



The 24th World Congress on
Controversies in Obstetrics,
Gynecology & Infertility (COGI)

All About Women's Health

Amsterdam, The Netherlands
November 10-13, 2016

Congress Program

www.congressmed.com/cogiamsterdam
cogi@congressmed.com

Timetable

Thursday, November 10, 2016

Hall A	
15:00-16:30	<i>Pre-Congress sessions on preconception care:</i> PRECONCEPTION GENETIC TESTING AND SOCIAL FREEZING
16:30-18:00	PRECONCEPTION CARE IN REPRODUCTION AND CHILD OUTCOMES
18:00-19:00	OPENING SESSION
19:15-20:30	Networking reception in the Exhibition Hall

Friday, November 11, 2016

	Infertility I Hall A	Infertility II Hall B	Gynecology Hall C	Fetomaternal Medicine Hall D	Oral presentations Hall E
08:30-10:00	PCOS	LABORATORY WORK CONTRIBUTING TO SUCCESS (I)	URODYNAMIC INVESTIGATION IN SUI	IUGR (INTRAUTERINE GROWTH RESTRICTION)	INFERTILITY
10:00-10:20	<i>Coffee Break & Poster Viewing</i>				
10:20-11:50	INDUSTRY SESSION	LABORATORY WORK CONTRIBUTING TO SUCCESS (II)	HPV SCREENING AND SCREENING STRATEGIES	PREGNANCY AFTER INFERTILITY	FETOMATERNAL MEDICINE
11:50-12:10	<i>Break</i>				
12:10-13:40	OVARIAN STIMULATION	BREAKING NEWS - ON THE MEANING OF UNEUPOIDY	POTENTIAL TREATMENT OF BREAST AND PROSTATIC CANCER	INDUSTRY SESSION	FETOMATERNAL MEDICINE
13:40-14:30	<i>Lunch Break</i>				
14:30-16:00	ADENOMYOSIS	GENE EDITING: FROM BENCH TO CLINIC AND BACK TO MORATORIUM?	SEX AND THE PELVIC FLOOR	FETAL MONITORING IN THE 21ST CENTURY	FETOMATERNAL MEDICINE
16:00-16:30	<i>Coffee Break & Poster Viewing</i>				
16:30-18:00	MECHANICAL INFERTILITY	OVARIAN STIMULATION <i>Organized by The Turkish Society of Reproductive Medicine</i>	HPV VACCINES: LIGHTS AND SHADOWS	PREVENTION OF PREECLAMPSIA	

Saturday, November 12, 2016

	Infertility Hall A	Infertility II Hall B	Gynecology II Hall C	Fetomaternal Medicine Hall D	Oral presentations Hall E
08:30-10:00	THE ENDOMETRIUM: WHAT IS NEW?	ALTERNATIVE PERSPECTIVES ON INFERTILITY CARE	ADOLESCENT GYNECOLOGY (I) <i>Organized by the Federation Internationale de Gynecologie Infantile et Juvenile (FIGIJ)</i>	PRETERM BIRTH	OBGYN
10:00-10:20	<i>Coffee Break & Poster Viewing</i>				
10:20-11:50	FERTILITY PRESERVATION FOR CANCER PATIENTS	LABORATORY WORK CONTRIBUTING TO SUCCESS (III)	ADOLESCENT GYNECOLOGY (II)	NEW INSIGHTS ON PREMATURITY	OBGYN /UROGYNECOLOGY
11:50-12:10	<i>Break</i>				
12:10-13:40	FERTILITY PRESERVATION: WHERE SHOULD WE GO FROM HERE?	METHODS FOR EMBRYO SELECTION: TOWARDS SET FOR ALL	MANAGING FIBROIDS	INNOVATIONS - FROM NEW IDEAS TO CLINICAL TOOLS	HPV/ONCOLOGY
13:40-14:30	<i>Lunch Break</i>				
14:30-16:00	OVARIAN AGING	PGS: A FRIEND OR A FOE OF THE PATIENTS?	NON HORMONAL MANAGEMENT OF MENOPAUSE	INDUSTRY SESSION	OBGYN
16:00-16:30	<i>Coffee Break & Poster Viewing</i>				
16:30-18:00	RTD ON BURNING CLINICAL ISSUES IN INFERTILITY		POTENTIAL THERAPY IN MENOPAUSE	GESTATIONAL DIABETES	OBGYN

Sunday, November 13, 2016

	Infertility Hall A	Fetomaternal Hall B	
08:30-10:00	PERSONALIZED MEDICINE IN ACTION	CAESARIAN SECTION	
10:00-10:20	<i>Coffee Break</i>		
10:20-11:50	HIGHLY CITED DUTCH RESEARCH IN REPRODUCTIVE MEDICINE	SCREENING TO ALL BY EVERY TOOL? RTD with panelists and audience	

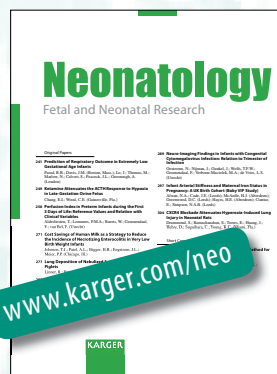
Congress Program



Amsterdam
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Welcome Letter

Dear Colleagues,

We would like to personally welcome each of you to the 24th COGI Congress in Amsterdam, The Netherlands. It's an exciting time for the COGI organizing committee and we are pleased to discuss with you the current controversies that we are facing in gynecology, infertility and obstetrics.

As always, we would like to give you an idea of what you can expect and what we hope to achieve over the next few days. More than 120 invited speakers will debate, discuss and lecture in four parallel halls.

We would like to thank each of you for attending the COGI Congress and for bringing your expertise to this gathering. We are delighted to have the leaders of different communities from around the world attend the Congress. In addition, by bringing together such a diverse group, we are able to teach, learn, and pave the way towards a better future in the field of Ob/Gyn and infertility.

Sincerely,



Zion Ben Rafael
Israel



Bart C.J.M. Fauser
The Netherlands
University of Utrecht



Rene Frydman
France
Antoine Beclere Hospital

Congress Co-Chairpersons



Committees

Section Heads

Fetomaternal Medicine

Aris Antsaklis, Greece
Frank Chervenak, USA
Dan Farine, Canada
Gerard Visser, The Netherlands

ART/IVF

Victor Gomel, Canada
Jacques Donnez, Belgium
Laura Rienzi, Italy

HPV

Xavier Bosch, Spain

Oncology

Benedetti Panici, Italy

Gynecology/Menopause/ Family planning

Jacques Donnez, Belgium
Andrea Genazzani, Italy
Santiago Palacios, Spain
Serge Rozenberg, Belgium
Sven Skouby, Denmark

Previous Co-Chairpersons

2016 Melbourne, Australia

Gab Kovacs
Michael Permezel

2015 Budapest, Hungary

Rene Frydman
Bart C.J.M. Fauser

2015 Guilin, China

Zeyi Cao
Gab Kovacs
Xiangyan Ruan
Alfred Mueck
ie Qiao
Tak Yeung Leung
Bart C.J.M. Fauser

2014 Paris, France

Rene Frydman
Bart C.J.M. Fauser

2014 Macau

Zeyi Cao, Honorary President
Zi-Jiang Chen
Tak Yeung Leung
P.C. Ho
Xiangyan Ruan

2013 Vienna

Christian Egarter
Alfred O. Mueck
Bart C.J.M. Fauser

2012 Lisbon

C. Freire de Oliveira
Luis Graça
Bart C.J.M. Fauser

2012 Singapore

Christopher Chong
Bernard Chern
Lai Fon-Min
Bart C.J.M. Fauser

2011 Hainan, China

Yuanhua Huang
Canquan Zhou
Zijiang Chen

2011 Paris, France

Bart C.J.M. Fauser
Rene Frydman

2010 Berlin, Germany

K.Diedrich
Bart C.J.M. Fauser

2009 Beijing, China

K. Shen
T. Duan
Q. Yu

2008 Paris, France

R. Frydman

2007 Shanghai, China

J.H. Lang – Honorary President
D. Duan
Q. Yu

2007 Barcelona, Spain

S. Dexeus – Honorary President
P.N. Barri
R. Aurell

2005 Athens, Greece

G. Creatsas

2004 Bangkok, Thailand

C.A. Kamheang

2004 Las Vegas, USA

R. Lobo
R. Berkowitz
M. D'Alton
A.H. DeCherney
P.E. Schwartz

2003 Berlin, Germany

K. Diedrich
J-W. Dudenhausen
I. Mettler
H.P.G. Schneider

2002 Washington DC, USA

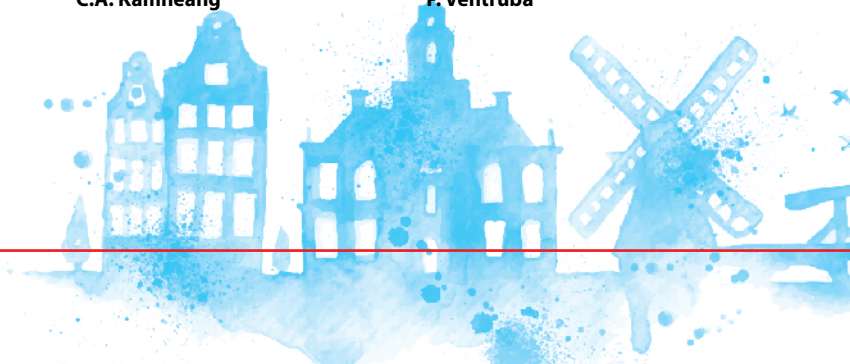
R. Lobo
M. D'Alton
A.H. DeCherney
J. Rock
P.E. Schwartz

2001 Paris, France

R. Frydman

1999 Prague, Czech Republic

J. Horejsi
P. Mardesic
P. Ventruba



CME Accreditation

The 24th World Congress on Controversies in Obstetrics, Gynecology & Infertility (COGI), Amsterdam, The Netherlands, November 10-13, 2016 was granted by the European Accreditation Council for Continuing Medical Education (EACCME) a maximum of **18 European CME credits (ECMEC)**

In order to allow participants who attend the above-mentioned Congress to validate their credits in their own country.

Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity. The EACCME credit system is based on 1 ECMEC per hour with a maximum of 3 ECMECs for half a day and 6 ECMECs for a full-day event.

**To receive your CME credits, please complete the questionnaire online at:
www.surveymonkey.com/r/COGI24**

**After completing the questionnaire, you will receive your certificate
The link will be open for 3 weeks starting on
Saturday, November 12, 2016 at 18:00**

Through an agreement between the European Union of Medical Specialists and the American Medical Association, physicians may convert EACCME credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME credit to AMA credit can be found at www.ama-assn.org/go/internationalcme.

Live educational activities, occurring outside of Canada, recognized by the UEMS-EACCME for ECMEC credits are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of The Royal College of Physicians and Surgeons of Canada.

COGI at Your Fingertips

COGI is proud to introduce the Congress WEB APPLICATION
An educational tool dedicated to implementing innovative
and environmentally-friendly technology.

In order to access the congress program, abstracts
and other information via the WEB APPLICATION,
please scan the QR code via your personal device, or go to: cogi.eventmagix.com



General Information

Congress Venue

Beurs van Berlage
Damrak 243, Beursplein 1-3
1012 ZJ Amsterdam
The Netherlands
www.beursvanberlage.com

Language

English is the official language of the Congress.

Registration Desk

Thursday, November 10	12:00-19:00
Friday, November 11	07:30-18:00
Saturday, November 12	08:00-18:00
Sunday, November 13	08:00-12:00

Congress Kit and Nametag

The congress kit you have received contains your nametag. Please wear your name tag to all sessions and events.

Certificate of Attendance

You may collect your Certificate of Attendance at the registration desk as of Saturday, November 12.

Refreshments

Welcome reception will be held on Thursday, November 10, 2016 at 19:15 in the exhibition area.
Coffee will be served in the exhibition area on the main level.
Lunch will be available for participants of the Congress on Friday, November 11 and Saturday, November 12, 2016.
Entrance will be with nametags only.

Exhibition Opening Hours

Thursday, November 10	19:15-20:30 (Networking Reception)
Friday, November 11	08:30-17:00
Saturday, November 12	08:30-17:00
Sunday, November 13	08:30-11:50

Speakers' Preview Room

Invited Speakers are welcome to visit the Speakers' Preview Room to upload their presentations at the following times:

Thursday, November 10	12:00-19:00
Friday, November 11	07:30-18:00
Saturday, November 12	08:00-18:00
Sunday, November 13	08:00-10:00

Oral & Poster presentations

Oral and Poster presenters that did not mount their presentations in advance, are requested to approach the information desk, as of Thursday, November 10, from 12:00.

Poster presenters should plan to be at the posters area during poster's viewing breaks and coffee breaks.

Safety and Security

Please do not leave any bags or suitcases unattended at any time, whether inside or outside session halls.

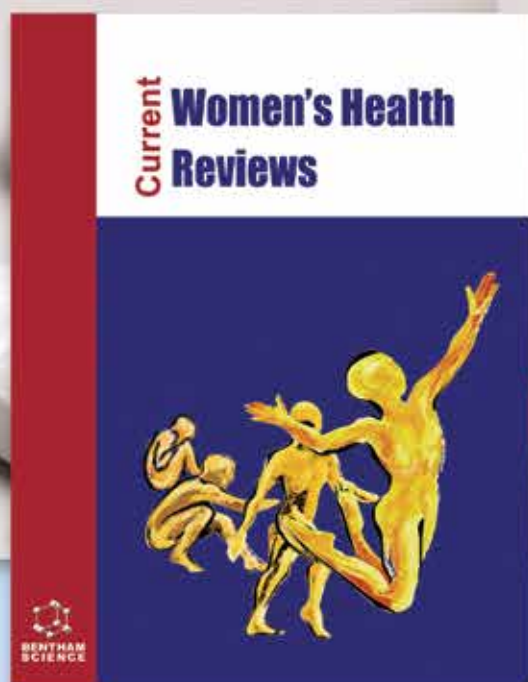
Liability

The Congress Secretariat and Organizers cannot accept liability for personal accidents or loss or damage to private property of participants either during or directly arising from The World Congress on Controversies in Obstetrics, Gynecology and Infertility (COGI).

Participants should make their own arrangements with respect to health and travel insurance.



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John Yeh, USA

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To Attendees of
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in Obstetrics, Gynecology & Infertility"

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The Journal of Endometriosis and Pelvic Pain Disorders (JEPPD) publishes basic and clinical original research articles and critical reviews focusing specifically on diagnosis, medical and surgical treatment of endometriosis in all its multidimensional aspects. In particular, contributions on the epidemiology of the disease, of its diagnosis and classification, and of its medical, social, psychological and health outcome consequences are welcome. Manuscripts related to uterine disorders and other gynecological and non-gynecological diseases leading to pelvic pain are also a specific focus of the journal.

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WICHTIG

Thursday November 10, 2016

15:00-18:00 PRE-CONGRESS SESSIONS ON PRECONCEPTION CARE

Hall A

Chairpersons **Bart C.J.M. Fauser**, The Netherlands
Zion Ben-Rafael, Israel
Arie Franx, The Netherlands

15:00-16:30 PRECONCEPTION GENETIC TESTING AND SOCIAL FREEZING

Capsule Adoption of new technological capabilities is controversial. Should we screen all of our patients? Is it a first step towards eugenics? And who should bear the cost anyway?

15:00-15:45 Debate: **Expanded genetic carrier screening: Should we propose it to everybody?**

15:00-15:15 For: **Rita Vassena**, Spain

15:15-15:30 Against: **Sjoerd Repping**, The Netherlands

15:30-15:45 Discussion

Capsule Freezing oocytes, no doubt became very efficient, but there are many other considerations before suggesting to all young women to bank their oocytes

15:45-16:30 Debate: **All women beyond 30 years of age should freeze their oocytes**

15:45-16:00 Yes: **Nick S. Macklon**, UK

16:00-16:15 No: **Yacoub Khalaf**, UK

16:15-16:30 Discussion

16:30-18:00 PRECONCEPTION CARE IN REPRODUCTION AND CHILD OUTCOMES

Capsule COGI is joining national efforts to increase awareness, knowledge, attitudes and behaviors of physicians and intended parents to increase preconception health. Entering pregnancy in optimal parent's health improves the chances to have healthy offspring

16:30-17:00 Preconception care, pregnancy and child outcomes
Eric A.P. Steegers, The Netherlands

17:00-17:30 How preconception care can impact fertility outcomes

COGI- *All about women's health*. The more you know...

Human Microbiome, so called the "Second Genome" is the total of 10 folds more microbial cells than all human cells and affects more function of life than would have ever been imagined. Information gathered by culture methods is limited, hence the use of high throughput DNA sequencing to analyze bacteria that are otherwise not recognized by culture methods has already shown that bacteria colonizes tissues like uterus, gametes, placenta etc. in high frequency, and may affect life functions in many unimaginable ways

17:30-18:00 Human Microbiome and reproduction
Amir Mor, USA

18:00-19:00 OPENING SESSION

Chairpersons **Bart C.J.M. Fauser**, The Netherlands
Zion Ben-Rafael, Israel

18:00-18:05 Greetings

18:05-18:15 TREAT ME LIKE A LADY: Why women and society would benefit from improved gender awareness in medicine
Jannet Vaessen, The Netherlands

18:15-19:05 **"Nobel Prize Laureate Robert G. Edwards 5th Annual Lecture**

Capsule Evidence from extensive twin studies reveals that genetic (maternal and fetal) as well as environmental factors contribute to preterm birth. The relative contributions are influenced by race/ethnicity. Identifying the specific genes and the unique environmental factors in different populations may provide risk assessment tools as well as preventative interventions. The Human Microbiome Project, coupled with multi-omic approaches have disclosed previously unappreciated players

Genetic and environmental factors contributing to preterm birth
Jerome F. Strauss III, USA

19:05-19:15 Best Abstract Awards Ceremony



Friday, November 11, 2016

INFERTILITY

Hall A

08:30-10:00 PCOS

Capsule PCOS: The most common endocrine disorder may be due to a combination of genetic and environmental factors that possibly are worsened by epigenetic factors, industrial endocrine disruptors and obesity exposures during the prenatal period

Chairpersons **Zion Ben Rafael**, Israel
Jerome F. Strauss III, USA

08:30-09:00 Hormonal aspect of PCOS
Phillippe Bouchard, France

09:00-09:30 PCOS: Is there a preferred stimulation protocol for IVF?
Basil C. Tarlatzis, Greece

09:30-10:00 Genetics of PCOS
Jerome F. Strauss III, USA

10:00-10:20 Coffee break

10:20-11:50 INDUSTRY SESSION see page 187

11:50-12:10 Break

12:10-13:40 OVARIAN STIMULATION

Capsule COH is a crucial step in ART. What is the place of AMH in the diagnosis and hCG in reaching optimal results?

Chairpersons **Nick S. Macklon**, UK
Fady I. Sharara, USA

12:10-12:40 Role of hCG in ovarian stimulation
Christophe Blockeel, Belgium

12:40-13:10 hCG versus LH
Manuela Simoni, Italy



COGI- *All about women's health*. The more you know...

14:30-16:00 ADENOMYOSIS

Capsule For too long Adenomyosis was difficult to diagnose, classify, and treat. Have we now overcome all these issues?

Chairpersons **Felice Petraglia**, Italy
Victor Gomel, Canada

14:30-14:50 Are Adenomyosis and Endometriosis the same entity?
Stephan Gordts, Belgium

14:50-15:15 Classification of Adenomyosis
Gregoris Grimbizis, Greece

15:15-15:35 Management of Adenomyosis
Felice Petraglia, Italy

15:35-16:00 Different surgical options of Adenomyosis
Gregoris Grimbizis, Greece

16:00-16:30 Coffee break

16:30-18:00 MECHANICAL INFERTILITY

Capsule Mechanical factors that affect implantation are not common but lend themselves to treatment

Chairpersons **Felice Petraglia**, Italy
Stephan Gordts, Belgium
Mattheos Fraidakis, Greece

16:30-16:50 Implications of Adenomyosis for fertility
Velja Mijatovic, The Netherlands

16:50-17:35 Debate: **Is ultrasound enough for exploring the uterine cavity in IVF?**

16:50-17:05 Yes: **Andrea Tinelli**, Italy

17:05-17:20 No: **Mark Hans Emanuel**, The Netherlands

17:20-17:35 Discussion

17:35-18:00 Caution: Endometrioma surgery can be very deleterious for the ovarian reserve
Jacques Donnez, Belgium



08:30-10:00 LABORATORY WORK CONTRIBUTING TO SUCCESS (I)

Capsule Quality control and risk management are cornerstones in IVF success

Chairpersons **Laura Rienzi**, Italy
Jacques Cohen, USA

08:30-08:50 TQM (Total quality management): Why it matters?
Edith Coonen, The Netherlands

08:50-09:15 Quality control in ART
Rita Vassena, Spain

09:15-09:35 In-vitro follicular culture
Evelyn Telfer, UK

09:35-10:00 Relevance of embryo competence for successful IVF, and role of GCSF
Bart C.J.M. Fauser, The Netherlands

10:00-10:20 Coffee break

10:20-11:50 LABORATORY WORK CONTRIBUTING TO SUCCESS (II)

Capsule How laboratory work can better that results?

Chairpersons **Rita Vassena**, Spain
Manuela Simoni, Italy

10:20-10:40 What key performance indicators (KPI's) should be used in an IVF lab?
Simon Fishel, UK

10:40-11:05 How to improve embryo quality in the IVF lab
Laura Rienzi, Italy

11:05-11:25 What is risk and how do you assess it?
Edith Coonen, The Netherlands

11:25-11:50 Selecting the right sperm for ICSI
Laura Rienzi, Italy



COGI- *All about women's health*. The more you know...

12:10-13:40 BREAKING NEWS – ON THE MEANING OF UNEUPLOIDY

Capsule Research and innovation is the only way forward

Chairpersons **Simon Fishel**, UK
Magdalena Zernicka-Goetz, UK

12:10-12:30 Building the embryo: Plasticity and fate
Magdalena Zernicka-Goetz, UK

12:30-12:55 Development of the human embryo beyond day 7 in a dish
Marta N. Shahbazi, UK

12:55-13:15 What can these studies teach us about PGS?
Norbert Gleicher, USA

13:15-13:40 Precision medicine in assisted conception: A multi-center observational treatment cohort study of the annexin A5 M2 haplotype as a biomarker for antithrombotic treatment to improve pregnancy outcome
Simon Fishel, UK

13:40-14:30 Lunch break

14:30-16:00 GENE EDITING: FROM BENCH TO CLINIC AND BACK TO MORATORIUM?

Capsule “Genome engineering” refers to the process of targeted modification of the genome. Like a “search mode” Cas9 can guide to specific site of intricate genome by string of short RNA. Gene editing of human germline with CRISPR/Cas9 technology can eventually transform medicine, basic research and biotechnology. How it works? Should it be baned from use on gametes?

Chairpersons **Jacques Cohen**, USA
Anthony C.F. Perry, UK

14:30-15:00 Technical aspects of gene editing in gametes and embryos
Anthony C.F. Perry, UK

15:00-15:30 Possible applications of gene editing in gametes and embryos
Rita Vassena, Spain

15:30-16:00 Ethical aspects and moratorium on gene editing in embryos
Heidi Mertes, Belgium



COGI- *All about women's health. The more you know...*

16:30-18:00 OVARIAN STIMULATION

Organized by The Turkish Society of Reproductive Medicine

Chairperson **Gurkan Uncu**, Turkey

16:30-16:50 Monitoring ART cycles: What is the additional value of endocrine testing?
Bariş Ata, Turkey

16:50-17:15 Individualized ovarian stimulation for ART
Gurkan Bozdağ, Turkey

17:15-17:35 Adjuvants to ovarian stimulation for ART
Gurkan Uncu, Turkey

17:35-18:00 Monitoring the luteal phase and individualized luteal support: Fact or fiction?
Ahmet Zeki Isik, Turkey



08:30-10:00 URODYNAMIC INVESTIGATION IN SUI

Chairperson **C.H. van der Vaart**, The Netherlands

08:30-09:15 Debate: **Does multichannel urodynamics have value in evaluation of SUI?**

08:30-08:45 In favor: **Gommert van Koeveringe**, The Netherlands

08:45-09:00 Against: **Jan Paul Roovers**, The Netherlands

09:00-09:15 Discussion

09:15-09:40 Treatment of drug-refractory overactive bladder (Botox, sacral neuromodulation, tibial nerve stimulation)

Laetitia de Kort, The Netherlands

09:40-10:00 Treatment of pelvic floor dysfunction using erbium laser

Aleksandra Novakov Mikic, Serbia

10:00-10:20 Coffee break

10:20-11:50 HPV SCREENING AND SCREENING STRATEGIES

Capsule Most European recommendations support the adoption of validated HPV tests as the stand-alone primary screening tool. Coordinated strategies of screening and vaccination are the subject of intense research and evaluation

Chairpersons **F. Xavier Bosch**, Spain
Chris J.M. Meijer, The Netherlands

10:20-10:40 Introduction
The need for coordinated programs of vaccination and screening
F. Xavier Bosch, Spain

10:40-11:10 The indications and the guidelines of HPV testing in Europe
Marc Arbyn, Belgium

11:10-11:40 The complexities of adopting HPV screening by population based programs
Peter J.F. Snijders, The Netherlands

11:40-11:50 Discussion
The impact of HPV screening in the private practice



12:10-13:40 POTENTIAL TREATMENT OF BREAST AND PROSTATIC CANCER

Capsule Estrogens are effective for the treatment of breast and prostate cancer, but failed in the past due to side effects. The fetal SERM estetrol (E4) may become a new treatment option for these hormone sensitive cancers

Chairpersons **Bart C.J.M. Fauser**, The Netherlands
Herjan Coelingh Bennink, The Netherlands

12:10-12:30 High dose estrogen treatment of breast cancer
Herjan Coelingh Bennink, The Netherlands

12:30-12:55 Treatment of breast cancer with high dose estetrol
Carole Verhoeven, The Netherlands

12:55-13:15 E4 and prostate cancer
Yvette Zimmerman, The Netherlands

13:15-13:40 Breast Cancer: Molecular and hormonal mechanisms for metastasis
Andrea R. Genazzani, Matias Sanchez, Marina Ines Flamini, Tommaso Simoncini, Italy

13:40-14:30 Lunch break

14:30-16:00 SEX AND THE PELVIC FLOOR

Capsule Sexual pain is a highly prevalent complaint and involves sexual, psychological, medical and musculoskeletal aspects. The gynecologist is almost always involved in taking care of women with sexual pain. What should gynecologists know about the non-gynecological factors involved in this multifactorial problem in order to be effective caregivers?

Chairpersons **Rik H.W. van Lunsen**, The Netherlands
Andrea R. Genazzani, Italy

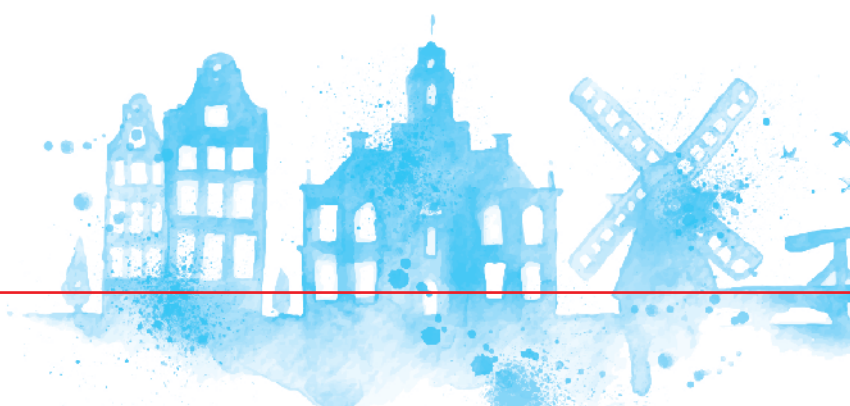
14:30-15:00 The pelvic floor: A neglected contributor of vulvar pain in the lifespan - Medical considerations
Alessandra Graziottin, Italy

15:00-15:30 The Pelvic Floor: A sexual organ and mirror of the soul
Rik H.W. van Lunsen, The Netherlands



16:30-18:00 HPV VACCINES: LIGHTS AND SHADOWS

- Capsule In spite of massive data confirming the effectiveness and safety of HPV vaccines, some vaccination programs in the world have been challenged by non-scientifically supported claims of side effects
- Chairpersons **F. Xavier Bosch**, Spain
Elmar A. Joura, Austria
- 16:30-16:50 Introduction
The adoption of HPV vaccines in the world and the axes of assessment of vaccine safety
F. Xavier Bosch, Spain
- 16:50-17:20 Vaccine confidence and vaccine hesitancy
Heidi J. Larson, UK
- 17:20-17:50 The promises of the HPV vaccines
Elmar A. Joura, Austria
- 17:50-18:00 Discussion
The role of the gynecologists in HPV vaccination



08:30-10:00 IUGR (INTRAUTERINE GROWTH RESTRICTION)

Chairpersons **Michael Robson**, Ireland
Dan Farine, Canada

08:30-08:50 IUGR in Twins
Isaac Blickstein, Israel

08:50-09:15 How reliable is ultrasound and Doppler in prediction of extreme fetal growth retardation?
Aris Antsaklis, Greece

09:15-09:35 IUGR and fetal brain damage
Isaac Blickstein, Israel

09:35-10:00 Update on Zika virus
Mark H. Yudin, Canada

10:00-10:20 Coffee break

10:20-11:50 PREGNANCY AFTER INFERTILITY

Capsule Pregnancy post infertility is a well-known perinatal risk beyond the multiple pregnancy issue. Can the risk be reduced?

Chairpersons **Dan Farine**, Canada
Felice Petraglia, Italy

10:20-10:45 Obstetric challenges of advanced maternal age and egg donation
Hanns Helmer, Austria

10:45-11:10 How to avoid multiple pregnancies; Insights from a fertility specialist
Fady I. Sharara, USA

11:10-11:30 Does the epidemic of multiple births still exist?
Isaac Blickstein, Israel

11:30-11:50 Should we limit access to IVF to older women? At what age. Perinatologist point of view
TBA

11:50-12:10 Break

12:10-13:40 **INDUSTRY SESSION** see page 188

COGI- *All about women's health*. The more you know...

13:40-14:30 Lunch break

14:30-16:00 FETAL MONITORING IN THE 21ST CENTURY

Capsule Despite the lack of real evidence to its value, continuous electronic fetal monitoring remains the mainstay in large proportion of all deliveries

Chairpersons **Andrew Shennan**, UK
Gerard H.A. Visser, The Netherlands

14:30-14:50 The FIGO CTG interpretation
Diogo Ayres de Campos, Portugal

14:50-15:15 CTG supporting mobility in labor
Jenny Smith, UK

15:15-15:35 Auscultation vs. electronic fetal monitoring
Dan Farine, Canada

15:35-16:00 Pitfalls in CTG monitoring
Gerard H.A. Visser, The Netherlands

16:00-16:30 Coffee break

16:30-18:00 PREVENTION OF PREECLAMPSIA

Capsule The ability to predict changes in markers, weeks before the onset of preeclampsia is the first step in offering prevention plan. Can close surveillance of the patient at risk prevent the pathology or save maternal and fetal life?

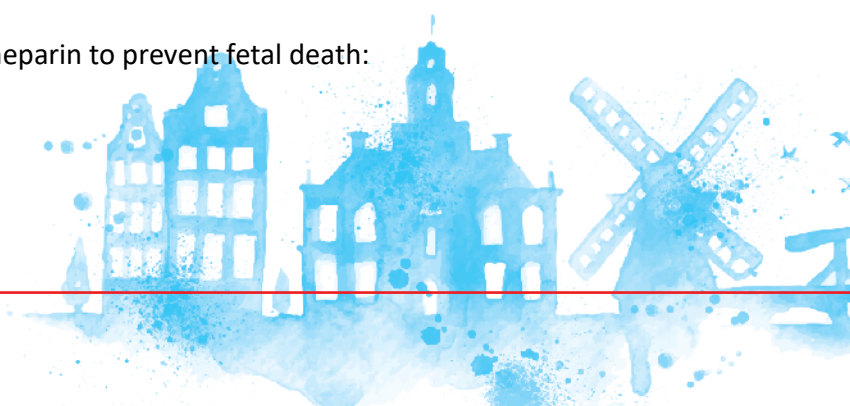
Chairpersons **Diogo Ayres de Campos**, Portugal
Aris Antsaklis, Greece

16:30-16:55 The best method to predict hypertension
Andrew Shennan, UK

16:55-17:15 The best method to prevent preeclampsia
Aris Antsaklis, Greece

17:15-17:40 Should we screen for maternal and child hypertension after birth?
Christianne De Groot, The Netherlands

17:40-18:00 Screening for thrombophilia and heparin to prevent fetal death:
When and why?
Chiara Benedetto, Italy



Saturday, November 12, 2016

INFERTILITY

Hall A

08:30-10:00 THE ENDOMETRIUM: WHAT IS NEW?

Capsule More forms of infertility will be subjected to treatment as the endometrium, the most neglected organ in reproduction, is revealing its secrets

Chairpersons **Frank Broekmans**, The Netherlands
Jacques Donnez, Belgium

08:30-08:50 Embryo-Endometrium dialogue
Nick S. Macklon, UK

08:50-09:15 The emerging role of junctional zone in endometrium formation and implantation potential
Stephan Gordts, Belgium

09:15-09:35 Biomarkers or genetic tests for endometrial receptivity
Jose Horcajadas, Spain

09:35-10:00 Endometrial regeneration: Stem cell therapy in Asherman Syndrome and Atrophic Endometrium
Antonio Pellicer, Spain

10:00-10:20 Coffee break

10:20-11:50 FERTILITY PRESERVATION FOR CANCER PATIENTS

Capsule Cancer patients should be informed of options for fertility preservation and future reproduction prior to cancer treatment (ASRM). Reproduction in the context of cancer raises a number of clinical and ethical issues

Chairpersons **Norbert Gleicher**, USA
Attila Vereczkey, Hungary

10:20-10:40 New frontier in vitrification for human oocytes and embryos
Masashige Kuwayama, Japan

10:40-11:05 Fertility preservation in the female: What are the prerequisites for success?
Marie-Madeleine Dolmans, Belgium

11:05-11:25 Fertility preservation: What is best - oocyte vitrification or tissue freezing?
Antonio Pellicer, Spain

COGI- *All about women's health*. The more you know...

11:25-11:50 Fertility preservation for cancer patients, are we over using the technique?
Kirsten L. Tryde Macklon, Denmark

11:50-12:10 Break

12:10-13:40 FERTILITY PRESERVATION: WHERE SHOULD WE GO FROM HERE?

Capsule Fertility preservation is often possible in cancer patients. However, in order to close the large gap between the need and the actual usage it is pertinent to produce interdisciplinary guidelines that will call upon every oncologist to discuss the options with every patient of reproductive age

Chairpersons **Kirsten L. Tryde Macklon**, Denmark
Marie-Madeleine Dolmans, Belgium

12:10-12:35 Fertility preservation: Balancing risks versus benefits - The Netherlands registry
Annelies Bos, The Netherlands

12:35-13:00 Is there an ideal guideline?
Willianne Nelen, The Netherlands

13:00-13:25 How to increase awareness among oncologists. A gynecologist point of view?
Marie-Madeleine Dolmans, Belgium

13:25-13:40 Physicians' perspective on fertility preservation in patients with cancer: Results of a survey performed by IVF Worldwide
Zeev Shoham, Israel

13:40-14:30 Lunch break

14:30-16:00 OVARIAN AGING

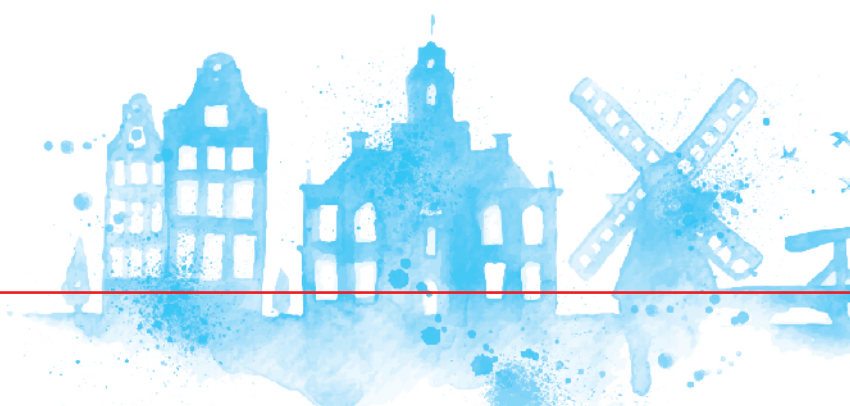
Capsule Ovarian aging is the main reason for ART failures

Chairpersons **Rene Frydman**, France
Stephan Gordts, Belgium
Vereczkey Attila, Hungary

14:30-14:50 Assessment of ovarian aging
Frank J.M. Broekmans, The Netherlands

14:50-15:10 Treatment of poor responders
Zion Ben-Rafael, Israel

15:10-15:30 When to revert to egg donation
Pedro Barri, Spain



Special lecture

15:30-16:00 **Update on uterine transplantation and pregnancy outcome**
Mats Brännstrom, Sweden

16:00-16:30 Coffee break

16:30-18:00 **RTD ON BURNING CLINICAL ISSUES IN INFERTILITY**

Panelists and audience discussion

Moderators **Zion Ben Rafael**, Israel
Bart C.J.M. Fauser, The Netherlands

Discussants **Jacques Cohen**, USA
Rene Frydman, France
Simon Fishel, UK
Nick S. Macklon, UK
Manuela Simoni, Italy

Questions

1. Does ovarian stimulation for IVF affect oocyte / embryo quality?
2. Is freeze all embryos a realistic strategy for all IVF patient? Who is doing it?
3. Does GnRH agonist trigger for final oocyte maturation improve IVF outcome?
4. Current status of androgen supplementation to FSH ovarian stimulation for IVF
5. Current status of LH / hCG supplementation to FSH ovarian stimulation for IVF
6. All ovulation induction in PCOS should be replaced by IVF (the only way to effectively reduce multiple pregnancies)
7. AUGMENT by OvaScience – what's the evidence? what do practitioners need to know about what is being injected?
8. PGS: Clinical evidence, risk of litigation
9. Should mosaic embryos be transferred?
10. What KPI's (Key Performances Indicators) should be used in an IVF lab?
11. In 2017, should virtually all women undergoing IVF have single embryo transfer? Who has achieved it?



08:30-10:00 ALTERNATIVE PERSPECTIVES ON INFERTILITY CARE

Capsule The increasing need for quality reproductive treatments dictates involvement of patient's organizations, societies and states in the regulation of these services

Chairpersons **Bart C.J.M. Fauser**, The Netherlands
Kamal Ahuja, UK

08:30-08:50 What patient organizations can do for infertile couples?
Elin Einarsdottir, Iceland

08:50-09:15 Context based infertility care
Jan A.M. Kremer, The Netherlands

09:15-09:35 Infertility and its implications for couples and children
Lone Schmidt, Denmark

09:35-10:00 From cross-border reproductive care to treatment at home: A turning of the tide?
Zeynep Gurtin, Kamal Ahuja, UK

10:00-10:20 Coffee break

10:20-11:50 LABORATORY WORK CONTRIBUTING TO SUCCESS (III)

Capsule Several recent and futuristic technologies which are in the forefront of laboratory research, including Mitochondrial Replacement Therapy (MRT) to avoid diseases transmission (which was recently approved in the UK for clinical use), nuclear transplantation or spindle transfer, mitochondrial supplementation and germ cell lines promises that innovation will keep fueling our field

Chairpersons **Simon Fishel**, UK
Barbara Wirleitner, Austria

10:20-10:40 MRT (Mitochondrial Replacement Therapy) and PGD as a first line treatment for mitochondrial disorders
Jacques Cohen, USA

10:40-11:05 Potential of germ line stem cells
Evelyn Telfer, UK

11:05-11:30 Epigenetics in reproduction
Rebecca Painter, The Netherlands



COGI- *All about women's health*. The more you know...

11:30-11:50 Laboratory instrumentation, data handling and quality control
Jacques Cohen, USA

11:50-12:10 Break

12:10-13:40 METHODS FOR EMBRYO SELECTION: TOWARDS SET FOR ALL

Capsule Better selection methods might affect the rate of adoption of SET for IVF treatment however current methods to assess the pre-implantation embryos like morphology, time lapse, PGS or markers are alone far from perfection. Can a combination of methods secure a better selection and implantation rate?

Chairpersons **Rene Frydman**, France
Jean Michel Foidart, France

12:10-12:30 Time-Lapse: Improved culture or just an expensive toy?
Thomas Ebner, Austria

12:30-12:55 What to do with embryos with reversed cleavage?
Diana Stein, Israel

12:55-13:20 Industry lecture see page 189

13:20-13:40 The pros and cons of embryo selection
Thorir Hardarson, Sweden

13:40-14:30 Lunch break

14:30-16:00 PGS: A FRIEND OR A FOE OF THE PATIENTS?

Capsule **The debate is more acute now:** While the technique seems to be improving the question now is can universal PGS improve the results of ART or worsen them?

Chairpersons **Luca Gianaroli**, Italy
Norbert Gleicher, USA

14:30-14:55 Optimizing embryo biopsy techniques
Simon Fishel, UK

14:55-15:15 Blastocoel analysis for PGS and the potential clinical value of mitochondrial screening assays
Luca Gianaroli, Italy



COGI- *All about women's health.* The more you know...

15:15-16:00 Debate: **Overcoming the technical gaps will lead to PGS to all embryos... It's only a matter of time**

15:15-15:30 Yes: **Jacques Cohen, USA**

15:30-15:45 No: PGS causes more damage than benefit
Norbert Gleicher, USA

15:45-16:00 Discussion

16:00-16:30 Coffee break



08:30-10:00 **ADOLESCENT GYNECOLOGY (I)**

Organized by the Federation Internationale de Gynecologie Infantile et Juvenile (FIGIJ)

Chairpersons **Gabriele Tridenti**, Italy
George K. Creatsas, Greece

08:30-09:00 Usefulness of nonavalent HPV vaccine in sexually abused adolescents
Mireille Merckx, Belgium

09:00-09:30 Oocyte cryopreservation in high risk girls and adolescents
Evelien Roos, The Netherlands

09:30-10:00 Pregnancy in adolescence
Gabriele Tridenti, Italy

10:00-10:20 Coffee break

10:20-11:50 **ADOLESCENT GYNECOLOGY (II)**

Chairpersons **Christian Egarter**, Austria
Mireille Merckx, Belgium

10:20-10:40 Vulvovaginal Congenital Anomalies
George K. Creatsas, Greece

10:40-11:05 Dysfunctional uterine bleeding
Lydia Marié-Scemama, France

11:05-11:30 Extended regimen of OC's
Alessandra Graziottin, Italy

11:30-11:50 Deficiencies in the adolescent: Key supplementations
Santiago Palacios, Spain

11:50-12:10 Break



COGI- *All about women's health*. The more you know...

12:10-13:40 **MANAGING FIBROIDS**

Capsule Choosing the right operative procedure where appropriate remains a challenge

Chairpersons **Pierluigi Benedetti Panici**, Italy
Alessandra Graziottin, Italy

12:10-12:30 Uterine myomas: Health and sexual challenges with a new perspective
Alessandra Graziottin, Italy

12:30-12:55 Myomas: Prime time for HIFU in gynecological clinical practice?
Franco Orsi, Italy

12:55-13:15 Myometomy by minilaparotomy: The best option?
Pierluigi Benedetti Panici, Italy

13:15-13:40 Laparoscopic myomectomy
Jacques Donnez, Belgium

13:40-14:30 Lunch Break

14:30-16:00 **NON HORMONAL MANAGEMENT OF MENOPAUSE**

Capsule The slow bouncing of hormonal prescriptions requires a different solution

Chairpersons **Santiago Palacios**, Spain
Yuliya Savochkina, Russia

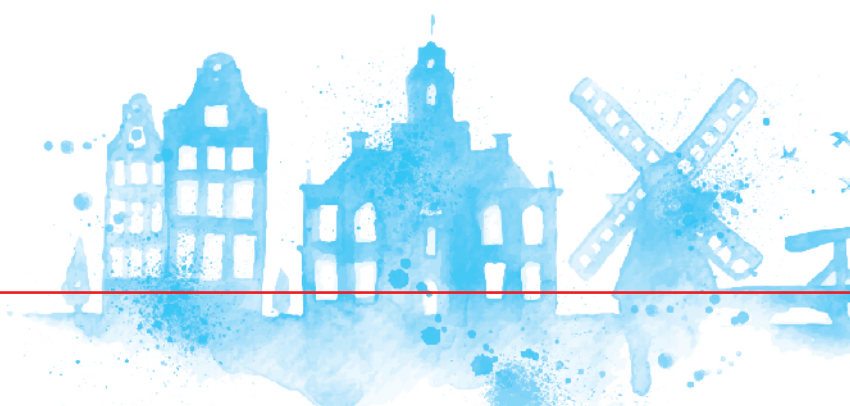
14:30-14:50 HRT and Osteoporosis prevention: Are we under-using the best treatment option?
Robert Langer, USA

14:50-15:15 Erbium laser treatment of pelvic organ prolapses: 3 years follow-up
Sabina Sencar, Slovenia

15:15-15:35 The new paradigm for menopausal therapy
Christian Egarter, Austria

15:35-16:00 Non-hormonal treatment of menopause
Sven O. Skouby, Denmark

16:00-16:30 Coffee break



COGI- *All about women's health. The more you know...*

16:30-18:00 POTENTIAL THERAPY IN MENOPAUSE

Organized by the European Menopause and Andropause Society (EMAS)

Chairpersons **Santiago Palacios**, Spain
Mark Brincat, Malta

16:30-16:55 Can ovarian response to stimulation predict early menopause
Frank J.M. Broekmans, The Netherlands

16:55-17:15 Delaying menopause by ovarian tissue banking
Jacques Donnez, Belgium

17:15-18:00 Debate: **HRT with proper timing and chosen regimen is cardiovascular protective**

17:15-17:30 Yes: **Robert Langer**, USA

17:30-17:45 No: **Sven O. Skouby**, Denmark

17:45-18:00 Discussion



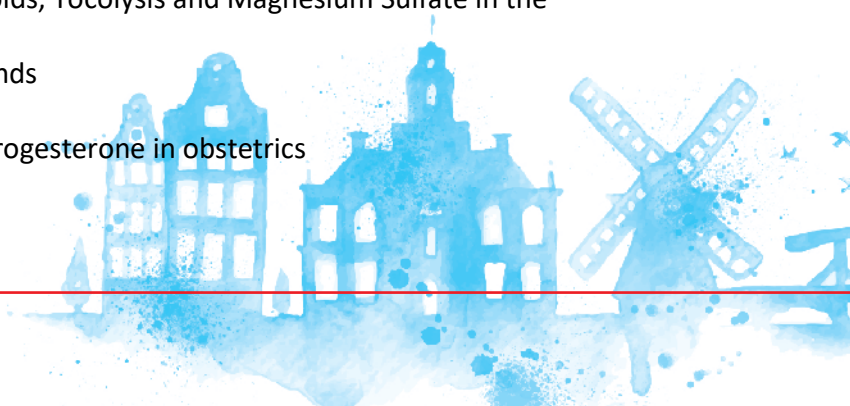
08:30-10:00 **PRETERM BIRTH**

- Capsule Did we make any progress in prevention of preterm birth?
- Chairpersons **Michael Schumacher**, France
Isaac Blickstein, Israel
- 08:30-08:50 The controversy goes on: Progesterone, Cerclage or Arabin Pessary?
Progesterone Vs. Arabin
Andrew Shennan, UK
- 08:50-09:15 Preterm birth: Still an enigma but progesterone can help to prevent
Jane E. Norman, UK
- 09:15-09:40 Treatment of (threatening) preterm birth: Insights from recent RCTs
Ben W. J. Mol, Australia
- 09:40-10:00 New approaches to predict the outcome of threatened or suspected preterm
labor
Gian Carlo Di Renzo, Italy
- 10:00-10:20** Coffee break

10:20-11:50 **NEW INSIGHTS ON PREMATUREITY**

*Organized by the **Preis School**, Permanent International and European School in Perinatal, Neonatal and Reproductive Medicine, Italy*

- Capsule Premature labor and delivery is a major risk facing the fetus lending great
impetus to research and understanding
- Chairpersons **Gian Carlo Di Renzo**, Italy
Gerard H.A. Visser, The Netherlands
- 10:20-10:40 Introductory lecture
Preterm birth: A great obstetrical syndrome
Gian Carlo Di Renzo, Italy
- 10:40-11:00 The pros and cons of Corticosteroids, Tocolysis and Magnesium Sulfate in the
management of preterm delivery
Gerard H.A. Visser, The Netherlands
- 11:00-11:25 Basic and clinical application of progesterone in obstetrics
Paul Piette, Belgium



COGI- *All about women's health*. The more you know...

11:25-11:50 Progesterone and neurodevelopment
Michael Schumacher, France

11:50-12:10 Break

12:10-13:40 INNOVATIONS – FROM NEW IDEAS TO CLINICAL TOOLS

12:10-12:25 Hystero-Salpingo Foam Sonography (HyFoSy)
A simple office based technique to check tubal patency
Mark Hans Emanuel, The Netherlands

12:25-12:40 Pregnabit: The first comprehensive telemedical CTG solution for fetal health monitoring (<http://www.pregnabit.com/en/>)
Magdalena Sekowska, Poland

12:40-12:55 Why you need CTG Gameplan?
CTG Gameplan is an innovative training system that will make your CTG interpretation easier, and reduce the risk of unsafe intervention.
<https://www.youtube.com/watch?v=erGHu130puQ>
Gloria Esegbona,

12:55-13:10 Vulvovaginal atrophy: What can be achieved by laser?
Zdenko Vizintin, Slovenia

13:10-13:20 Performance verification of the Diafert® granulocyte colony-stimulating factor
Fabian Somers, USA

13:40-14:30 Lunch break

14:30-16:00 INDUSTRY SESSION see page 190

16:00-16:30 Coffee break

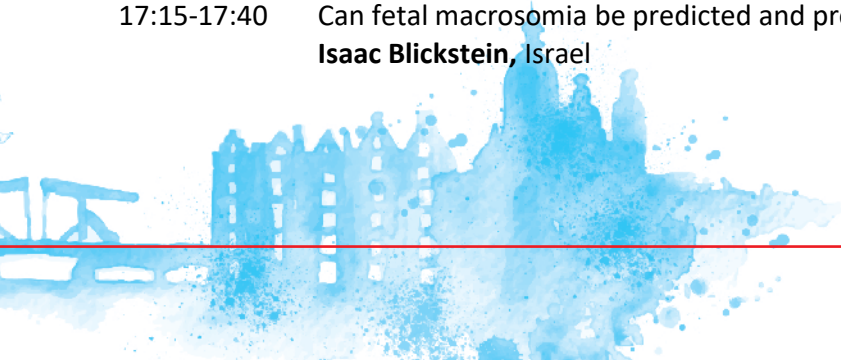
16:30-18:00 GESTATIONAL DIABETES

Chairpersons **Chiara Benedetto**, Italy
Gerard H.A. Visser, The Netherlands

16:30-16:50 Obesity and GDM: Which is a more important risk factor for PET?
Aris Antsaklis, Greece

16:50-17:15 New treatment strategies (oral antidiabetics; continues glucose monitoring) for gestational diabetes
Arie Franx, The Netherlands

17:15-17:40 Can fetal macrosomia be predicted and prevented?
Isaac Blickstein, Israel



Sunday, November 13, 2016

INFERTILITY

Hall A

08:30-10:00 PERSONALIZED MEDICINE IN ACTION

Chairpersons **Dominique de Ziegler**, France
Zion Ben-Rafael, Israel

08:30-09:00 Personalization of medicine: Is fertility a good example?
Bart C.J.M. Fauser, The Netherlands

09:00-09:30 When should IVF be used
Dominique de Ziegler, France

09:30-10:00 The role of Progesterone revisited: A personal perspective
Phillipe Bouchard, France

10:00-10:30 Coffee break

10:30-12:00 HIGHLY CITED DUTCH RESEARCH IN REPRODUCTIVE MEDICINE

Capsule Three university medical centers from The Netherlands belong to the most cited research centers in Clinical Reproduction. Young members from these units will present their own work and put this in the larger perspective of the overall focus of the team

Chairpersons **Zion Ben Rafael**, Israel
Bart C.J.M. Fauser, The Netherlands

10:30-10:50 Multifollicular ovaries, presence and growth in health and disease
Marieke Verhoeven, (on behalf of Prof. Lambalk team), VU University Medical Center, The Netherlands

10:50-11:15 Genetics of PCOS
Yvonne V. Louwers, (on behalf of Prof. Laven team), Erasmus University Medical Center, Rotterdam, The Netherlands

11:15-11:35 Androgens and cardiovascular risk in women with reproductive dysfunction
Nadine Daan, (on behalf of Prof. Fauser team), UMC Utrecht, The Netherlands

11:35-12:00 Endometrial implantation
Robert P. Berkhout, (on behalf of Prof. Repping team), AMC Amsterdam, The Netherlands



08:30-10:00 CAESARIAN SECTION

Chairpersons **Dan Farine**, Canada
Eva Pajkrt, The Netherlands

08:30-09:00 Debate: **VBAC is risky for women, child and physician**

08:30-08:40 True: **Eva Pajkrt**, The Netherlands

08:40-08:50 Not true: **Michael Robson**, Ireland

08:50-09:00 Discussion

09:00-09:30 Why do niches develop in Caesarean uterine scars and are they a problem?
Judith A.F. Huirne, The Netherlands

09:30-10:00 Oxytocin to accelerate or induce labour: Time for reflection and standardization
Michael Robson, Ireland

10:00-10:20 Coffee break

10:20-11:50 SCREENING TO ALL BY EVERY TOOL?

RTD with panelists and audience

Moderators **Dan Farine**, Canada
Michael Robson, Ireland

Discussants: **Chiara Benedetto**, Italy
Arie Franx, The Netherlands
Gerard H.A. Visser, The Netherlands
Diogo Ayres de Campos, Portugal

Questions to the panel and audience:

1. Screening for thyroid dysfunction
2. Screening for GBS, CMV, Bacterial vaginosis
3. Cervical length for all?
4. How many scans for anomalies are needed?
5. Screening for aneuploidy to all?
6. Should we screen for GDM before 24 weeks?
7. How to define well glycemetic control?
8. Vitamins, Omega 3 during pregnancy: Worth taking?
9. What is the optimal weight gain? Maternal risks
10. Exercise: What is OK and what is not
11. Immunizations in pregnancy: which? When?

Oral Presentations

Friday, November 11, 2016

Hall E

08:30-10:00 INFERTILITY

Chairpersons **Norbert Gleicher**, USA
Emina Ejubovic, Bosnia Herzegovina

COGI24-1392

The association between coenzyme Q10 concentrations in follicular fluid with embryo morphokinetics and pregnancy rate in assisted reproductive techniques

Ahmet Zeki Isik, Turkey

COGI24-1124

What have we learnt from extended culture of rejected day 3 cleavage stage embryos: A retrospective cohort study

Anat Hershko Klement, Israel

COGI24-1386 CD 138 immunohistochemistry in chronic endometritis in women with recurrent implantation failure after in Vitro Fertilization

Domenico Carone, Italy

COGI24-1168

The effects of male hyperinsulinemia on ivf outcome

Mahbod Ebrahimi, Iran

COGI24-1354

Pregnancy outcomes with double trigger compared to single trigger in antagonist IVF cycles

Rhythm Ahuja Gupta, India

COGI24-1368

Pioglitazone effects on oocyte and embryo quality and pregnancy rate in recurrent implantation failure in comparison with metformin in polycystic ovarian syndrome

Robabeh Taheripanah, Iran

COGI24-1135

The impact of oral long acting sphingosine-1-phosphate analogue on spontaneous follicle apoptosis ratio in a rat-model

Sezcan Mumusoglu, Turkey

COGI24-1213

Embryo transfer is a risk factor for massive postpartum hemorrhage and blood transfusion requirement

Shohei Noguchi, Japan

COGI24-1123

Changes in serum inhibin b levels throughout controlled ovarian hyperstimulation, rather than initial concentrations, are better predictors of ovarian response

Amir Wiser, Israel

10:20-11:50 FETOMATERNAL MEDICINE

Chairperson **Gerard H.A. Visser**, The Netherlands

COGI24-1360

A rare cause for acute abdominal pain in second trimester of pregnancy

Akalya Krishna, United Kingdom

COGI24-1349

Placental cyclophilin a expression in pregnant women with gestational diabetes mellitus

Akin Usta, Turkey

COGI24-1258

Flecainide as first-line treatment of fetal supraventricular tachycardia

Ali Ekiz, Turkey

COGI24-1452

Diagnosing gestational diabetes mellitus in the first or in the second trimester: What are the differences?

Ana Portela Carvalho, Portugal

COGI24-1272

Emerging evidence of metformin on the prevention and treatment of preeclampsia

Angga Wiratama Lokeswara, Indonesia

COGI24-1453

Renal transplantation and pregnancy: Experience of a portuguese center

António Braga, Portugal

COGI24-1189

Correlation between placental histological patterns and angiogenic factors in pregnancies complicated by hypertensive disorders of pregnancy and/or intrauterine growth restriction

Daniela Di Martino, Italy

COGI24-1192

Recurrent scar ectopic pregnancies – A case series of four patients and a review of the literature

Danya Chandrakumar, United Kingdom

COGI24-1143

Analysis and comparison of the pregnancies and perinatal outcome in adolescents and adult women in zenica-doboj canton in 2011-2014

Emina Ejubovic, Bosnia and Herzegovina



12:10-13:40 FETOMATERNAL MEDICINE

Chairperson **Diogo Ayres de Campos**, Portugal

COGI24-1228

Prenatal screening for morbidity adherent placenta: a comparative prospective study

Khalil Saffar, Tunisia

COGI24-1239

The effects of vaginal progesterone administration on the frequency of gestational diabetes mellitus and impaired glucose tolerance in pregnant women

Maryam Kasraeian, Iran

COGI24-1126

Status eclampticus – life threatening human pregnancy complication: Can we avoid it?

Marzena Laskowska, Poland

COGI24-1421

Is cervical stitch (cerclage) a standard for preventing preterm birth in triplet pregnancy?

Ons Kaabia, Tunisia

COGI24-1195

Perinatal results in women above 35-40 years of age in faculty hospital trencin

Peter Kascak, Slovakia

COGI24-1063

Spontaneous preterm birth and cervical length in a pregnant asian population

Serene Thain, Singapore

COGI24-1088

Laparoscopic transabdominal cervicoisthmic cerclage at second trimester; tips for safe procedure

Seung Hyun Lee, Korea

COGI24-1356

Controversial aspects of postpartum health: Longitudinal evidence from Pakistani women's health study

Samina Zafar, Pakistan

COGI24-1451

The effects of vitamin B1 on ameliorating of physical symptoms of the premenstrual syndrome

Sareh Abdollahifard, Iran

14:30-16:00 FETOMATERNAL MEDICINE

Chairperson **Fady I. Sharara, USA**

COGI24-1097

Eclampsia in a 26-year-old woman with the late-onset preeclampsia

Stella Kawilarang, Indonesia

COGI24-1226

Anticoagulation in pregnant patients with mechanical prosthetic heart valves: a clinical dilemma

Sumitra Pappala, United Kingdom

COGI24-1448

Association between hypertension in pregnancy and preterm birth

Sutra Khalishaputri, Indonesia

COGI24-1303

Significance of preconception counseling on the course of pregnancy in women with cervical ectopy

Vladislava Novikova, Russia

COGI24-1262

Some clinical characteristics of women with early severe preeclampsia

Vladislava Novikova, Russia

COGI24-1388

Clinical outcome and placental characteristics of early- and late-onset selective intrauterine growth restriction

Wang Xueju, China

COGI24-1326

The relationship between molecular mechanism of maternal iron deficiency and central nervous system function of neonatal

Yusrawati Wati, Indonesia

COGI24-1440

Neonatal outcomes following a trial of labour after cesarean delivery: A population-based study

Charles Edward Litwin, Canada

COGI24-1178

Prenatal attachment and social support in risk pregnancies

Yasemin Erkal Aksoy, Turkey



08:30-10:00 OBGYN

Chairpersons **Alessandra Graziottin**, Italy
Vladislava Novikova, Russia

COGI24-1111

Laparoendoscopic single-site surgery (less) for adnexal masses

Abdulaziz Alobaid, Saudi Arabia

COGI24-1157

Comparing the effect of different doses of piascledine and hormone replacement therapy on hot flushing of menopausal women

Athar Rasekh Jahromi, Iran

COGI24-1208

Assessment of problems in sexual function and quality of life during menopausal period

Ebru Gozuyesil, Turkey

COGI24-1038

Serum procalcitonin and proinflammatory markers in polycystic ovary syndrome

Ahmet Zeki Işık, Turkey

COGI24-1068

Surgical treatment of cervical pregnancy under transient occlusion of uterine arteries with an endoscopic vascular clip

Jae Young Kwack, Korea

COGI24-1279

Husband's smoking and the risk of spontaneous abortion or stillbirth in chinese females aged 20-49 years

Long Wang, China

COGI24-1045

Cervical pregnancy: Diagnostic and therapeutic challenges

Maja Aleksandra Kotlinska, United Kingdom

COGI24-1114

Double-blinded randomized controlled study for comparison of surgical rectus sheath and intrathecal morphine for postoperative pain control after caesarean section

Man-wa Lui, Hong Kong

COGI24-1373

Developing clinical rules to predict urinary tract infection in antenatal care settings. an economic analysis of an observational cohort study

Arumugam Jayanthi, United Kingdom

10:20-11:50 OBGYN/UROGYNECOLOGY

Chairperson **Mark Brincat**, Malta

COGI24-1175

Uterine malformations: is there a new gold standard in diagnosis?

Mariana Cruz Rei, Portugal

COGI24-1348

Resident trainees increase surgical time: a comparison of obstetric and gynecologic procedures in academic versus community hospitals

Megan McKeow, Canada

COGI24-1016

Conscious pain mapping using micro laparoscopy in egyptian women with chronic pelvic pain

Antonia Louise Courtney, Ireland

COGI24-1441

Fertility outcomes after ablation using plasma energy compared with cystectomy in women with ovarian endometrioma

Oana Mircea, Romania

COGI24-1302

Early predictive biophysical and serum markers of preeclampsia

Svetlana Olegovna Dubrovina, Russia

COGI24-1108

Effects and safety of using ammonium succinate supplementation on parameters of hormonal and lipid metabolism in perimenopausal and postmenopausal women

Yulia Uspenskaya, Russian Federation

COGI24-1131

Prevalence of episiotomy for vaginal births in a hospital in turkey and its effecting factors

Zeynel Abidin Erbesler, Turkey

COGI24-1174

Efficacy of vaginal and laparoscopic sacrocolpopexy (VLSC), a dual approach to utero-vaginal prolapse, compared with laparoscopic sacrocolpopexy (LSC) alone

Ariel Aharoni, Israel

COGI24-1107

Prevalence of urinary incontinence and its effect on quality of life in married women

Gökçe Demir, Turkey



12:10-13:40 HPV/ONCOLOGY

Chairperson **F. Xavier Bosch**, Spain

COGI24-1043

The determination of the knowledge levels of women who undergo regular Pap Smear tests on HPV infection and vaccination and their attitudes towards the early diagnosis of cervical cancer: A case control study

Dilek Coşkuner Potur, Turkey

COGI24-1077

Knowledge of midwifery students in central of turkey about hpv infection and vaccine

Fikriye Yasemin Özatik, Turkey

COGI24-1096

Clinical performance of HPV16/18 genotyping, reflex cytology and P16/ki-67 dual-stained cytology to triage of HRHPV+ women: Pilot nested in the scottish pavidag study

Grazyna Stanczuk, United Kingdom

COGI24-1069

New therapeutic method and treatment for hiv positive patients of both sexes with severe forms of genital warts with vaginal and anal localization radio wave therapy is bloodless technique which prevents professional exposure

Igor Jeremic, Serbia

COGI24-1160

Long-term probiotic administration to re-establish physiologic vaginal ecosystem: A real team-mate against hpv-infection

Lavinia Domenici, Italy

COGI24-1299

Innovative diagnostic panel for serous tubal intraepithelial carcinoma detection

Alexandra V Asaturova, Russia

COGI24-1170

Squamous cell carcinoma of the cervix, a retrospective study of 5 years

Filipa Rafael, Portugal

COGI24-1027

Breast and gynecologic cancer screening by ultrasound: Has this become an option for populations with limited resources?

Annina Wilkes, United States

COGI24-1059

An analysis of gynecologic oncology patients' and their midwives'/nurses' perception of individualized care

Esra Bükecik, Turkey

14:30-16:00 OBGYN

Chairperson TBA

COGI24-1122

Single-port laparoscopic surgery for management of salpingo-ovarian pathology: A single-center experience from Saudi Arabia

Kareemah M.Y Salamah, Saudi Arabia

COGI24-1373

Developing clinical rules to predict urinary tract infection in antenatal care settings. an economic analysis of an observational cohort study

Arumugam Jayanthi, United Kingdom

COGI24-1347

Prevalence and risk factors for domestic violence against infertile women in a Turkish setting

Asli Sis Celik, Turkey

COGI24-1129

Identification of the role, attitudes and perceptions towards gender of midwifery students at a college in turkey

Filiz Direk, Turkey

COGI24-1227

Effects of myoinositol in metabolic and cardiovascular profile of pcos women

Saghar Salehpour, Iran

COGI24-1053

Treatment continuation and satisfaction in women using combined oral contraception with norgestrel acetate and 17 β -estradiol: A multicenter, prospective cohort study (Bolero)

Angelo Cagnacci, Italy

COGI24-1339

Postpartum readmissions in centro materno-infantil do norte between 2014 and first half of 2016

Maria Lúcia Moleiro, Portugal

COGI24-1320

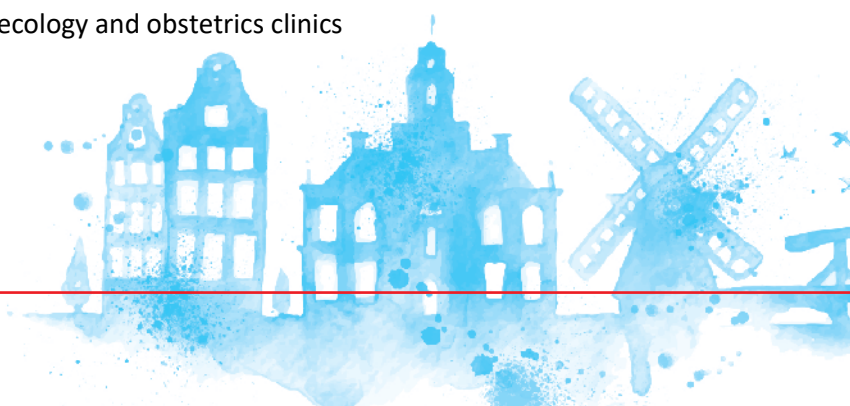
Use of traditional medicine and health practices in women's health in selected indigenous communities in the Philippines

Maria Stephanie Fay Samadan Cagayan, Philippines

COGI24-1218

Patient satisfaction on nursing care: The case of gynecology and obstetrics clinics

Meltem Akbas, Turkey



16:30-18:00 OBGYN

Chairperson **Attila Vereczkey**, Hungary

COGI-1161

Efficacy of pre-operative vaginal cleansing with povidone iodine in reducing post caesarean infectious morbidity

Minakshi Rohilla, India

COGI-1243

Mortality and causes of death in Finnish women with history of placental abruption

Outi Riihimäki, Finland

COGI-1334

Gestational diabetes mellitus, fetomaternal outcomes and impact on plasma 25(OH)D3

Yacine Soltani, Algeria

COGI-1458

Long-term risk of surgery for small bowel obstruction after cesarean delivery: a Danish nationwide cohort study 1978-2010

Julie Glavind, Denmark

COGI-1350

Health-related outcomes among women in the European Union and the United States using monthly-cycle oral contraception

Boxiong Tang, United States

COGI-1198

The predictive value of the self-sampling of human papillomavirus DNA for the diagnosis of CIN and Cervical Cancer

Natalia Artymuk, Russia

COGI-1138

Uterus-conserving treatment for early stage endometrial cancer; hysteroscopic resection just after bilateral tubal ligation followed by insertion of A Progesterone-Releasing Intrauterine Device

Keuna Kim, Korea

COGI24-1082

Clinical performance of Diafert® to determine granulocyte colony stimulating factor concentration in follicular fluid as a predictor of implantation during in vitro fertilization

Jean-Michel Foidart, France

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The prevalence of prescription type medicine, over-the-counter medicine and psychoactive substances in Danish pregnant women

Sissel Kramer Aagaard, Denmark

COGI24-1010

Neural tube defect with first trimester varicella Zoster infection

Mohamed Abdelgadir Garelnabi Abdelrahman, Ireland

COGI24-1429

Human papilloma virus: Impact on male fertility in men

Sareh Abdollahifard, Iran

COGI24-1433

The relationship between herpes-viral infections and male reproductive health

Sareh Abdollahifard, Iran

COGI24-1150

Correlation of laparoscopic findings with hysterosalpingographic diagnosis of bilateral incomplete distal tubal occlusion in patients with infertility at Zaria, Northwest Nigeria

Adebiyi Gbadebo Adesiyun, Nigeria

COGI24-1152

Ovarian drilling by mini-laparotomy route: A cost effective treatment approach for clomiphene citrate resistant polycystic ovary syndrome in low resource setting

Adebiyi Gbadebo Adesiyun, Nigeria

COGI24-1466

Blood loss during delivery by Caesarean section compared with vaginal birth

Fehmi Ahmeti, Albania

COGI24-1265

Complementary therapies used in labour pain management

Sevban Arslan, Turkey

COGI24-1267

The effects and results of infertility on sexual life

Sevban Arslan, Turkey

COGI24-1139

Innovative method for ovarian high-grade serous carcinoma prediction with secretory cells changes assessment in fallopian tube

Alexandra Asaturova, Russian

COGI24-1280

Structure of acute respiratory infections of pregnant women

Farida Mirzayevna Ayupova, Uzbekistan



COGI24-1367

There is a place for forceps application after a failed attempt to deliver by vacuum

Isaac Babarinsa, Qatar

COGI24-1463

Conservative management of morbidly adherent placenta: a case report and review of literature

Faisal Karim, United Kingdom

COGI24-1462

Motor neurone disease in pregnancy: A case report

Faisal Karim, United Kingdom

COGI24-1361

A rare case of ectopic pregnancy: When the surgeon makes the diagnosis

Joana Bernardco, Portugal

COGI24-1362

A special case of spina bifida apperta: Ultrasound makes it easier

Joana Bernardco, Portugal

COGI24-1313

Prevention of preterm birth in multiple pregnancy by using Arabin obstetric pessary

Olesya Bepalova, Russia

COGI24-1115

Continued versus discontinued oxytocin stimulation. Protocol of an RCT

Sidsel Boie, Denmark

COGI24-1338

Adnexal mass presented by increased abdominal volume in a woman in the third trimester of pregnancy: Case report

Rosário Botelho, Portugal

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Indications for cesarean delivery in women ≥ 35 years of age

Rosário Botelho, Portugal

COGI24-1445

Myasthenia gravis in pregnancy: Experience of a Portuguese center

António Braga, Portugal

COGI24-1153

Early pregnancy results with frozen oocytes; Optimism for women with POF

Maximilian Fancis Joseph Brincat, Malta

COGI24-1151

The effect of transdermal testosterone pretreatment on controlled ovarian stimulation and IVF outcome in patients with bad embryo quality in previous cycles as the last attempt to achieve a pregnancy with own oocytes.

Yolanda Cabello, Spain

COGI24-1285

Safety is a feeling and a culture: A questionnaire based survey from a north London district general hospital

Danya Chandrakumar, United Kingdom

COGI24-1379

Midwives' and nurses' state of internalization and practice of occupational roles within the scope of autonomy

Sultan Çiçek Alan, Turkey

COGI24-1289

Live birth rates following a single cycle of the augment treatment

Dan Nayot, United States

COGI24-1179

The epidemiology and risk factors of those who received surgery after C Sections in 3 year follow up

Dilek Coşkuner Potur, Turkey

COGI24-1233

Structural modification of pentoxifylline to improve the sperm function

Jagadeesh Prasad Dasappa, India

COGI24-1203

Labor induction in pregnancies complicated with different types of diabetes mellitus

Ekaterina Devyatova, Russia

COGI24-1311

Evaluation of clinical characteristics of endometrial polyps in patients with infertility

Jelena Dotlic, Serbia

COGI24-1329

Ovarian carcinoma during pregnancy: Patient characteristics and outcomes

Jelena Dotlic, Serbia

COGI24-1104

Safety of caesarean myomectomy in patients with single anterior wall and lower uterine segment fibroids

Ljiljana Radojic, Serbia

COGI24-1144

Kisspeptins and their effect on reproductive hormones: A review of literature

Emina Ejubovic, Bosnia and Herzegovina

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Periodontal disease and preeclampsia: Is there an association?

Ali Ekiz, Turkey



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Incidence, associated factors and influence of gestational diabetes on perinatal outcome before and after implementation of new who guidelines

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Yasemin Erkal Aksoy, Turkey

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Antenatal insulin treatment in gestational diabetes mellitus: associated factors and perinatal outcome

Ana Catarina Estevinho, Portugal

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Predictors of fetal macrosomia in gestational diabetes mellitus and perinatal outcome

Ana Catarina Estevinho, Portugal

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Pregnancy and multiple sclerosis: A retrospective study in a Portuguese tertiary center

Manuel Montezuma Fonseca, Portugal

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Screening for preterm delivery using vaginal Ph. and ultrasound cervical length measurement in population with signs and symptoms of threatened preterm delivery

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Behavioral tests suitable for infantile rat models of hyperthermic neonatal hypoxic ischemic encephalopathy

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Motor ability and anatomical assessment of neonatal hypoxic ischemic encephalopathy rat models with low oxygen load at high or normal ambient temperature

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Recurrence rate of preterm delivery: A retrospective study

Kurumi Iwaki, Japan

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Comparison of human chorionic oxytocin and gonadotropin efficiency in induction of ovulation and pregnancy in women with polycystic ovary syndrome admitted at Akbarabad hospital from 2013 to 2016

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Triplet pregnancy: is the perinatal outcomes related to the mode of conception?

Ons Kaabia, Tunisia

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Oxidative stress and antioxidant capacity in the primary ovarian insufficiency

Toshiyuki Kakinuma, Japan

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Ethambutol induces testicular damage and decreases the sperm functional competence in Swiss albino mice

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The usage of inosine pranobex in treatment of viral genitals infection

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Vaginal birth after cesarean: Is it safe? 14 years of experience

Peter Kascak, Slovakia

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Total abdominal hysterectomy of a hyperretroflexed uterus alleviate the partial obstructive ileus and defecation problem: A rare case report

Stella Kawilarang, Indonesia

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Standard practice and alternative treatment in pregnancy with red alloimmunization

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How to find missed needle during laparoscopic operation?

Sukyoung Baek, Korea

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Successful pregnancy following preventive salpingectomy after recurrent ipsilateral interstitial pregnancy (IP).

Maja Aleksandra Kotlinska, United Kingdom

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Cervical biomarkers as predictors of successful labor induction by Foley catheter

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The leadoff study comparing laparoscopy and laparotomy for the conservative surgical treatment of Adenomyosis

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Maternal serum MMP-2 in pregnancies complicated by IUGR in the course of severe preeclampsia.

Marzena Laskowska, Poland

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A 5-year experience of ultrasound guided aspiration and sclerosis with alcohol in recurrent endometriomas at a single tertiary university hospital

Jisun Lee, Korea

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Case series of successful treatment for symptomatic post cesarean section scar defect with hysteroscopic coagulation

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A rare case of intramural müllerian adenosarcoma arising in adenomyosis of the uterus

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Analyses of patients who opted for ovarian tissue cryopreservation and the outcome in Singapore general hospital

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Endometriosis in a twin pregnancy leading to massive hemoperitoneum and intrauterine death: A case report

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Successful medical treatment of an ectopic caesarean scar pregnancy with methotrexate

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Gastroschisis and omphalocele: A ten-year review at a tertiary care center

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Amniotic fluid matrix metalloproteinase-8 in relation to histologic chorioamnionitis with or without microbial invasion of the amniotic cavity

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Effects of intravenous propranolol for labor induction in women with rupture of membranes: A randomized controlled trial

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The effects of aromatherapy in childbirth: A review

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Doppler assessment of the uterine artery in pregnant women with risk factors, for the prediction of preeclampsia

Mihaela Daniela Oancea, Romania

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Assessment of serum and follicular fluid total oxidant and total antioxidant levels in in vitro fertilization (IVF) cases

Ozben Isiklar, Turkey

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Determination of adapting to pregnancy and coping styles with stress of pregnant diagnosed of hyperemesis gravidarum

Funda Ozdemir, Turkey

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Evaluation of the level of satisfaction of patients with the use of a newly marketed vaginal gel (Satisvag survey)

Santiago Palacios, Spain

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Comparative study of immuno protein profiles in cervicovaginal fluid between women with and without intra-amniotic infection in the preterm labor

Kyo Hoon Park, Korea

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A review of studies on the efficacy of herbal medicines for primary dysmenorrhea

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Assessment of ovarian reserve after hysterectomy: laparoscopic vs. non-laparoscopic surgery

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Determination RH D of the fetus from maternal blood

Snezana Plesinac, Serbia

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Cesarean delivery in gestational diabetes mellitus: Risk factors and perinatal outcome

Ana Portela Carvalho, Portugal

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Risk of cerebral palsy in relation to preterm birth

Svitlana Petrivna Posokhova, Ukraine

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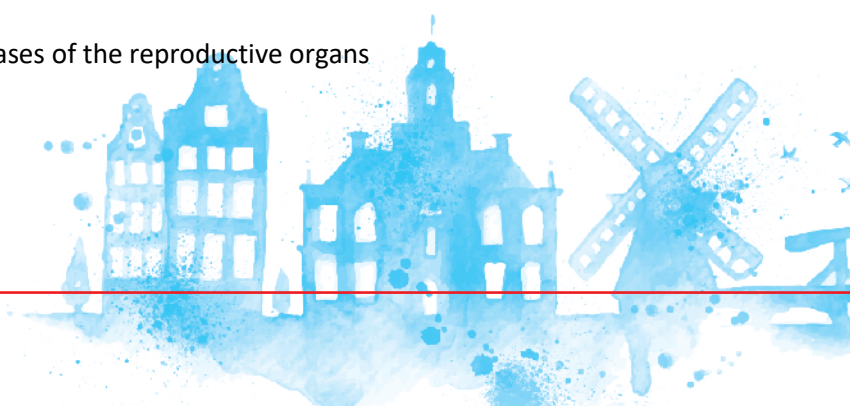
Correction of hormonal irregularities in woman with the benign proliferative diseases of the reproductive organs

Vira Pyrohova, Ukraine

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Patient preferences for FSH injection devices: a maxdiff analysis in seven European countries

Rainel Sanchez-De La Rosa, Spain

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Amniotic fluid erythropoietin in term and post-term births

Laura Seikku, Finland

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Does the use of hormonal contraception prior to ovarian superovulation(IVF/ICSI) affects pregnancy rate in GnRH antagonist cycles?

Farah Shakur, United Kingdom

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Thrombophilia gene mutations in relation to recurrent miscarriage

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Madalena Andrade Tavares, Portugal

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TVT-exact in the management of female stress urinary incontinence: A retrospective review over 1 year in a tertiary care hospital

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Selection of sperm without nuclear vacuole-like structures improves implantation potential of blastocysts in advanced maternal age: an indication for IMSI

Barbara Wirleitner, Austria

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Comparison of outcomes and costs of elective single blastocyst transfer versus double embryo transfer

Keryi Wong, Singapore

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Pregnancy, implantation and live birth rates of day 5 embryo transfer are dependent on the embryo morphology and age of patients.

Rui Shan Ruth Wong, Singapore

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Outcome of twin-twin transfusion syndrome complicated with selective intrauterine growth restriction after floc

Wang Xueju, China

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Comparison of adhesive glue and subcuticular stitch using none-absorbable material as wound closure method for cesarean delivery

Hanggoo Yun, Korea

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Atypical Ovarian Hyperstimulation Syndrome (OHSS): Bilateral pleural effusion as the only manifestation

Laura De La Fuente, Spain

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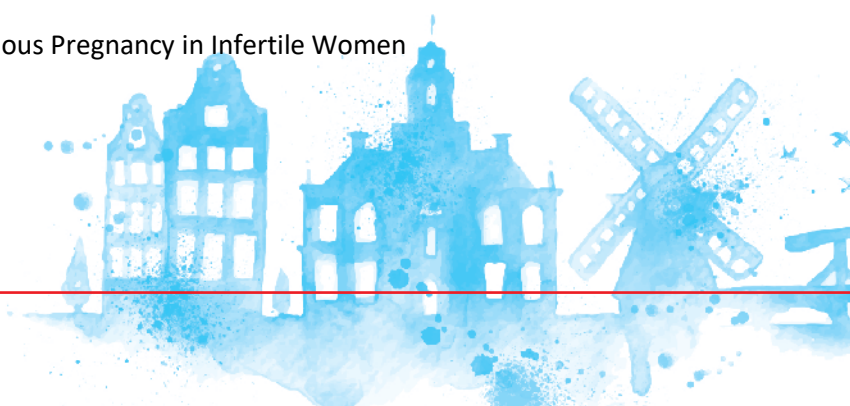
Insulin resistance and free androgen as predictors for ovarian hyper stimulation syndrome in non-PCOS women undergoing medically assisted reproduction: Evaluation of the optimum cut-off points

Roshan Nikbakht, Iran

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The effect of aminoguanidine on sperm motility and mitochondrial membrane potential in varicocelectomized rats

Mehdi Abbasi, Iran

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Can we do screening of GDM by using capillary blood glucose measurement

Farideh Akhlaghi, Iran

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Is there a difference between outcomes of the spontaneous natural cycle and hormone replacement treatment in frozen-thawed human embryo transfer?

Hüseyin Aksoy, Turkey

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Femoston (1.0 mg estradiol plus 5.0 mg dydrogesterone) for menopausal hormonal replacement in morbid obese women

Natalia Artymuk, Russia

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Adverse effects of nighttime lighting on conception and fetal development

Sakineh Gholamzadeh, Iran

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Investigation the medical malpractice claims in obstetrics and gynaecology

Sakineh Gholamzadeh, Iran

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A systematic study using a laser reveals differences in the blastocyst hatching rate and clinical outcomes between two different methods: classic assisted hatching (AH) and zona thinning (ZT)

Leyre Herrero, Spain

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Bo Hyon Yun, Korea

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The clinical efficacy of ablation zone based on pelvic MRI anatomy in the HIFU (high intensity focused ultrasound) treatment for adenomyosis

Min Woo Kim, Korea



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Evaluation of anti-müllerian hormone serum levels in each stage of endometriosis

Radek Kucera, Czech Republic

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What is the effect of hot season and cold season on sperm parameters?

Serdar Dilbaz, Turkey

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Reduction perinatal HIV transmission in Mexico: Analysis of three years and commitments for 2018

Francisco Javier Posadas Robledo, Mexico

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Unilateral primary fetal pleural effusion: A case of good prognosis

Ana Simao, Portugal

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Treatment satisfaction, adherence, and menstrual symptoms among women in five European union countries using monthly-cycle oral contraception

Marie-Christine Micheletti, USA

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Menstrual symptoms, satisfaction, adherence, health-related quality of life, and depression during monthly-cycle oral contraception among women in the European union and the United States

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Vincenzo De Vita, Italy

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Differential approach to the delivery in the cases of diabetic fetopathy

Ekaterina Devyatova, Russian

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Ovarian reserve in women with polycystic ovary syndrome according to the phenotype

Svetlana Ivanovna Elgina, Russian

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Vanja Fenzl, Croatia

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The crucial attitude to hormonal therapy prescription

Ludmila Yuryevna Karakhalis

Russian Federation

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Assessment of cytokine status in women using injectable contraception

Makhmuda Hamdamovna Kattakhodjaeva, Uzbekistan

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Comparative characteristics of some clinic-laboratory parameters in women at reproductive age using injectable contraceptives.

Makhmuda Hamdamovna Kattakhodjaeva, Uzbekistan

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Epidemiology of premature ovarian failure: Cross-sectional study in the non-selective sample of women of reproductive age

Iana G Nadeliaeva, Russian

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Early prognostic markers for future reproductive losses at PCOS

Liudmyla Semeniuk, Ukraine

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Gestational weight gains and peripartum cardiomyopathy in a twin pregnancy

Yutaka Iwaki, Japan

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The correlation of elevated second trimester maternal hemoglobin, blood viscosity and fetal weight at birth

Tatiana P Zefirova, Russian

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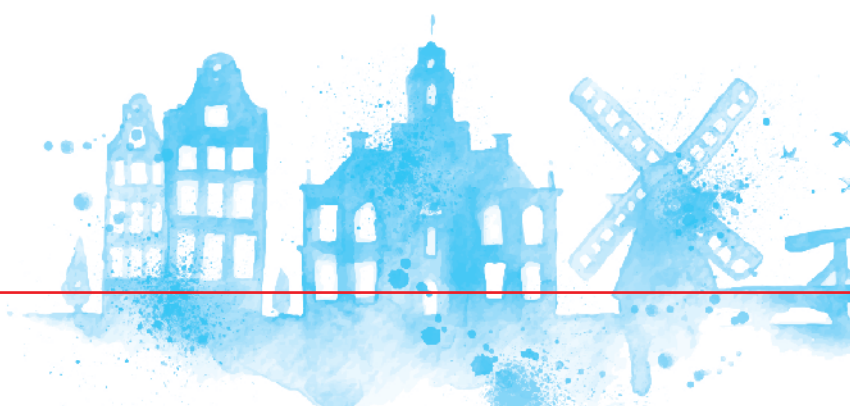
Non-invasive prenatal testing for aneuploidies in policlinic Sunce -Sarajevo

Aida Zujovic-Ajanovic, Bosnia and Herzegovina

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Family planning and contraception from the adolescence till the menopause

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INVITED SPEAKERS

Thursday, November 10, Hall A
PRE-CONGRESS SESSIONS

PRECONCEPTION CARE AND GENERAL HEALTH IMPLICATIONS
16:30-18:00

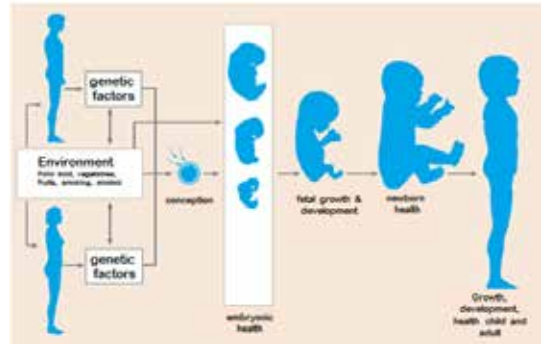
PRECONCEPTION CARE, PREGNANCY AND CHILD OUTCOMES

E.A.P. Steegers

Erasmus MC, Rotterdam, The Netherlands

Worldwide every year more than 275 million couples are contemplating pregnancy with approximately 130 million babies subsequently being born. This relative low success rate can be explained by subfertility in 13% of the couples, early pregnancy loss (30%), and clinical miscarriage (10%). Moreover, each year around 22 million of these babies suffer from preterm birth (9%), low birthweight (6%), and congenital malformations (2%). These adverse birth outcomes (BIG3) determine in 83% of perinatal mortality. Evidence of the last three decades is overwhelming that these birth outcomes are not only important for the health of the mother and her baby, but are also associated with health and disease risks during the life course. Therefore, perinatal mortality and morbidity represent the top of the iceberg of disparities in risks for adverse growth and development disorders as well as adult chronic disease. Until recently, epidemiological research has largely been focused on fetal size and growth trajectories in the second half of pregnancy in association with birth outcomes. However, most adverse reproductive and pregnancy outcomes appear to have an origin already in the periconception period (preconception period of 14 weeks before conception up to 10 weeks thereafter). Unfortunately, this is a largely neglected period of life by both the woman and her partner, but also by health care professionals and researchers. Therefore, providing new knowledge on the impact of periconception (non)modifiable conditions and exposures on embryonic growth and development as well as the underlying (epi)genetic mechanisms involved are essential. Societal valorization of such knowledge will contribute to the further development of preconception care. Preconception health: Recent insights reveal that maternal and paternal (genetic) conditions and environmental influences, such as maternal folic acid supplement use, dietary habits and lifestyle, affect the preconception maturation of the gametes and the growth of the embryo in early pregnancy (Figure). Poor quality of the female and male gametes, containing the genetic material of the future embryo, is associated with subfertility and BIG3 outcomes. Embryonic growth and development, is not the same but differs between women and pregnancies and are associated with environmental influences. Embryonic health is associated with fetal growth and birth weight of the baby. Moreover, being small as an embryo is associated with an increased risk of BIG3 outcomes. Embryonic growth restriction is also associated with an adverse cardiovascular risk profile in school-age children. The lasting impact of embryonic growth and development demonstrates the need for the general availability and accessibility of evidence-based preconception care. Impact of the periconception environment on growth and development of the next generation. Modified from Steegers et al. (Steegers EA. [Embryonic health and preconception care: importance for current and future generations. *Ned Tijdschr Geneeskd.* 2014; 158:A7373). Impact of the periconception environment on growth and development of the next generation. Modified from Steegers et al. (Steegers EA. [Embryonic health and preconception care: importance for current and future generations. *Ned Tijdschr Geneeskd.* 2014; 158: A7373) Preconception care: Preconception care should be regarded as one of the most important preventive care measures of the future. However, this can only be effective if target populations can

be reached in time, the risks can be identified in time, and the interventions are focused on the strongest and most common risks. Personalized tailored



interventions are shown to be most effective and are an example of precision medicine. Couples with subfertility problems are especially accessible for preconception care. Poor nutrition and lifestyle behaviors in women, but also in men during the preconception period, can result in impaired development, programming and functioning of gametes, embryo and placenta. This can contribute to short term adverse reproductive- and BIG3 outcomes, but also to subsequent sequelae for health during the life course. Therefore, responsibility should be taken by parents-to-be as well as health care professionals and governments to prevent these personal and modifiable risk behaviors already before conception or at least shortly thereafter. Because it is generally accepted that poor nutrition and lifestyle behaviors are extremely difficult to change the target groups should be empowered with easily accessible, personalized, individual and evidence based effective tools to accomplish this ambition. As adverse outcomes are also associated with socioeconomic circumstances and poverty, the public health importance of antenatal care should also be recognized. Because of the great need for personal and evidence-based nutrition and lifestyle coaching, the online Dutch platform Smarter Pregnancy (www.slimmerzwanger.nl) has been developed and launched in 2011. This is an online application on the smartphone or mobile phone in combination with internet connection via the computer for use by couples during the periconceptional and pregnancy period (UK version www.smarterpregnancy.co.uk/research). The challenge is now to implement such online platforms in health care which will also provide the opportunity of big data collection and as such will contribute to research. Preconception care is a nice example and opportunity of precision medicine, which is an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person. This approach will allow doctors and researchers to predict at the earliest moment in life more accurately which treatment and prevention strategies for a particular disease will work in various groups of people.

HUMAN MICROBIOME AND REPRODUCTION

A. Mor

Maimonides Medical Center, New York, USA

For more than 100 years, culture-based methods were used for isolation of microbes. Nowadays, cultivation-independent DNA sequencing methods are being used to detect colonization by microbes. The evolution of molecular approaches led to a paradigm shift in understanding about microbes, the human body, DNA, and the human microbiome. The introduction of cultivation-independent techniques, such as DNA sequencing, with the former knowledge derived from the classic cultivation-dependent techniques, has revealed surprising information that oftentimes contradicts what was considered to be factual only a decade ago. For

example, it has been shown that placental tissues derived from elective, term cesarean deliveries contained organisms in 70% of placental membranes. This finding indicates that the presence of microorganisms alone does not induce preterm labor. Cultivation-dependent and independent techniques have also broadened understanding of the spread and colonization of the normal human microbiome at different anatomic sites of the reproductive tract. For instance, the upper genital tract was previously considered to be sterile, but endometrial cultures obtained surgically at hysterectomy have demonstrated the presence of one or more microorganisms in the uterus in nearly one quarter of asymptomatic women examined. Furthermore, with the usage of advanced molecular biology techniques, there is additional evidence that the upper genital tract in asymptomatic women is not a sterile environment. These examples beg the question: what constitutes a balanced (symbiotic or commensal) microbiome, and what makes it a diseased, a parasitic, or harmful microbiome? Advanced technological tools in molecular biology have allowed researchers to “look deeper” into the microbiome world and have revealed an enormous amount of information that was not previously accessible. Technological breakthroughs, such as high throughput methods for DNA sequencing, led to a deeper level of understanding and new conclusions. For example, it is now accepted that the human body contains 1013–1014 symbiotic microbial cells, which outnumber our own body cells. Thanks to worldwide human genome and microbiome projects, we now know that there are 3.3 million microbial genes in the human gut microbiome alone, as compared with only 20,000–25,000 protein-coding genes present in the entire human genome. Within the past decade, with the newly gathered information provided by high throughput analyses, we begin to question what was previously considered impossible. Does the uterus have its own microbiome? Is the normal healthy fetus growing in a nonsterile environment? Is there a chance that the most common bacteria associated with chorioamnionitis are not isolable by culture? Are certain types of lactobacilli necessary for normal fecundity? These are only a few of the questions that have arisen in the field of reproduction.

INFERTILITY – HALL A

Friday, November 11

PCOS

08:30-10:00

IVF IN PCOS: THE PREFERRED OVARIAN STIMULATION PROTOCOL

B. C. Tarlatzis

Aristotle University of Thessaloniki, Thessaloniki, Greece

In infertile women with PCOS wishing to conceive, IVF can be considered if the first and second line treatment options have failed or if there are other additional causes of infertility, such as tubal damage or male subfertility. The meta-analyses have shown that PCOS women undergoing IVF have a higher chance for cycle cancellation and a higher number of oocytes retrieved than the non-PCOS women, but there was no significant difference in clinical pregnancy, live birth and miscarriage rates. On the other hand, PCOS women have a significantly higher risk to develop moderate and severe OHSS. The type of FSH used has no impact on the chances of pregnancy and OHSS, while the addition of metformin seems to decrease the risk for OHSS. The use of GnRH antagonists for suppressing premature luteinizing hormone (LH) surge is associated with a significant reduction in the incidence of OHSS as compared to GnRH agonists. In addition, it has made feasible the substitution of hCG with GnRH agonists and reliably eliminated the risk of clinically significant OHSS, due to the shorter duration of LH stimulation of corpora lutea as compared to hCG. This has changed dramatically clinical practice in ART, resulting in the virtual elimination of severe OHSS and the

development of the “OHSS free clinic” concept, increasing in this way the safety of ovarian stimulation for ART to the benefit of infertile couples. However, GnRH agonist triggering has been associated with a decreased chance of pregnancy, when embryo transfer is performed in the fresh cycle, probably due to the defective luteal phase from insufficient corpora lutea formation and function. To manage the problem of the decreased probability of pregnancy after GnRH agonist triggering in ovarian stimulation for IVF, it has been proposed to defer embryo transfer in a subsequent cycle. In this way, embryo transfer takes place in a normally developed endometrium with optimal chances to support implantation. The results from all available relevant studies, prospective and retrospective, in which GnRH agonist was used for triggering final oocyte maturation and no luteal phase support (“freeze all” strategy or donor patients), the incidence of severe OHSS was 0% (95% CI: 0 to 0). Moreover, the achievement of pregnancy in the frozen thawed cycles seemed to be very satisfactory. In a very recent large RCT comparing fresh versus frozen embryo transfer after agonist triggering in PCOS women, it was shown that frozen embryo transfers were associated with significantly higher live birth rates as compared to fresh and significantly lower incidence of pregnancy loss and OHSS. In conclusion, based on the available evidence, the preferred protocol for ovarian stimulation of PCOS women undergoing IVF is the use of GnRH antagonists to suppress premature LH surge, since it reduces the risk for OHSS and, in addition, allows to apply GnRH agonist triggering, which in combination with a freeze-all strategy, practically eliminates the occurrence of OHSS, while preserving very satisfactory live birth rates in the frozen thawed embryo transfer cycles.

OVARIAN STIMULATION

12:10-13:40

LH VERSUS HCG

M. Simoni^{1,2} and L. Casarini¹

¹Department of Biomedical, Metabolic and Neural Sciences, University of Modena & Reggio Emilia and ²Unit of Endocrinology, Azienda USL of Modena, Modena, Italy

The glycoproteins human luteinizing hormone (hLH) and chorionic gonadotropin (hCG) play a key role in embryo development and reproduction. In the female reproductive age, LH regulates ovarian cycle, ovulation and corpus luteum formation, while hCG maintains pregnancy and stimulates progesterone secretion. The gonadotropic action results from the opposite actions of life and death signals exerted by a complex intracellular cross-talk among multiple signaling pathways, resulting in the prevalent activation of either cAMP/PKA signaling, steroidogenic and cell death-related, or AKT/ERK1/2 signaling, anti-apoptotic and proliferation-related. Since they act on the same receptor (LHCGR), the two hormones were classically considered as equivalent in clinical practice, although molecular, biochemical, physiologic and evolutionary features differentiate the two hormones. Using recombinant hLH and hCG, we compared their activities at molecular level in vitro. Specifically, the cAMP, ERK1/2 and AKT activation, the expression of selected target genes and progesterone production were evaluated in primary human granulosa lutein cells (hGLC), in the presence or in the absence of specific inhibitors. Cell viability was analyzed in cell lines permanently expressing the LHCGR (hGL5/LHCGR). The steroidogenic PKA/cAMP pathway activation was 5-fold more potent upon hCG than hLH stimulation but hLH maximal effect was significantly faster than that of hCG. In hGLC continuous exposure to either gonadotropin up to 36 hours revealed that intracellular cAMP production is pulsatile and significantly higher by hCG versus hLH. Conversely, the activation of the proliferative and anti-apoptotic phospho-ERK1/2 and -AKT pathways was more potent and sustained by hLH vs. hCG. ERK1/2 and AKT inhibition removed the inhibitory effect on NRG1 (neuregulin) gene expression by hLH but not by hCG. ERK1/2 inhibition significantly increased hLH- but not hCG-



stimulated CYP19A1 (aromatase) expression. Analysis of cell viability in the hGL5/LHCGR cell line revealed that continuous stimulation by hLH increased cell viability increase versus controls, while hCG resulted in cell death over five days, depending on higher steroidogenic cAMP/PKA and lower ERK1/2 and AKT pathway activation mediated by hCG vs. hLH. The increase of CASP3 (caspase 3) gene expression over five days upon hCG stimulation confirmed these results. These results demonstrate that the steroidogenic- and cell death-related cAMP/PKA pathway is predominantly activated by hCG, while hLH stimulates proliferative/anti-apoptotic effects. These opposite effects of the two gonadotropins in vitro suggest the opportunity of re-considering the mechanism by which hLH and hCG regulate the follicular ovulation, corpus luteum maintenance progesterone and pregnancy maintenance in vivo. Finally, we recently demonstrated that co-treatment with a follicle-stimulating hormone (FSH) dose in the ART therapeutic range potentiates different LH- and hCG-dependent responses in vitro, measured in terms of cAMP, phospho-CREB, -ERK1/2 and -AKT activation, gene expression, progesterone and estradiol production in human granulosa-lutein cells (hGLC). In addition, we showed that, in the presence of FSH, hCG biopotency is about 5-fold increased, in the presence of FSH, in terms of cAMP activation. Accordingly, CREB phosphorylation and steroid production is increased under hCG and FSH co-treatment. LH effects, evaluated as steroidogenic cAMP/PKA pathway activation, do not change in the presence of FSH, which, however, increases LH-dependent ERK1/2 and AKT, but not CREB phosphorylation, resulting in antiapoptotic effects. The different modulatory activity of FSH on LH and hCG action in vitro corresponds to their different physiological functions.

WHERE AMH FITS INTO CONTROLLED OVARIAN STIMULATION

F.J. Broekman

University Medical Center Utrecht, The Netherlands

Assisted reproduction technology is increasingly applied as a treatment mode for couples with both explained and unexplained infertility. The first step in this treatment is the creation of multiple follicles with the purpose of obtaining the oocytes held within these follicles, creating embryos in the IVF laboratory and replacing the embryos into the uterine cavity. Controlled ovarian stimulation is mostly applied by using exogenous FSH. The response of the ovaries to this exogenous FSH exposure demonstrates a high degree of variation. From a clinical significance point of view, the poor ovarian response defined as the yield of less than 4 oocytes is related to a clearly unfavorable prognosis for live birth, although much of this poor prognosis is in fact dictated by female age. At the other side of the spectrum excessive response arbitrarily defined as obtaining more than 15 oocytes at pick up will increase treatment risks for the patient and may even slightly limit the rates of live birth. It is therefore that many clinicians across the world try to foresee the ovarian response category in order to adjust the stimulation protocol with the expectation that the ovarian response will be in the normal range (5-15 oocytes) and that by doing so the prospects of pregnancy for the couple will also improve. Studies on the effect of response prediction and adjustment of the stimulation protocol have shown conflicting results. Prediction of ovarian response category today is mainly applied by using the Antral Follicle Count or AntiMullerian Hormone in the early follicle phase. Both relate to the number of antral follicles present at any time and the source for the number of dominant follicles that could grow in results to the application of exogenous FSH. As such, these two tests have become the standard test for response prediction although factors such as female age and possibly body weight may add to this predictive information. Recent large controlled trials have demonstrated that with AMH based individualized dosing of the FSH preparation is not likely to alter the fate of the predicted poor responder but may help in reducing the risks of the predicted excessive responder. Unfortunately, the promises of earlier studies that individualized dosing would also affect live birth rates in the ART program as a whole have not been fulfilled. Specifically, in predicted poor

responders the actual occurrence of a poor response in spite of slight adjustments in the stimulation protocol it (with a maximum dosage of 225 IU per day) will mean that the couple is in a prognostic very unfavorable category. There the combination of low AMH and the first cycle poor response may help to decide whether continuation of the ART treatment is really feasible. The true gain however could be the management of the hyper responding patient in terms of safety and pregnancy prospects. The question then remains whether the AFC will be the prior screening test to select patients to undergo blood sampling for AMH assessment in order to confirm a sufficient risk of excessive response and apply reduced FSH dosage or antagonist co-medicated stimulation protocols.

ADENOMYOSIS

14:30-16:00

ADENOMYOSIS, ENDOMETRIOSIS: THE JUNCTIONAL ZONE AND REPRODUCTION

S. Gordts

Life Expert Centre, Leuven, Belgium

Morphologically, Adenomyosis is defined as an invasion of glands and stroma into the myometrium, which extends deeper than 2.5 mm from the endometrial junctional zone (EJZ). In 1920 Cullen defined Adenomyosis as endometriosis with predominantly presence of fibromuscular tissue. With the introduction and evolution of indirect imaging techniques, the diagnosis of Adenomyosis moved from a histological to a clinical entity. The advent of magnetic resonance imaging (MRI) and 3-D ultrasound heralded a turning point in the appreciation of Adenomyosis as an important disorder of the female reproductive tract. The systematic use of these techniques has enabled non-invasive visualization of distortions in the myometrial architecture, which facilitated the distinction between pathology of the outer myometrium and pathology of the inner myometrium or junctional zone (JZ). Like Endometriosis, Adenomyosis may present in various disguises, ranging from a simple JZ thickening to a nodular, cystic or diffuse lesion, involving the entire uterine wall. Recent advances in ultrasound technology have increased its diagnostic capabilities. In the diagnosis of Adenomyosis, ultrasound analyses have high accuracy, with a mean sensitivity of 0.72 (95% CI: 0.65-0.79), and a specificity of 0.81 (95% CI: 0.77-0.85), (6). However, ultrasound diagnostic performance is biased by the experience of the examiner. MRI also has a high diagnostic sensitivity of 0.77 (95% CI 67–85%) and specificity of 89% (6). MRI has the advantage of less dependence on operator experience, and the diagnosis is based on objective image findings. In patients with infertility, dysmenorrhea, and menorrhagia, the incidence of Adenomyosis is reported to be as high as 50%. Adenomyosis causes dysregulation of myometrial structures and alterations in endometrial function. Therefore, it is reasonable to hypothesize the existence of a relationship between Adenomyosis and reproduction. However, the mechanisms by which Adenomyosis may potentially impede fertility remain unclear. In baboons, Adenomyosis was associated with life-long infertility (3). Moreover, a recent study reported that, among patients with Adenomyosis, the clinical pregnancy rate decreased and the miscarriage rate increased after IVF treatments, compared to patients without Adenomyosis. The prevalence of Adenomyosis in patients with endometriosis is reported as high as 80.6 % and the presence of endometriosis in patients with Adenomyosis is 91.1 % (G. Leyendecker et al. Arch Gynecol Obstet 2014). Endometrial abnormalities are shared by both diseases like modified immune response, altered apoptosis, increased oxidative stress and alterations in enzymatic activities, increased cytokine and steroid production, increased angiogenesis and altered gene expression. In both diseases there is increased estrogenic activity due to increased presence of P450 aromatase in eutopic and ectopic endometrium. Both diseases are common in women at reproductive age, and are oestrogen dependent with regression at menopause and under suppression of estrogens. In both adenomyosis and endometriosis the increased

concentration of estrogens is causing a uterine dysperistalsis, which is at the basis of the extra cavity localization of endometrium due to retrograde menstruation in case of endometriosis and in case of Adenomyosis due to disruption of the lamina basalis. Adenomyosis and endometriosis share the same commonality of being wounds that undergo repeated tissue injury and repair. These continue process of tissue injury and repair (TIAR) in ectopic endometrium will ultimately result in fibrosis. Direction of peristalsis of the junctional zone is cycle dependent going from the cervix to the fundus in the late follicular phase and from fundus to cervix in the late luteal phase at the moment of menstruation. The junctional zone becomes symmetrical thicker as the peristaltic wave moves and can reach at the height of the wave a thickness of 12 mm (Leyendecker et al.) It has been demonstrated that in case of Adenomyosis and endometriosis these peristaltic waves are disturbed. This dysperistalsis together with the archimetrial compression by neometrial contraction causes the auto traumatization of the junctional zone. Most of the lesions can be found at the longitudinal midline of the uterus with extensions into the paramedian and fundal planes. Cystic Adenomyosis is frequently encountered at the cornual regions where intra-uterine pressure seems to be highest. The presence of these cystic lesions cannot be explained by a process of infiltration but are due to a dislocation of entire endometrial fragments. At MRI these cysts can be seen surrounded by own junctional zone without communication with the uterine cavity. Recent findings show the importance of platelet activation in endometriosis and Adenomyosis and more particular in fibrogenesis. Smooth muscular metaplasia (SMM) is present both in endometriosis and Adenomyosis. Endometriosis and Adenomyosis have been associated with an increased incidence of obstetric complications with a 2.42-fold higher incidence of premature labor (OR 95%CI 1.05-5.75) small gestational age, a 4.54-fold higher incidence of placenta previa (OR 95%CI 1.23-16.50), and further higher incidence of premature rupture of membranes, pre-eclampsia, small for gestational age (Hong Linn et al. 2015). It is therefore not impossible that the status of the junctional zone at the moment of conception is detrimental for a normal further evolution of a pregnancy. Conclusion: •It is still too early to know how important the abnormal endo-myometrium is compared to the myriad of other possible factors, but it seems more and more evident that the presence of an abnormal endometrium and junctional zone plays an important role in many pathological conditions observed in the female reproductive tract. •There is increasing evidence that a metabolically abnormal eutopic endometrium capable of invading both the peritoneal cavity and the myometrium is the uterine link between Endometriosis and Adenomyosis. •Abnormalities of the junctional zone at the moment of conception can be associated with impaired obstetrical outcome.

CLASSIFICATION OF ADENOMYOSIS

Grigoris F. Grimbizis

Aristotle University of Thessaloniki

Adenomyosis is defined as the presence of heterotopic endometrial glands and stroma into the myometrium with adjacent smooth muscle hyperplasia, thus having both a glandular and a muscular element. Histologically, it could range from mostly solid to mostly cystic. It could be either diffuse or focal, taking the form of adenomyoma or adenomyotic cyst. As adenomyomas are characterized grossly circumscribed nodules of hypertrophic and distorted endometrium and myometrium usually embedded within the myometrium. Adenomyosis could be present in polyps of endometrial cavity characterized by the presence of endometrial glands between smooth muscle bundles. Nowadays, the existence of ultrasound and Magnetic Resonance Imaging, two imaging techniques with high diagnostic accuracy and excellent correlation with histology, allows the mapping of the disease and its histologic elements in a non-invasive way. This makes the task of disease's classification feasible. Classification of adenomyosis should ideally be related with: (a) the clinical presentation and severity of the symptoms (abnormal bleeding, pelvic pain, effect on reproductive potential), (b) the disease aggressiveness and prognosis as well as (c) the selection of patients for the various treatment options. It might also be as much as possible: clear

in definitions, comprehensive and user's friendly and related, if clinically important, to the disease's pathogenesis. In 2008, based on MRI findings, Gordts et al proposed the first classification into inner myometrium hyperplasia, diffuse adenomyosis and focal adenomyosis. In 2014, for the needs of surgical treatment, Grimbizis et al proposed a more detailed system classifying the disease into: (a) the diffuse form, including the subgroup of inner myometrium smooth muscle hyperplasia with ectopic endometrium (increased junctional zone) and the subgroup of micro-dilated ectopic endometrial glands throughout hyperplastic myometrium (uterine wall adenomyosis), (b) focal adenomyosis including the subgroups of adenomyomas and cystic adenomyosis and (c) polypoid adenomyosis including the typical and the atypical forms. Another proposal came from Kishi et al (2012) dividing adenomyosis according to the geography of the disease into the intrinsic, the extrinsic, the intramural and the intermediate forms supporting the notion of different pathogenetic mechanism for each one of them. However, classification of adenomyosis still represents a clinical challenge due to the disease characteristics. It seems that the anatomical characteristics (including the uterine zone, the location and the extend of infiltration), the histological characteristics (glandular/muscular element, typical atypical forms), the pattern and other disease related extra-uterine findings might be potentially important parameters.

DIFFERENT SURGICAL OPTIONS OF ADENOMYOSIS

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Excision or destruction of the diseased tissue with concomitant maintenance of the healthy myometrium is the goal of any surgical conservative treatment. However, adenomyosis infiltrates myometrium and, thus, adenomyomectomy is always associated with concomitant removal of some amount of myometrial tissue. Classification of the currently available surgical techniques are based on how radical is the adenomyotic tissue removal in order to simultaneously preserve the functional integrity of the uterine wall. As complete excision of adenomyosis is defined the complete removal of all the clinically recognizable, non-microscopic lesions with maintenance of uterine wall integrity. On the other hand, as partial excision of adenomyosis, which is actually a cytoreductive surgery, is characterized the partial removal of the clinically recognizable non-microscopic lesions. In that cases, complete removal would lead to "functional" hysterectomy due to the concomitant excision of a critical amount of healthy myometrium. Polypoid adenomyomas and inner myometrium adenomyotic cysts should be treated hysteroscopically. Atypical forms need radical excision of the lesion and the underlying myometrium. Due to the disease characteristics and the difficulty in findings clear disease borders, various surgical techniques have been proposed, from the relatively "simple" classical adenomyomectomy (with the interesting modification of the overlapping flaps technique) to the more complicated "H" and triple flap techniques. Based on the currently available data, a post-operative ~50% pregnancy rate could be expected. Detailed pre-operative mapping with MRI in adenomyosis surgery is absolutely necessary. It seems that laparoscopic adenomyomectomy could be applied mainly for the treatment of focal forms. Furthermore, surgical treatment should be probably kept as an alternative only in well-organized centers with experience.

MECHANICAL INFERTILITY

16:30-18:00

IMPLICATIONS OF ADENOMYOSIS FOR INFERTILITY

V. Mijatovic,

VU University Medical Center, The Netherlands



Both endometriosis and adenomyosis were fully described in the 1920's by Sampson and Cullen. In the 1960's endometriosis gained a lot from the introduction of laparoscopic surgery. It revolutionized the diagnostic but also the therapeutic possibilities. Adenomyosis on the other hand, was only diagnosed up to the 1990's by the pathologist after hysterectomy. The introduction of MRI and transvaginal ultrasound in infertility clinic made it possible to make a diagnosis with an uterus in situ. By using these new imaging techniques, it became clear that adenomyosis is not only prevalent in women of the 4th decade but that is also prevalent in younger women showing prevalence's of around 20% on MRI. It became also clear that 30-50% of women with severe endometriosis also show adenomyosis on MRI. Is adenomyosis an infertility factor? The ideal population to study the prevalence of adenomyosis in relation to infertility would be a large cohort of patients with surgically proven unexplained infertility, but such data are unavailable. In the currently available literature we can only determine the prevalence of adenomyosis in infertile patients with surgically proven endometriosis. In this population the overall reported prevalence's of adenomyosis are ranging from 27% to 79%. The question "does adenomyosis have an influence on spontaneous conception" could ideally be answered by a large prospective study comparing natural conception rates in women with and without adenomyosis, who are otherwise similar. Unfortunately, such a study is nonexistent. However, the best data to answer this question are from a case-control study in baboons showing a negative influence on spontaneous conception. 37 cases of spontaneous adenomyosis at necropsy were compared with 37 controls with normal uterine histology. Two strong associations were found: 1. an association between adenomyosis and endometriosis, and 2. an association between adenomyosis and lifelong infertility. The second association was still significant even after endometriosis cases were excluded. Recently, a meta-analysis of nine observational studies was published. It concerned 5 retrospective cohort studies and 4 prospective cohort studies. Altogether including 1865 women. The meta-analysis showed a mean prevalence of 22% in women with a mean age of 36 years at IVF. Two studies established adenomyosis by MRI and seven by TVS. In most studies a variable proportion of the women had a diagnosis of concomitant endometriosis. Only two studies used a long-term GnRH agonist protocol prior to IVF. In women with adenomyosis a significant 28% lower pregnancy rate as well as a 2-fold risk of miscarriage was found in comparison to women without adenomyosis undergoing IVF. In addition, at meta-regression no association was observed between the prevalence of endometriosis and the likelihood of pregnancy. However, this does not rule out endometriosis as a confounder anyway. More research is needed on this topic. How to explain these observations? Which mechanisms could be involved? The literature suggests various biological mechanisms that may explain the observed adenomyosis associated infertility such as altered myometrial peristaltic activity, impaired implantation and altered decidualization. Especially interesting are the alterations in the endometrial immune environment since it is well recognized that macrophages have the capability of releasing embryo-toxic cytokines and reactive oxygen species. This may well play an important role in impaired implantation. Luckily, this unfavorable endometrial immune response can be reversed by long term GnRH agonist treatment. This effect is not exclusively apparent in adenomyosis but this response is also shared in women with endometriosis and uterine myoma. If we translated these data into clinical studies than this mechanism may explain why in two IVF studies using Long-term GnRH agonist pretreatment in subfertile women with adenomyosis, clinical pregnancy and miscarriage rates are better than in the studies using conventional IVF protocols.

IS EXPLORING THE UTERINE CAVITY IN ULTRASOUND ENOUGH? – YES

A. Tinelli

Vito Fazzi Hospital, Lecce, Italy

The presence of uterine pathology may cause a mechanical infertility, negatively affects women's fertility for the association to recurrent implantation failure, miscarriage and increased risk of subfertility, and endometrial polyps are among the most common intrauterine lesions,

especially in infertile women. The prevalence of unsuspected uterine pathology in asymptomatic women with implantation failure has been reported to be higher than 50%, generally identified at hysteroscopy in asymptomatic IVF population. Diagnosis and treatment of those abnormalities in infertile women is mandatory. Traditionally, trans-vaginal ultrasound (TVU) examination, hysterosalpingography and hysteroscopy can be all used as screening tests for the uterine cavity assessment before assisted reproductive technique (ART). When abnormality in the uterine cavity is suspected by TVU or hysterosalpingography, successive step is hysteroscopy, as therapeutic modality. Hysteroscopy is generally considered as the definitive diagnostic tool to evaluate any abnormality suspected on hysterosalpingography, TVU or saline hysterosonography during routine investigation of infertile patients. It allows also a directed biopsy and a therapeutic treatment of any diagnosed pathology. In addition, hysteroscopy provides information about atrophic, inflammatory and infectious lesions that may be responsible for poor reproductive outcomes in nearly 25% of sub fertile women. Summarizing, hysteroscopy is a safe test for the direct and accurate visualization of the uterine cavity, revealing the nature, location, shape, size and vascular pattern of any uterine cavity abnormalities, such as polyps, sub mucosal fibroids, differences in endometrial thickness and adhesions. There is an ongoing debate regarding the value of uterine cavity instrumental examination prior ART and currently there is no conclusive evidence of its benefit. The NICE guidelines suggest that women should not be offered hysteroscopy on its own as part of the initial investigation for infertility unless clinically indicated, whereas the European Society of Human Reproduction and Embryology guidelines for infertility investigations suggest hysteroscopy could be useful for confirmation and treatment of suspected uterine pathology. However, how to accurately detect intracavitary anomalies for infertility and reduce unnecessary hysteroscopy has been the key point for treatment. The 2D-TVU has been used for the assessment of uterine morphology and has been suggested as a first step for routine investigation in the evaluation of sub-fertile women and for detection of endometrial lesions for more than two decades. The 2D-TVU is widely used for the evaluation of the endometrium, assessment of tubal patency and detection of the disorders that may be related to infertility, such as pelvic inflammatory disease or endometriosis. The value of the 2D-TVU for the uterine abnormalities diagnosis is well known. One of the limits of 2D-TVU is that the distinction between the different types of anomalies is often impossible and the presence of a large number of false positives. Furthermore, due to the inability to obtain transverse sections through the long axis of the uterine fundus, the distinction between a normal and an arcuate or bicornuate or subseptate uterus is often hard on conventional transvaginal and transabdominal B mode scanning. Due to the limitations of current diagnostic methods, the final diagnosis has usually been achieved only by combining the results of two or more tests. The research development and continuous improvements in three-dimensional ultrasound (3D-US) have a significant impact on many areas of clinical application. The 3D-US exceeds uterine anatomical limitations that restrict the number and orientation of scanning planes, investigating any uterine section. The 3D-US permitted to clinicians to have the diagnosis of congenital uterine anomalies, adding a feasible, accurate and noninvasive outpatient measurements of the follicular, ovarian and endometrial volumes. In addition, the 3D-US reconstruction of the uterine cavity is largely performed without particular expertise in ultrasound diagnosis, and by a very low inter-observer and intra-observer variability. Thus, a uterine volume of a region of interest (ROI) can be acquired and stored by 3D-US, allowing to further analyze it by several available software, such as navigation, multiplanar display, and surface rendering or volume calculation (V.O.C.A.L.).

References:

1. Arslan M, Erdem A, Erdem M, Yazzici G, Himmetoglu O, Gursoy R. Transvaginal ultrasonography for prediction of pre-cancerous endometrial lesions. *Int J Gynecol Obstet* 2003; 80: 299-306.
2. Chan YY, Jayaprasadan K, Zamora J, Thornton JG, Raine-Fenning N, Coomarasamy A. The prevalence of congenital uterine anomalies in unselected and high-risk populations: a systematic review. *Hum Reprod Update*. 2011; 17:761-771

3. Demiral A, Gurgan T. Effect of treatment of intrauterine pathologies with office hysteroscopy in patients with recurrent IVF failure. *Reprod Biomed Online* 2004; 8: 590–594.
4. Faruqar C, Rishworth JR, Brown J, Nelen WL, Marjoribanks J. Assisted reproductive technology: an overview of Cochrane Reviews. *Cochrane Database Syst Rev*. 2015 Jul 15;(7):CD010537.
5. Gameiro S, Boivin J, Dancet E, de Klerk C, Emery M, Lewis-Jones C, Thorn P, Van den Broeck U, Venetis C, Verhaak CM, Wischmann T, Vermeulen N. ESHRE guideline: routine psychosocial care in infertility and medically assisted reproduction—a guide for fertility staff. *Hum Reprod*. 2015 Nov;30(11):2476–85.
6. Harger JH, Archer DF, Marchese SG, Muracca Clemens M Garver KL. Etiology of recurrent pregnancy losses and outcome of subsequent pregnancies. *Obstet Gynecol* 1983; 62:574–8.
7. Jarvela IY, Sladkevicius P, Tekay AH, Campbell S, Nargund G. Intraobserver and interobserver variability of ovarian volume, gray-scale and color flow indices obtained using transvaginal three-dimensional power Doppler ultrasonography. *Ultrasound Obstet Gynecol* 2003; 21: 277–28.
8. Jurkovic D, Geipel A, Gruboeck K, Jauniaux E, Natucci M, Campbell S. Three-dimensional ultrasound for the assessment of uterine anatomy and detection of congenital anomalies: a comparison with hysterosalpingography and two-dimensional sonography. *Ultrasound Obstet Gynecol* 1995; 233–237.
9. Karayalcin R, Ozcan S, Moraloglu O, Ozyer S, Mollamahmutoglu L, Batioglu, S. Results of 2500 office-based diagnostic hysteroscopies before IVF. *Reprod. Biomed. Online* 2010; 20: 689–693.
10. Kupecic S. The present and future role of three-dimensional ultrasound in assisted conception. *Ultrasound Obstet Gynecol* 2001; 18: 191–194.
11. Moini A, Kiani K, Ghaffari F, Hosseini, F. Hysteroscopic findings in patients with a history of two implantation failures following in vitro fertilization. *Int J Fertil Steril* 2012; 6:27–30.
12. NICE Guidelines - Clinical Guideline 11: Fertility: assessment and treatment for people with fertility problems. NICE, February. 2004; 48–49.
13. Pundir J, Toukhy El T. Uterine cavity assessment prior to IVF. *Women's Health* 2010; 6:841–848.
14. Raine-Fenning NJ, Campbell BK, Clewes JS, Kendall NR, Johnson IR. The reliability of virtual organ computer-aided analysis (VOCAL) for the semiquantification of ovarian, endometrial and subendometrial perfusion. *Ultrasound Obstet Gynecol* 2003; 22:633–639.
15. Roma Dalfó A, Ubeda B, Ubeda A Monzón M, Rotger R, Ramos R, Palacio A. Diagnostic value of hysterosalpingography in the detection of intrauterine abnormalities: a comparison with hysteroscopy. *AJR Am. J. Roentgenol*. 2004; 183(5): 1405–1409.
16. Rottem S, Timor Tritsch IE, Thaler I. Assessment of pelvic pathology by high frequency transvaginal sonography. In: Chervenak FA, Isaacson GC and Campbell S (Eds.). *Ultrasound in Obstetrics and Gynecology* 1993. Little, Brown and Co. Boston-Toronto-London, 1st. ed., cap. 155, pp. 1629.
17. Salim R, Jurkovic D. Assessing congenital uterine anomalies: the role of three-dimensional ultrasonography. *Best Pract. Res. Clin. Obstet. Gynaecol*. 2004; 18(1):29–36.
18. Soares SR, Barbosa dos Reis MM, Camargos AF. Diagnostic accuracy of sonohysterography, transvaginal sonography, and hysterosalpingography in patients with uterine cavity diseases. *Fertil Steril* 2000; 73:406–411.
19. Wu HM, Chiang CH, Huang HY, Chao AS, Wang HS, Soong YK. Detection of the subendometrial vascularization flow index by three-dimensional ultrasound may be useful for predicting the pregnancy rate for patients undergoing in vitro fertilization-embryo transfer. *Fertil Steril* 2003; 79: 507–11.
20. Wu HM, Chiang CH, Huang HY, Chao AS, Wang HS, Soong YK. Detection of the subendometrial vascularization flow index by three-dimensional ultrasound may be useful for predicting the pregnancy rate for patients undergoing in vitro fertilization-embryo transfer. *Fertil Steril* 2003; 79: 507–11.
21. Yaman C, Jesacher K, Pölz W. Accuracy of three-dimensional transvaginal ultrasound in uterus volume measurements; comparison with two-dimensional ultra-sound. *Ultrasound Med Biol* 2003; 29: 1681–4.

INFERTILITY – HALL B
Friday, November 11

BREAKING NEWS
12:10-13:40

BUILDING THE MAMMALIAN EMBRYO: CELL FATE AND PLASTICITY
M. Zernicka-Goetz
University of Cambridge, UK

Mammalian embryonic development progresses through successive cell fate decisions and intricate three-dimensional morphogenetic transformations. Pre-implantation development involves a series of cell fate decisions that is first initiated through a heterogeneity at the 4-cell stage and progressively lead to the specification of three blastocyst lineages by the time of implantation. I will describe our progress in revealing signaling pathways underlying the very first cell fate decisions to build mammalian embryo and how we can mimic these developmental events with different types of stem cells.

DEVELOPMENT OF THE HUMAN EMBRYO BEYOND DAY 7 IN A DISH
M.N. Shahbazi¹, Agnieszka Jedrusik¹, Sanna Vuoristo¹, Gaëlle Recher¹, Anna Hupalowska¹, Virginia Bolton², Norah M. E. Fogarty³, Alison Campbell⁴, Liani G. Devito², Dusko Ilic², Yakoub Khalaf², Kathy K. Niakan³, Simon Fishel⁴, Magdalena Zernicka-Goetz¹

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On the 7th day, the human embryo must implant in the uterus of the mother to continue its normal development, and failure to implant represents a major cause of early pregnancy loss. Due to the experimental hurdles to study early human post-implantation morphogenesis, the cellular and molecular changes that take place in human embryos during this phase remain poorly characterized. We have developed a culture method that allows visualization of human embryos developing in vitro beyond day 7th of development. Despite the absence of maternal tissues human embryos display a remarkable autonomous self-organization that was previously underappreciated.

GENE EDITING: FROM BENCH TO CLINIC AND BACK TO MORATORIUM?
14:30-16:00

ETHICAL ASPECTS AND MORATORIUM ON GENE EDITING IN EMBRYOS
H. Mertes
Ghent University, Belgium

In 2013 the new genome editing technique, CRISPR, was listed by Science as one of the major breakthroughs of the year. Since then, its development has exceeded all expectations and has resulted in the publication of the first application on human embryos in April 2015 (Liang et al, 2015). As many European countries have ratified the Oviedo-convention (Council of Europe, 1997) which explicitly forbids germ line gene modifications and embryo creation for research purposes, genome editing in human embryos is already de facto outlawed in these countries. However, also in countries which have no legislation in place, the genetic modification of human embryos using the CRISPR/Cas9 technique has stirred international debate and has resulted in a call for a voluntary moratorium on such research (Lanphier et al, 2015) or at least on its clinical applications (Baltimore et al, 2015), published in the two leading scientific journals Nature and Science, which reportedly both declined publication of the first genome modification in embryos based on ethical objections. Which are, however, those ethical concerns? And do those concerns legitimize a moratorium on all applications (both clinical and in the research setting) or only on clinical applications?

Research setting: The moral concerns related to research using genome editing are largely the same as those for other types of embryo research. Different kinds of moral status are attributed to human embryos and depending on this status, destructive research on embryos is either



perceived as permissible or impermissible (Mertes, 2012). This causes a great variety in the regulation of embryo research. Some countries completely prohibit the destruction of human embryos in research (e.g. Germany), some countries allow the creation of human embryos explicitly for research purposes (e.g. the UK) and most countries allow the destruction of spare IVF embryos in research, but not the creation of human embryos for research purposes (e.g. France). When embryo research is allowed, it is usually restricted to research aimed at important scientific goals, sound research protocols are required, alternatives need to be considered, oversight and transparency needs to be insured and of course, the progenitors of the embryos need to provide consent for their use in research. With regard to genome editing in human embryos, two elements need further attention: (a) donor consent and (b) the moral distinction between using spare IVF embryos and creating embryos for research purposes.

The decision whether or not to donate embryos for research is not only based on the attributed moral status, but also on the instrumental value attributed to the embryo, on knowledge about the research and on trust in the scientific community (Samorinha et al, 2014; Provoost et al, 2009). In other words, even if people attribute a relatively high moral status to their embryos, they might still be willing to donate them for research due to the fact that they find them too valuable to be wasted. However, they are more inclined to do so if they know which research project they will be used in and if they trust the researchers. As genetic manipulation is a sensitive issue for many people (cf GMO-debates), an explicit consent for the particular research project requiring embryo genome editing should be sought of the embryo donors, rather than a generic consent. Donors should have a clear understanding of what will be done with the embryos and for which purpose this will be done, in order to maintain trust. Oftentimes, however, research involving genome editing in human embryos will not be possible with donated embryos but will require the creation of embryos in vitro, as the procedure will be easier and more efficient in oocytes before fertilisation or in the very early embryo, whereas IVF embryos are frozen either at day 3 or day 5. As mentioned above, the creation of human embryos for research purposes is only allowed in a handful of countries worldwide, even if embryo destruction in itself is accepted by many countries. This distinction can be explained based on different arguments. First, one might argue that as spare IVF embryos will be destroyed anyway, the wrongdoing is not increased by using them in research, but if we create additional embryos for research purposes, the wrongdoing does increase. Second, one might argue that in IVF treatment, although a number of embryos are being destroyed, this is an unintentional side effect, whereas the same cannot be said when embryos are created in order to be used in research. Finally, one might see a morally relevant distinction in the extent to which a researcher is complicit in the wrongdoing of embryo destruction. However, all these arguments take for granted that the destruction of embryos in IVF treatment is unproblematic, although it is foreseeable and avoidable. Thus, these lines of reasoning can only be upheld on the condition that infertility treatment is considered to be a more valuable goal than the goals of embryo research (which will oftentimes also be infertility treatment). Clinical applications: Diseases - For clinical applications of genome editing in human embryos, a distinction is often made between applications to cure diseases on the one hand and applications to enhance a future child. For the correction of genetic disorders, the main concern is safety. Off-target mutations, on-target mutations with unforeseen effects and mosaicism all need to be avoided if genome editing is ever to become a clinical routine. For a large number of possible applications, PGD will remain a safer alternative. Also, this is a typical example of high tech personalized medicine, and thus elite medicine. Once the technology exists, it would be difficult to deny access to people who can afford it, but one can rightly wonder whether public funding should be invested in research which will only benefit the happy few. Another objection that is sometimes voiced is that there is no informed consent from the person who is treated, namely the future child and future generations. While this is true, it is commonly accepted that parents make medical decisions for their children in their best interest. Moreover, from the point of view of the future person, not intervening when a harmful

genetic condition is present, resulting in birth with serious disabilities while the technology is available, would also be a choice for which consent of the person involved is not obtained. As long as the best interest of the future child remains the central concern, it appears that lack of informed consent cannot be a valid argument against genome editing, if and when it becomes a safe technology. The same is true for the argument that germline gene modification would always be immoral. As long as everyone who inherits the changed traits is better off, it is strange to argue that we should only cure a disease in one generation, but not in all generations. Clinical applications: Designer babies - One of the reasons for opposition against clinical applications of genome editing in human embryos is the slippery slope towards designer babies. However, the prospect of designer babies is a very distant one as the genotype-phenotype-correlation is still poorly understood and even when certain gene functions are known, there is seldom a 1-on-1-relationship. There is no gene for intelligence, no gene for beauty, no gene for athleticism, oftentimes many genes impact on one trait and oftentimes one single gene has more than one function. Moreover, even if it would be possible, the legislator can still limit the possible applications, as is done today for PGD. In conclusion, in countries where embryo creation and destruction is allowed for basic research, there is no obvious reason why genome editing in embryos would not be allowed in a basic research context. However, many countries have outlawed the creation of embryos for research. For preclinical research the main question is whether or not the allocation of research funds, effort and embryos is warranted at present, especially as for many applications PGD is an established alternative. For clinical research, the main concern is safety. At present, it would be irresponsible to bring genome editing to the IVF-clinic, especially given the alternative of PGD (for most applications). However, if the technique of genome editing of embryos is perfected and becomes safe, for the rare cases in which PGD is not possible, it is difficult to provide a well-founded reason to oppose reproduction with genome editing to avoid the transmission of serious diseases. The slippery-slope towards designer babies is something to be considered, but at the same time rather unlikely. It should therefore not stifle debate.

References:

- Baltimore D, Berg P, Botchan M, Carroll D, Charo RA, Church G, ... & Greely HT. A prudent path forward for genomic engineering and germline gene modification. *Science* 2015;348(6230):36-38.
- Council of Europe. Convention for the protection of human rights and dignity of the human being with regard to the application of biology and medicine: Convention on human rights and biomedicine. 1997. Available at <http://conventions.coe.int/treaty/en/treaties/html/164.htm> (Last accessed Oct 1st, 2016).
- Lanphier E, Urnov F, Haecker SE, Werner M, Smolenski J. Don't edit the human germ line. *Nature*. 2015;519:410-411.
- Liang P, Xu Y, Zhang X, Ding C, Huang R, Zhang Z et al. CRISPR/Cas9-mediated gene editing in human triploid zygotes. *Protein Cell* 2015;6:363-372.
- Mertes H. Understanding the ethical concerns that have shaped European regulation of human embryonic stem cell research. *Proceedings of the Belgian Royal Academies of Medicine* 2012;1:127-139.
- Provoost V et al. Infertility patients' beliefs about their embryos and their disposition preferences. *Human Reproduction* 2009;24.4: 896-905.
- Samorinha C, Pereira M, Machado H, Figueiredo B, Silva S. Factors associated with the donation and non-donation of embryos for research: a systematic review. *Human Reproduction Update* 2014;20(5):641-655.

OVARIAN STIMULATION

16:30-18:00

Organized by The Turkish Society of Reproductive Medicine

INDIVIDUALIZED OVARIAN STIMULATION FOR ART

G. Bozdag

Hacettepe University, Ankara, Turkey

From the early ages of assisted reproductive technologies (ART), different protocols have been developed with different gonadotropin preparations at different dosages with or without gonadotropin releasing hormone (GnRH)

agonist or antagonist co-treatment. Various adjuvants have also been incorporated in controlled ovarian hyper stimulation (COH) protocols in an attempt to increase the efficacy and safety. However, there is no single COH protocol, gonadotropin dose or combination that can fit all type of patients. From this point, it is obvious that the treatment strategy should be individualized according to patients' characteristics. While individualizing the treatment strategy, high live birth rate should not be taken as sole outcome. Maintaining safety during the treatment and avoiding iatrogenic complications such as ovarian hyper stimulation syndrome and decreasing the treatment burden with less dose of injection and shorter duration of COH should be also considered while planning the further treatment.

INDIVIDUALIZED LUTEAL PHASE SUPPORT

A. Zeki Işık

Izmir University

Luteal phase has been found to be defective in Assisted Reproductive Technologies (ART) cycles since the early times of this technology. Main reason of this defect seems to be the supraphysiological steroid hormone levels in luteal phase of ART cycles where this leads to suppression of pituitary gland and in turn luteolysis and short luteal periods. Hence it was established that particularly progesterone support is necessary for a successful luteal phase. New developments in controlled ovarian hyper stimulation (COH) has raised the question of luteal support need in different clinical setting recently. A very recent meta-analysis revealed that luteal phase progesterone support is mandatory both in agonist and antagonist cycles. Adding estradiol seems not effective in most of the clinical settings other than frozen thaw cycles, analog trigger cycles and in some poor responder cycles.

Although HCG is an effective alternative to progesterone as a luteal phase support agent due to the risk of OHSS it is not preferred routinely. In the same meta-analysis adding GnRH analog as single or multiple doses to progesterone support was shown to be effective although the evidence was not a strong one. The way how progesterone was applied was shown to be equally effective for every form of progesterone. I.M. and vaginal progesterone routes seem to be equivalent however vaginal route is better tolerated by patients. Synthetic oral progesterone and s.c. route can be alternatives. No statistically significant differences were found between P4 start at day of hCG, oocyte retrieval or ET Therefore optimal time recommended for starting progesterone supplementation is within 24 to 48 hours after oocyte retrieval. Luteal phase support can be stopped in early pregnancy beyond the first positive pregnancy test or at the time of the detection of fetal heartbeat. There is insufficient data to establish the right time for discontinuation of the treatment. Modified luteal phase support is recommended for GnRH agonist triggered cycles. Adding small doses of LH, hCG have been found to improve the clinical pregnancy rates. In a recent study daily low dose rhCG supplementation was suggested instead of exogenous progesterone. Also intensive luteal phase support according to luteal estradiol and progesterone levels is an alternative strategy to achieve the optimal results. New data and developments are expected especially in the frozen thawed embryo transfer cycles, analog trigger cycles, poor responder cycles. Different treatment options might be better in different clinical settings. Therefore, luteal phase support should be individualized according patient and cycle characteristics. In this presentation data about the above mentioned features will be brought to the attention of the participants of the symposium in detail.

GYNECOLOGY – HALL C

Friday, November 11

URODYNAMIC INVESTIGATION IN SUI

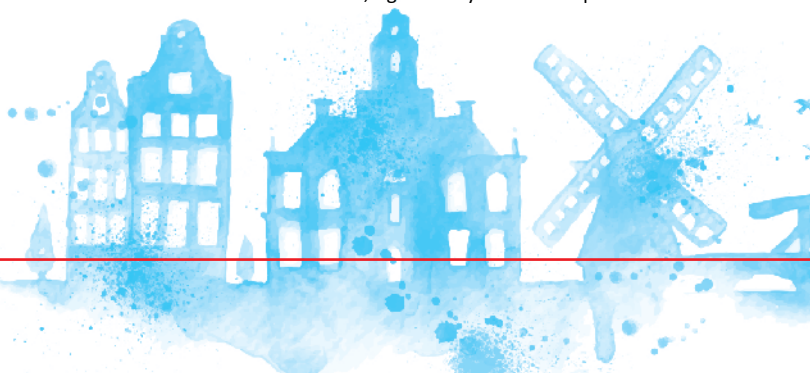
08:30-10:00

TREATMENT OF DRUG-REFRACTORY OVERACTIVE BLADDER (BOTOX, SACRAL NEUROMODULATION, TIBIAL NERVE STIMULATION)

L. de Kort

University Medical Center Utrecht, The Netherlands

Overactive bladder (OAB) syndrome is a bothersome symptom complex defined as urinary urgency, usually accompanied by increased daytime frequency and nocturia, with or without urgency incontinence, in the absence of urinary tract infection or other obvious pathology.¹ Although the exact prevalence is unknown, presence is thought to increase with age and is estimated in the United States to range from 7% to 27% in men and 9% to 43% in women.^{2,3} OAB and especially OAB with incontinence has a major impact on quality of life and has major socioeconomic impact. Diagnosis of OAB is primarily made on signs and symptoms. In patients with OAB, detrusor over activity may be found with urodynamic study. Determination of beneficial effect of treatment of OAB is not unambiguous and several parameters are being used for evaluation of treatment effect. Decrease in incontinence episodes, pad use, urgency episodes, number of voids per day or per night, or increase in quality of life may all be used as a measure. Comparison of efficacy of therapies for OAB is hindered by the variety in parameters. Antimuscarinic agents remain the mainstay of OAB pharmacotherapy. Antimuscarinics have been shown to be effective over placebo. However, side effects are frequent (dry mouth, constipation, blurred vision) and the median persistence rate is only 12.0% to 39.4% at 12 months, 8.0% to 15.0% at 18 months and 6.0% to 12.0% at 24 months.^{4,5} A few years ago, β_3 -adrenergics (mirabegron) were successfully introduced as an alternative to antimuscarinics for OAB management. The efficacy of mirabegron is comparable with antimuscarinic therapy.⁶ Tolerability is the same as with placebo, so more favorable than with antimuscarinics, although some caution is needed concerning cardiac arrhythmia and hypertension.⁶ Combination of an antimuscarinic agent and a β_3 receptor agonists appears to be more effective than monotherapy or placebo.⁷ An alternative for patient's refractory to pharmacological therapy is endoscopic injection of onabotulinum toxin type A (Botox) in the detrusor muscle. Onabotulinum toxin type A is a neurotoxic protein produced by the bacterium Clostridium botulinum and related species. It is a two-chain protein composed of a 100-kDa heavy chain polypeptide. Neuronal axons internalize the toxin and release of acetylcholine is inhibited. By inhibiting acetylcholine release, nerve impulses are blocked, causing a flaccid paralysis of muscles. From the end of the 20th century on Onabotulinum toxin A injection in the detrusor have been applied for neurogenic detrusor overactivity. Since 2013 the use of botulinum toxin A is also registered for idiopathic OAB. Cystoscopic injection of typically 100IU is done under local (preferably), spinal or general anesthesia with prophylactic antibiotic covering. Injection of Onabotulinum toxin type A in the bladder has been proved effective, especially for urge incontinence, and safe.⁸ Main side effects were post void residual, urinary tract infection and need for clean intermittent catheterization. Patients need to be willing to catheterize if necessary. Repeat injections every 6 to 12 months are needed to maintain effect. Neutralizing antibodies against Onabotulinum toxin type A, possibly leading to loss of efficacy, were very infrequently found after repeat injections, but should be considered if reiterated injections fail.^{9,10} Posterior tibial nerve stimulation (PTNS) is a minimally invasive, percutaneous method of peripheral sacral nerve stimulation used to treat OAB, 'invented' around 1980 in San Francisco by dr. Stoller. During the procedure, a fine needle electrode is placed near the tibial nerve near the medial malleolus. The needle electrode is connected with an external pulse generator which delivers an adjustable pulse to the sacral plexus via the tibial nerve, thus influencing afferent bladder function. The treatment protocol requires once-a-week treatments for 12 weeks, 30 minutes per session. Patients who respond to treatment may require occasional treatments (~ once every 3 weeks) to sustain improvements. The treatment is time consuming, but virtually without side effects besides minor needle related issues. Randomized studies on the effect of PTNS are sparse. A meta-analysis on the short term effect of PTNS in comparative studies showed that PTNS is effective in 37.3% - 81.8%, significantly better than placebo and



comparable with antimuscarinics but with fewer side effects. 11 Also long term PTNS might be suitable for maintenance treatment. Success rate in females in randomized studies is reported to be 54 to 93%.12 Sacral neuromodulation (SNM) was developed in London and Pittsburgh and approved in 1997 for urge incontinence and in 1999 for urgency frequency and non-obstructive retention. The exact mechanism of action of neuromodulation on micturition remains unclear. In theory, neuromodulation acts to augment inhibitory somatic afferents that are deficient in patients with OAB.13 Chronic stimulation of bladder afferents leads to changes in suprapontine regions that ultimately modulate micturition reflexes.14 In SNM patient selection is of utmost importance. For testing, needle electrodes are placed under local anesthesia and fluoroscopic control in the foramina of S3 and S4. Electrodes are connected with an adjustable generator and effect on bladder function is monitored. Unilateral or bilateral stimulation may be tried. Sensory and motor response of stimulation in the genitals and foot is monitored and especially motor response is predictive for success rate. Permanent electrodes are implanted in the OR, either 1 stage or 2 stage (electrodes tunneled subcutaneously when stimulation is successful). The overall initial response rate in randomized controlled trials of SNM for urgency/frequency and urge incontinence found to be 64% and 88% and 80% of patients had either 90% continence or a 50% improvement in urge incontinence in response to SNM.15,16 The procedure is considered safe with a low complication rate. However, lead migration occurs 16% of patients.16 Use of a tined lead is thought to reduce risk of migration. On the long term, patients who had an initial response after one year, had >50% reduction in symptoms in 84% (urge incontinence) and 71% (urgency/frequency) after 5 years.17 Older age and the presence of comorbidities appear to decrease the rate of treatment success with SNM.18 Onabotulinum toxin type A, PTNS and SNM are all second line minimally invasive therapies for patients with OAB. The optimal treatment for the individual patient depends on the preference of both patient and physician, and on local circumstances and availability of resources. Cost effectiveness studies show that SNM is comparable to onabotulinum toxin type A, however, differences in local circumstances and reimbursement systems will influence outcomes. 19,20 So, the device for daily practice is proper counselling and shared decision making.

References:

- Abrams P, Cardozo L, Fall M, Griffiths D, Rosier P, Ulmsten U, van Kerrebroeck P, Victor A, Wein A. The standardisation of terminology of lower urinary tract function: report from the Standardisation Sub-committee of the International Continence Society. *Neurourol Urodyn.* 2002;21(2): 167–178.
- Stewart WF, Van Rooyen JB, Cundiff GW, Abrams P, Herzog AR, Corey R, Hunt TL, Wein AJ. (May 2003). Prevalence and burden of overactive bladder in the United States. *World Journal of Urology.* 2003;20(6):327–336.
- Milsom I, Abrams P, Cardozo L, Roberts RG, Thuroff J, Wein AJ. How widespread are the symptoms of an overactive bladder and how are they managed? A population-based prevalence study. *BJU Int.* 2001;87(9):760–766.
- Novara G, Galfano A, Secco S, D'Elia C, Cavalleri S, Ficarra V, Artibani W. A systematic review and meta-analysis of randomized controlled trials with antimuscarinic drugs for overactive bladder. *Eur Urol.* 2008;54:740–763.
- Veenboer PW, Bosch JL. Long-term adherence to antimuscarinic therapy in everyday practice: a systematic review. *J Urol.* 2014;191(4):1003–1008.
- Chapple CR, Kaplan SA, Mitcheson D, Blauwet MB, Huang M, Siddiqui E, Khullar V. Mirabegron 50 mg once-daily for the treatment of symptoms of overactive bladder: an overview of efficacy and tolerability over 12 weeks and 1 year. *Int J Urol.* 2014;21(10):960–967.
- Abrams P, Kelleher C, Staskin D, Rechberger T, Kay R, Martina R, Newgreen D, Paireddy A, van Maanen R, Ridder A. Combination treatment with mirabegron and solifenacin in patients with overactive bladder: efficacy and safety results from a randomised, double-blind, dose-ranging, phase 2 study (Symphony). *Eur Urol.* 2015;67(3):577–588.
- Cui Y, Zhou X, Zong H, Yan H, Zhang Y. The efficacy and safety of onabotulinumtoxinA in treating idiopathic OAB: A systematic review and meta-analysis. *Neurourol Urodyn.* 2015;34(5):413–419.
- Naumann M, Carruthers A, Carruthers J, Aurora SK, Zafonte R, Abu-Shakra S, Boodhoo T, Miller-Messana MA, Demos G, James L, Beddingfield F, VanDenburgh A, Chapman MA, Brin MF. Meta-analysis of neutralizing antibody conversion with onabotulinumtoxinA (BOTOX®) across multiple indications. *Mov Disord.* 2010;25(13):2211–2218.
- Schulte-Baukloh H, Herholz J, Bigalke H, Miller K, Knispel HH. Results of a BoNT/A antibody study in children and adolescents after onabotulinumtoxin A (Botox®) detrusor injection. *Urol Int.* 2011;87(4):434–438.
- Burton C, Sajja A, Latthe PM. Effectiveness of percutaneous posterior tibial nerve stimulation for overactive bladder: a systematic review and meta-analysis. *Neurourol Urodyn.* 2012;31(8):1206–1216.
- Levin PJ, Wu JM, Kawasaki A, Weidner AC, Amundsen CL. The efficacy of posterior tibial nerve stimulation for the treatment of overactive bladder in women: a systematic review. *Int Urogynecol J.* 2012;23(11):1591–1597.
- Fall m, Lindstrom s. Electrical stimulation. A physiologic approach to the treatment of urinary incontinence. *Urol Clin North Am.* 1991;18(2):393–407.
- Amend B, Matzel KE, Abrams P, De Groat WC, Sievert KD. How does neuromodulation work. *Neurourol Urodyn.* 2011;30(5):762–765.
- Peters KM, Macdiarmid SA, Wooldridge LS, Leong FC, Shobeiri SA, Rovner ES, Siegel SW, Tate SB, Jarnagin BK, Rosenblatt PL, Feagins BA. Randomized trial of percutaneous tibial nerve stimulation versus extended-release tolterodine: results from the overactive bladder innovative therapy trial. *J Urol.* 2009;182(3):1055–1061.
- Brazzelli M, Murray A, Fraser C. Efficacy and safety of sacral nerve stimulation for urinary urge incontinence: a systematic review. *J Urol.* 2006;175:835–841.
- van Kerrebroeck PE, van Voskuilen AC, Heesakkers JP, Lycklama á Nijholt AA, Siegel S, Jonas U, Fowler CJ, Fall M, Gajewski JB, Hassouna MM, Cappellano F, Elhilali MM, Milam DF, Das AK, Dijkema HE, van den Hombergh U. Results of sacral neuromodulation therapy for urinary voiding dysfunction: outcomes of a prospective, worldwide clinical study. *J Urol.* 2007;178(5):2029–2034.
- Amundsen CL, Romero AA, Jamison MG, Webster GD. Sacral neuromodulation for intractable urge incontinence: are there factors associated with cure? *Urology.* 2005;66(4):746–750.
- Bertapelle MP, Vottero M, Popolo GD, Mencarini M, Ostaro E, Spinelli M, Giannantoni A, D'Ausilio A. Sacral neuromodulation and Botulinum toxin A for refractory idiopathic overactive bladder: a cost-utility analysis in the perspective of Italian Healthcare System. *World J Urol.* 2015;33(8):1109–1117.
- Arlandis S, Castro D, Errando C, Fernández E, Jiménez M, González P, Crespo C, Staeuble F, Rodríguez JM, Brosa M. Cost-effectiveness of sacral neuromodulation compared to botulinum neurotoxin A or continued medical management in refractory overactive bladder. *Value Health.* 2011;14(2):219–228.

HPV SCREENING AND SCREENING STRATEGIES 10:20-11:50

EUROPEAN GUIDELINES FOR ORGANISED CERVICAL CANCER SCREENING M. Arbyn

Unit of Cancer Epidemiology/Belgian Cancer Centre, Scientific Institute of Public Health, Brussels Belgium

Over recent years, a series of Cochrane reviews and meta-analyses were conducted in order to establish evidence on questions related to secondary prevention of cervical cancer, which were used to develop the second edition of the European Guidelines for Quality Assurance in Cervical Cancer Screening, published in 2008.1. These guidelines were pivotal to promote organized screening in the member states of the European Union. In these guidelines, evidence was recognized regarding superior accuracy (higher sensitivity and similar specificity to diagnose CIN2/3+) of hrHPV testing compared to cytology in two clinical indications: 1) triage of women with ASC-US and 2) follow-up after treatment for cervical precancer.2. It was recognized in 2007, when evidence of primary HPV screening was assessed that testing with high-risk HPV assays was more sensitive but less specific than cytology to detect precancer.2. However, it was judged that cross-sectional data was insufficient to recommend primary HPV-based screening, since it could not be proven that HPV testing mainly would generate overdiagnosis.1. Recently, longitudinal data from four randomized European trials were pooled which revealed a lower cumulative incidence of CIN3+ and of invasive cervical cancer in women who were at baseline hrHPV negative versus cytology negative in the first screening round (proof of higher efficacy)3;4. Moreover, when hrHPV-positive women were triaged with cytology, the detection rates of CIN3+ over the first and second screening round were comparable in the experimental and control arms, indicating a balanced amount of over-diagnosis.3. Based on these observations, HPV-based cervical cancer screening is recommended in EU

member states⁵. Equivalency criteria were established which new HPV assays have to demonstrate: good reproducibility and non-inferior accuracy for CIN2+ compared to the standard comparator tests which were validated in the randomized trials (HC2 assay and GP5+/6+ PCR-EIA assay)⁶. A list of assays fulfilling these criteria was published recently⁷. HPV testing has the additional advantage that it can be done on self-samples which shows similar accuracy compared to clinician-collected samples, under the condition that a validated PCR assay is used⁸.

Reference List:

- (1) Arbyn M, Anttila A, Jordan J, Ronco G, Schenck U, Segnan N et al. *European Guidelines for Quality Assurance in Cervical Cancer Screening. Second Edition - Summary Document. Ann Oncol 2010; 21(3):448-458.*
- (2) Arbyn M, Sasieni P, Meijer CJ, Clavel C, Koliopoulos G, Dillner J. *Chapter 9: Clinical applications of HPV testing: a summary of meta-analyses. Vaccine 2006; 24 (SUPPL. 3):S78-S89.*
- (3) Arbyn M, Ronco G, Anttila A, Meijer CJLM, Poljak M, Ogilvie G et al. *Evidence regarding HPV testing in secondary prevention of cervical cancer. Vaccine 2012; 30 Suppl 5:F88-F99.*
- (4) Ronco G, Dillner J, Elfstrom KM, Tunesi S, Snijders PJ, Arbyn M et al. *Efficacy of HPV-based screening for prevention of invasive cervical cancer: follow-up of four European randomised controlled trials. Lancet 2014; 383(9916):524-532.*
- (5) von Karsa L, Arbyn M, De Vuyst H, Dillner J, Dillner L, Franceschi S et al. *European guidelines for quality assurance in cervical cancer screening. Summary of the supplements on HPV screening and vaccination. Papillomavir Res 2015; 1:22-31.*
- (6) Meijer CJLM, Castle PE, Hesselink AT, Franco EL, Ronco G, Arbyn M et al. *Guidelines for human papillomavirus DNA test requirements for primary cervical cancer screening in women 30 years and older. Int J Cancer 2009; 124(3):516-520.*
- (7) Arbyn M, Snijders PJ, Meijer CJ, Berkhof H, Cuschieri K, Kocjan BJ et al. *Which high-risk HPV assays fulfil criteria for use in primary cervical cancer screening? Clin Microbiol Infect 2015; 21(9):817-826.*
- (8) Arbyn M, Verdoodt F, Snijders PJF, Verhoef VM, Suonio E, Dillner J et al. *Accuracy of human papillomavirus testing on self-collected versus clinician-collected samples: a meta-analysis. Lancet Oncol 2014; 15(2):172-183.*

SEX AND THE PELVIC FLOOR

14:30-16:00

THE PELVIC FLOOR AS SEXUAL ORGAN & MIRROR OF THE SOUL

R. H.W. van Lunsen, E. Laan

University of Amsterdam, The Netherlands.

Pelvic floor over activity is a multifaceted problem with medical, psychological, sexual, and relational sequelae. This presentation addresses the involvement of the pelvic floor muscles in sexual arousal and orgasm, as well as the relationship between pelvic floor over activity, sexual pain and symptoms/problems on "three outlets" (genital, rectal., urethral) in women and men. Pelvic floor over activity, which we conceptualize as an emotional response resulting from activation of the defensive stress-system by pain or by trauma, such as sexual abuse or insecure attachment, is both associated with impaired sexual arousal, desire and orgasm and vulvar and sexual pain. In primary life-long over activity of the pelvic floor traumatic experiences in childhood often are at the base of the problem. In pelvic floor over activity secondary to a period of dyspareunia/PVD it is the painful experiences and fear of pain that activate the defense mechanism of the pelvic floor. In all cases of pelvic floor over activity an integrated multifaceted biopsychosocial sexological approach is needed instead of one-track treatment modalities.

Literature:

1. van Lunsen RHW, Ramakers MJ, *The hyperactive pelvic floor syndrome (HPFS): Psychosomatic and psycho-sexual aspects of hyperactive pelvic floor disorders with comorbidity of uro-gynaecological, gastro-intestinal and sexual symptomatology. Acta Endoscopica, 32:275- 285; 2002*
2. Both S, Laan E, van Lunsen R, Weijnenborg P. *A new device for Simultaneous measurement of pelvic floor muscle activity and vaginal blood flow: A test in a non-clinical sample. J Sex Med. 2012;9:2888-902*
3. Laan E., van Lunsen R. *Overactive Pelvic Floor; Female sexual functioning. In A. Padoa, T.Y. Rosenbaum (eds.) The Overactive Pelvic Floor, Springer International Publishing Switzerland , 2016. p17-p31AN*

AN INTEGRATED APPROACH TO THE MULTIDISCIPLINARY TREATMENT OF SEXUAL PAIN DISORDERS

T. Rosenbaum

Individual and couples' therapist, Certified sex therapist

The pelvic floor is complex and multi-dimensional, and so too, are our patients. Addressing the distress of women who present with pelvic floor disorders, including vulvar and vaginal pain, confronts practitioners with the need to recognize the complexities of the psychosocial, relational and sexual, as well as the physiological complexities related to pelvic floor complaints. This has included recognizing that treating women with vulvar pain and overactive pelvic floor, and/or women unable to allow vaginal penetration or engage in sexual intercourse, means meeting them in their most intimate and vulnerable space. The word 'pudenda' is, in fact Latin for 'shame.' Pelvic floor over activity is a primary feature of sexual pain disorders. Pelvic floor over activity may be associated with musculoskeletal and neurological impairments as well as psychological distress and sexual abuse, and is correlated with symptoms that greatly affect quality of life as well as sexual function. As such, sexual pain frequently involves physiological and well as psychosocial factors. Traditional biopsychosocial conceptualizations compartmentalize the treatment by designating the physiological aspects to medical practitioners (physicians and physiotherapists) and the psychosocial aspects including anxiety and aversion, to mental health professionals (psychologists and sex therapists). Essential to the comprehensive treatment and management and validation of the medical components of sexual pain disorders is a physical examination by the physician. Yet, fear avoidance and anxiety, which fall under the domain of the mental health component of treatment, are significant characteristics of the patient's response to the physical examination, necessitating the physician to be skilled in addressing these psychological presentations in the clinic. Likewise, mental health practitioners who lack knowledge of the very real physical contributors to sexual pain may fail to validate to the women that the pain is indeed not 'all in her head.' This presentation will present an integrated approach to treating women with sexual pain disorders, by highlighting the specific roles of each member of the multidisciplinary team, while emphasizing that sensitive practice and an appreciation of physiological, psychological, relational and social factors be maintained by medical as well as mental health practitioners.

References:

- *The Overactive Pelvic Floor, Padoa, A, Rosenbaum, T (Eds) Springer Publications, 2016*
- Rosenbaum, TY, Barnard, E, Wilhite, M. *Psychosexual aspects of vulvar disease. (2015) Clin Obstet and Gyn Sep;58(3):551-5. doi: 10.1097*
- Rosenbaum, TY: *An integrated mindfulness-based approach to the treatment of women with sexual pain and anxiety: promoting autonomy and mind/body connection, Sexual and Relationship Therapy, Jo(2013) Journal of Sex and Relationship Therapy DOI:10.1080/14681994.2013.764981*
- Rosenbaum, TY. *Addressing Anxiety In-Vivo in Physiotherapy Treatment of Women with Severe Vaginismus: A Clinical Approach (2011) J Sex and Marital Therapy 37(2): 89-93*

FETOMATERNAL – HALL D

Friday, November 11

PREGNANCY AFTER INFERTILITY

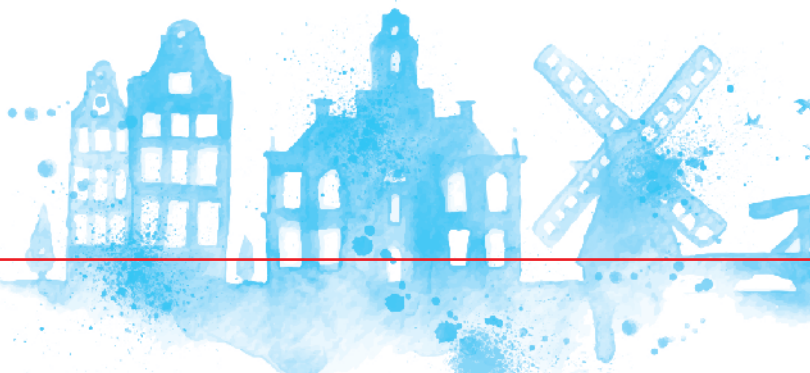
10:20-11:50

FROM ART TO OBSTETRICS: HOW TO AVOID MULTIPLE PREGNANCY?

F. I. Sharara

Virginia Center for Reproductive Medicine, Reston, VA

Multiple pregnancy is unfortunately an iatrogenic complication of ART. Despite significant improvements in ovarian stimulation and especially, laboratory technologies over the past several years, it has remained a



stubborn issue to tackle. The incidence of higher order multiples continues to decrease in Western countries, but the incidence of twin pregnancies remains stable in the US. Countries such as Australia, Belgium, and the Scandinavian countries have enforced a single embryo policy which have been successful in significantly reducing the incidence of twins. While the US programs have made significant strides, only about 25% of women < 37 have an elective single embryo transfer (eSET), an unacceptably low number. The complications associated with multiple pregnancies are many, including low birth weight, preterm labor, pre-eclampsia, gestational DM, NICU admissions, and perinatal deaths will be reviewed. Other less discussed complications include maternal depression, decreased quality of life, difficulty meeting needs, and increased marital dissatisfaction and divorce. The desire of couples to have twins will be reviewed, especially in countries where ART is not covered by insurance. The economic factor will also be reviewed. Data from our program regarding an innovative incentive to increase eSET use will also be addressed, along with the impact of the introduction of new PGS techniques on eSET uptake. It is also prudent to admit that what works, or can be enforced, in countries with public coverage for ART cannot be translated to other parts of the world. In less developed countries where ART is not just expensive but subpar in terms of success rates, and where higher order multiples is hailed as a success (rather than the failure it should be), it is still not uncommon to have multiple embryos transferred. It is the hope that this talk will generate a better cooperation between Reproductive Endocrinologists and Fetomaternal specialists that the ultimate success is one healthy baby at a time.

PREVENTION OF PREECLAMPSIA

SHOULD WE SCREEN FOR HYPERTENSION IN MOTHERS AND OFFSPRINGS AFTER BIRTH?

A. Bokslag and C. J.M. de Groot
VU University Medical Center

Cardiovascular disease (CVD) is the leading cause of death worldwide (1). Hypertension is often present years before CVD is clinically manifested. Increased blood pressure usually remains unnoticed and therefore left uncontrolled with subsequent risk of life-threatening complications like heart failure and stroke. Fortunately, with treatment and lifestyle changes, hypertension can be controlled to reduce these life-threatening complications. In women, clinical manifestation of CVD is different compared to the male standard. Although, diagnostic tests and procedures may be less sensitive and specific compared to men hypertension, plays a pivotal role for both in CVD (1). An important, recent developed "tool" to identify women at increased risk for hypertension and later CVD, is a complicated pregnancy by hypertensive disorders. Women who experience pregnancy induced hypertension or preeclampsia are considered to "fail" a stress test; pregnancy reveals vulnerability for several diseases including CVD (2). Sattar et al. described that women who develop hypertensive disorders in pregnancy have a higher pre-pregnancy vascular risk status described by increased endothelial dysfunction which will first manifest as a clinical syndrome during pregnancy (3). Subsequently, these women develop cardiovascular disease later in life at a younger age than women with uncomplicated pregnancies (4). Therefore, a hypertensive pregnancy disorder is useful as a diagnostic test for increased risk to develop CVD later in life, providing opportunities for strategies to prevent or postpone the (early) development of cardiovascular disease at a relative young age. Although recent guidelines described strategies for prevention of CVD, including lifestyle adjustments and pharmacotherapeutic options, in women after hypertensive pregnancy disorders, no randomized controlled trial has been performed comparing the effect of different preventive measures in these women to reduce cardiovascular risk. Important is the awareness and motivation of women at risk for these interventions while they have no clinical symptoms (yet). In children born to after a hypertensive pregnancy, the hypothesis of Developmental Origins of Health and Disease (DOHaD) might be applicable for long term development. These children are exposed

to a suboptimal intrauterine environment, which may permanently alter organ structure and function of the body's biological feedback systems and increase an individual susceptibility to diseases later in life (5;6) Recently, Pinheiro et al. reported in a meta-analysis contradictory outcomes of cardiovascular risk in offspring after intrauterine exposure of preeclampsia. Most studies found, in offspring exposed to intrauterine preeclampsia at the age of 9 to 17 years old, higher systolic blood pressure, other found higher diastolic blood pressure and some both (7;8). Kajantie et al. were the only to consider the severity of preeclampsia and found an increased risk of hypertension in adults exposed to severe maternal preeclampsia (6). We recently analyzed 465 mother-offspring pairs in a prospective follow-up study at the of age 19 and found in offsprings born preterm, also supposed a manifestation of suboptimal intrauterine environment, that neither maternal hypertension, gestational age nor birth weight have a substantial contribution regarding development of cardiovascular disease later (de Groot et al, communication). Conclusion: The answer to the question "Should we screen for maternal hypertension after birth?" is "yes" although evidence of which preventive measures is lacking for this group. For hypertension in offspring, born after a complicated pregnancy, literature is not fully convincing but follow up needs to be extended because hypothetically it is plausible

Reference List:

- (1) Stramba-Badiale M, Fox KM, Priori SG, Collins P, Daly C, Graham I, et al. Cardiovascular diseases in women: a statement from the policy conference of the European Society of Cardiology. *Eur Heart J* 2006 Apr;27(8):994-1005.
- (2) Craici I, Wagner S, Garovic VD. Preeclampsia and future cardiovascular risk: formal risk factor or failed stress test? *Ther Adv Cardiovasc Dis* 2008 Aug;2(4):249-59.
- (3) Sattar N, Greer IA. Pregnancy complications and maternal cardiovascular risk: opportunities for intervention and screening? *BMJ* 2002 Jul 20;325(7356):157-60.
- (4) Heida KY, Franx A, van Rijn BB, Eijkemans MJ, Boer JM, Verschuren MW, et al. Earlier Age of Onset of Chronic Hypertension and Type 2 Diabetes Mellitus After a Hypertensive Disorder of Pregnancy or Gestational Diabetes Mellitus. *Hypertension* 2015 Dec;66(6):1116-22.
- (5) Ehr von J, von Versen-Hoyneck F. Implications of maternal conditions and pregnancy course on offspring's medical problems in adult life. *Arch Gynecol Obstet* 2016 Aug 13.
- (6) Kajantie E, Eriksson JG, Osmond C, Thornburg K, Barker DJ. Pre-eclampsia is associated with increased risk of stroke in the adult offspring: The Helsinki birth cohort study. *Stroke* 2009 Apr;40(4):1176-80.
- (7) Pinheiro TV, Brunetto S, Ramos JG, Bernardi JR, Goldani MZ. Hypertensive disorders during pregnancy and health outcomes in the offspring: a systematic review. *J Dev Orig Health Dis* 2016 Aug;7(4):391-407.
- (8) Bokslag A, Van Weissenbruch M, Mol B, De Groot C. Preeclampsia; short and long-term consequences for mother and neonate. *Early Human Development* 2016;(Neonatal Update 2016).

INFERTILITY – HALL A

Saturday, November 12

THE ENDOMETRIUM: WHAT IS NEW?

08:30-10:00

NEW WAYS OF OVARIAN REJUVENATION

Herraiz S, Romeu M, Buigues A, Diaz-Garcia C, Martinez S, Solves P, Martinez L, Pellicer A.

Fundación IVI, Reproductive Medicine IIS La Fe, Hospital La Fe; Valencia, Spain

Nowadays up to 15% of European couples are considered as infertile, and thus require ART to achieve their desired motherhood. European women delay the age to childbearing due to the socio-economic changes experienced by our society. Therefore, the low ovarian reserve due to advanced maternal age is a major cause of human infertility. Then, interventions to ameliorate the reproductive potential of already aged gonads or poor responder (PR) women should be developed. Attempts to overcome PR have been so far focused on stimulating the ovaries. Many

Controlled ovarian stimulation (COS) protocols have been assayed but none of them has been proved to be successful, probably due to the low number of remaining antral, gonadotrophin-dependent, stimutable follicles within the ovaries. Previous studies suggest a positive effect of Bone Marrow derived stem cells transplant (BMT) on the ovarian niche of damaged ovaries and raise the possibility that dormant follicles, already present or somatic cells may benefit from a positive influence of the BM cells or soluble factors by their activation to growth. This concept is reinforced by the report of women who unexpectedly restore fertility after allogeneic BMT. In fact, similar approaches have been developed to regenerate tissues such as the endometrium and the myocardium, although these studies used CD133+ cells, the most undifferentiated population within the BM progenitor cells. Therefore, our purpose is to evaluate ovarian rejuvenation in PR women by BMT and to elucidate the underlying mechanisms to optimize the recruitment of resting follicles. The first phase of our proposal was a prospective pilot study with 10 PR women (NCT02240342). BM derived stem cells were mobilized to peripheral blood with a G-CSF and isolated by aphaeresis. Then, a volume of non-selected aphaeresis containing 50x10⁶ CD133+ cells was delivered into one ovarian artery by catheterism. Patients were considered as their own control as cells were injected in just one ovary while the contralateral was considered the control one. Serum AMH and AFC were monitored for up to 5 months and compared to basal levels. Then, BMT success criteria were established to determine the correlation between the treatment effects in PR patients and the analyzed components of the grafts. An increase in the AFC in the treated ovary (≥ 3 fol.) was considered the primary outcome while two consecutive increases in AMH levels was the secondary success criteria. When the preliminary results were assessed in the first ten patients recruited of our study, an improvement of the ovarian function was detected in 60% of the PR women underwent BMT. In fact, both criteria were accomplished by 30% of the recruited patients while 10% just reached the AFC increase and 20% the AMH improvement. The AMH rose was >200% of their baseline level in 80% of the PR. To elucidate the underlying mechanisms of this improvement, each sample was analyzed to establish the influence of the aphaeresis components on treatment success. Both the stem cell population distribution and the presence of soluble growth factors involved in stem cell signaling and oocyte growth, were analyzed. The CD133+CD34+ cell population has been previously proposed as essential to allow the cell engraftment and we found that higher concentration of this CD133+CD34+ subpopulation ($p < 0.05$) was detected in those patients where the AMH increased. Nevertheless, no association was observed between the total amount of CD133+ mobilized cells by patient and the BMT outcome, highlighting the fact that G-CSF administration per se could not be able to induce ovarian rejuvenation. Moreover, we also aimed to establish the association between AFC/AMH and the presence of plasma soluble factors released by BM stem cells. After analyzing samples by ELISA, we found that Fibroblast Growth Factor-2 (FGF-2) presence in plasma was positively associated with the improvement in both ovarian reserve biomarkers, the AFC ($p = 0.04$) and AMH level ($p < 0.03$) after BMT. Thus, FGF-2 circulating levels could improve follicle growth by activation of dormant follicles or regenerating the ovarian niche. Thrombospondin (THSP-1) concentration was also established and in all cases values were within the physiological range described for this molecule. Higher concentrations were associated with improved AFC ($r = 0.98, p < 0.01$). Nevertheless, its presence does not predict the AMH rise. The THSP-1 has a key role in ovarian angiogenesis and folliculogenesis and its presence in aphaeresis correlates with a positive outcome in the ovary, maybe avoiding an aberrant angiogenesis after the injection of hematopoietic precursor cells or by maintaining the follicular dynamics. Finally, to assess the BMT effects on the follicles and ovarian stroma, an animal model was developed. Human ovarian cortex from PR was xenografted into SCID mice ($n = 18$) and one week after, animals were injected via tail vein with: 1x10⁶ BMT cells, CD133+ cells or PBS (Control). Prior to injection, cells were labeled with MIRB to allow cell tracking. The presence and localization of cells, vascular and follicular densities and estradiol secretion in the ovarian grafts was then analyzed at 3 time points. We observed that injected cells were able to migrate into the ovarian xenografts from both BMT and CD133 groups since day 1. These cells

were mainly found near blood vessels and close to prenatal follicles, even in contact with granulosa cells. Although follicular densities were not different between groups, secondary follicles and a significant increase in the proportion of growing follicles (Control=12.5 \pm 10.5%; BMT=43.9 \pm 0.7%; CD133=43.8 \pm 6.2% were only observed in BMT and CD133 ovarian grafts. Furthermore, increased vascularization and E2 secretion (Control=1.1 \pm 2.1; BMT=11.8 \pm 5.6; CD133=3.1 \pm 2.9pg/mL) were detected in BMT and CD133 groups, when compared to control but only statistically significant in BMT group ($p = 0.03$, and $p = 0.02$ respectively).

We found that autologous BMT using a semi-invasive and easily reproducible technique enhanced AFC and AMH in PR patients, improving their reproductive potential. The concentration of soluble factors, such as FGF-2 and THSP-1, secreted by BM-derived stem cells could predict the BMT success and the distribution of cell populations will ensure the engraftment of transplanted cells in the ovary. Moreover, we showed that BMT cells were able to engraft in xenografted human ovarian cortex from PR where localized near blood vessels improving vascularization but also close to small pre-antral follicles inducing their development to secondary stages.

FERTILITY PRESERVATION FOR CANCER PATIENTS 10:20-11:50

THE CRYOTEC METHOD: THE NEW STRATEGY THAT MAKES 100% SURVIVAL RATE POSSIBLE M. Kuwayama

Repro-Support Medical Research Center, Japan

At first, clinical application of vitrification preservation was considered impossible, which fell behind remarkably in the effectiveness and safety of preservation compared to the slow freezing method. However, since the 1990's, efforts have aimed to lower negative effects of vitrification preservation, i.e. physical damage due to a cryoprotective agents of high concentration. Based on the vitrification theory of aqueous solutions, direct contact with coolant (conversion from closed to open system) as well as higher cooling speed rate due to minimization of samples, resulted in reduction of CPA concentration. With these findings was established a protocol that attains roughly 90% survival after preservation in any animal species. In humans, the presenter developed the ultra-rapid cooling vitrification method that aimed for 95% survival rate based on the method for bovine blastocysts (The Cryotop Method: 1999). As for oocytes were considered difficult to vitrify, the equilibration method was improved to raise the survival rate (Step-wise Method: 2002). To reduce the cost even more, the solution recipe was improved by reinvestigating the type and concentration of additives, and the method was improved to attain the same survival rate even with low concentration, which was spread as the standard method throughout the world with Japan being the center. For the past 15 years, due to vast clinical results exceeding 2,500,000 cases in over 75 countries, the vitrification method of open system developed by the presenter has been able to make >90% of human oocytes and embryos survive after vitrification, and besides it being extremely effective clinically, it had also proved that virus infection through liquid nitrogen did not actually exist. The last remaining challenge was to rescue valuable oocytes and embryos that still had led to death, and making improvements to a noninvasive vitrification method that makes saving possible for women in true difficulty and pain, from low-grade oocytes/embryos in older patients to oocytes in women with cancer. The strategy of 100% survival vitrification method consisted of decreasing cell injury due to osmotic pressure changes, considered to be the main adverse factor of the vitrification preservation method. Deciding to eliminate the primary factor that prevented oocyte and embryonic 100% survival led to the current vitrification method. In order to minimize the osmotic pressure failure, 1) converting to trehalose which has higher vitrification-forming ability in vitrification solution, 2) increased viscosity in vitrification solution, and 3) minimizing the CPA concentration have been implemented. In addition, on the cause of embryonic death with the current vitrification method, all negative factors were eliminated such



as 1) ambiguity in indicators of VS equilibration completion, 2) loading difficulty leading to excessive VS equilibration or improper VS drop shape and size, 3) bubble formation at the time of warming, and 4) flat-bottom plate leading to improper dilution or slowness. Thereby, the noninvasive vitrification method with a new protocol using new solutions and plates took place. This vitrification method was completed as the extremely effective and safe noninvasive vitrification method (The Cryotec Method: 2012) that attains approximately 100% survival rate after vitrification in oocytes/embryos derived from needless to say, general patients, and also in low-grade oocytes and embryos derived from older patients and cancer patients. Already >100,000 cases in 60 countries have been implemented especially in Europe and the U.S., and with this high survival rate and excellent clinical results, ordinary methods of advanced infertility facilities in the world are changing.

FERTILITY PRESERVATION: WHERE SHOULD WE GO FROM HERE? 12:10-13:40

FERTILITY PRESERVATION IN WOMEN: BALANCING RISKS VERSUS BENEFITS

A. Bos

University Medical Center Utrecht, The Netherlands

During the past decades, the survival of pediatric, adolescent and young adult cancer patients had improved considerably.¹ For this reason, issues related to the quality of life after cancer have gained increased attention in oncological care. Low fertility, infertility and early menopause rank high on the list of treatment side-effects that reduce quality-of-life in cancer survivors. The threat of experience of treatment-related infertility can lead to psychological distress² and many patients are interested in maintaining fertility and future reproductive function at the time of cancer diagnosis.^{3,4} International guidelines mentioned the need to discuss oncofertility.^{5,6} Sperm cryopreservation and the transposition of the ovaries outside the radiation field, embryo/oocyte cryopreservation are standard strategies for fertility preservation (FP) in male and female patients, respectively. Other strategies (e.g. pharmacological protection of the gonads and gonadal tissue cryopreservation) are considered experimental techniques.^{5,6} Although ovarian tissue freezing is still considered experimental, around 60 live births have been reported worldwide.⁷ In 2013 the American Society of Reproductive Medicine (ASRM) removed the experimental connotation of freezing oocytes.⁸ This opened the gate for clinics to offer this procedure to any women at risk for therapy- or disease-induced premature ovarian insufficiency and for women wishing to defer motherhood for other so called 'non-medical' or social reasons. The use of social freezing is increasing. This increase has been linked to a number of complex and interrelated reasons for delayed childbearing, including personal, professional, financial and psychological factor.⁹ This paper outlines medical, ethical, financial and societal implications of FP that are relevant in providing accurate and balanced information in counselling about FP for medical and non-medical reasons. Medical implications: The various PF options and their advantages and disadvantages for women will be discussed, including controversial topics as safety issues of controlled ovarian stimulation (a possible delay in cancer treatment initiation and a possible negative impact of ovarian stimulation on the prognosis of patients with hormone-responsive tumors in particular).¹⁰ Attention will be paid to safety concerns of pregnancy after (breast) cancer and the medical risks of pregnancy at an advanced age. Limited data are available concerning live births after oocyte vitrification. More than 1000 live births have been reported.^{11,12} The future has to show more about (long-term) safety issues. Ovarian tissue freezing may be a viable option, especially in prepubertal girls and when the treatment cannot be delayed. The technique requires no hormonal stimulation and can thus rapidly used. An important advantage of the cryopreservation of ovarian tissue is the possibility to store a large number of primordial follicles.¹³ After the autotransplantation of ovarian tissue, the ovarian graft restores the premenopausal hormonal

status, eliminating the need for hormone replacement therapy during the graft's lifespan. Alternative applications of cryopreservation and autotransplantation of ovarian tissue have been described, such as a technique to induce puberty after gonadotoxic therapy during childhood or a novel way of postponing menopause.^{14,15} Recently, a novel way of postponing menopause was described by transplanting the woman's own ovarian tissue cryostored during earlier reproductive years.^{16,17} The main goal of ovarian cryopreservation is fertility preservation, but grafting of ovarian tissue may also serve endocrine functions as a physiological solution to prevent the massive medical legacy of osteoporosis and menopause-related conditions in the ageing population.^{16,17} Social egg freezing offers two important benefits to women who anticipate becoming pregnant at an advanced age: it provides them the possibility of becoming a genetic parent using their frozen-thawed eggs and it reduces the risk of having children with chromosomal abnormalities associated with ovarian aneuploidy.^{18,19} Ethical implications: There are important ethical and consent issues that need to be explored and accepted before ovarian tissue cryopreservation (OTC) can be considered established in the young patient with cancer. The young patients themselves are usually unable to give informed consent for an experimental procedure. Therefore, in the case of OTC for young patients, informed consent is obtained from the parent or guardian.²⁰ For an experimental procedure to be ethical in a child it must be considered to be in the child's best interests. At the time of presentation, the patient is often unwell and may be at increased risk of bleeding and/or infection from a laparoscopic procedure. However, if the chances of a cure are good, and if future fertility is likely to be compromised, it may be considered to be in the best interests of the child to have their ovarian tissue cryopreserved for future use.²⁰ Recently, McDougall claimed that if we are taking seriously the idea that fertility choice is important to wellbeing, then health professionals, hospitals and the state have a range of ethical obligations to create an environment in which fertility preservation is a presumed element of treatment for a significant subset of pediatric cancer patients.²¹ Children and young people have the right to be involved in decision-making in a way that reflects their emerging autonomy.²¹ Female fertility preservation is still underdeveloped.²² Oncofertility counseling is established as a standard practice in the management of young women with cancer diagnoses, but too many patients are not being referred to reproductive endocrinologists. At the same time, gamete or ovarian tissue cryobanking continues to extend its indications and is now offered to patients at high risk of premature ovarian insufficiency due to non-malignant diseases and even in cases of genetic abnormality.²² This new field of reproductive medicine and biology raises many ethics issues in regards to the decision to collect gametes as much as their future use. Financial implications: Many insurance companies will cover fertility options as long as they are coded appropriately, using the cancer diagnosis.²³ Social egg freezing costs are in most countries not covered by health insurance programs. Reported costs range between \$5 000 and \$10 000 per stimulated cycle.¹⁹ These costs may include consultations, laboratory fees, medications, the egg retrieval procedure, freezing and storage. Given the high costs social egg freezing is very likely an option for only a small group of privileged women.¹⁹ Societal implications of social freezing: Social egg freezing uses medical technology to respond to a nonmedical problem namely natural aging.¹⁹ Physicians should therefore move beyond a discussion of the potential benefits, risks and financial costs to address societal implications. Examples are growing pressures on young women to freeze their eggs by the media, the portrayal of social egg freezing as a "back-up plan" or "fertility insurance", reinforcement of the social norms and expectations that construe motherhood as a central aspect of womanhood and the obscured influence of social structures that can contribute to delayed childbearing in the first place.¹⁹

References:

1. Childhood cancer survival statistics. *Cancer Research UK*. <http://www.cancerresearchuk.org/cancer-info/cancerstats/childhoodcancer/survival/>
2. Rosen A, Rodriguez-Wallberg KA, Rosenzweig L. Psychosocial distress in young cancer survivors. *Semin Oncol Nurs*. 2009 Nov;25(4):268-77.
3. Tschudin S, Bitzer J. Psychological aspects of fertility preservation in men and women affected by cancer and other life-threatening diseases. *Hum Reprod Update*. 2009 Sep-Oct;15(5):587-97.

4. Gorman JR, Bailey S, Pierce JP, Su HI. How do you feel about fertility and parenthood? The voices of young female cancer survivors. *J Cancer Surviv*. 2012 Jun;6(2):200-9.
5. Loren AV, Mangu PB, Beck LN, Brennan L, Magdalinski AJ, Partridge AH, Quinn G, Wallace WH, Oktay K; American Society of Clinical Oncology. Fertility preservation for patients with cancer: American Society of Clinical Oncology clinical practice guideline update. *J Clin Oncol*. 2013 Jul 1;31(19):2500-10.
6. Peccatori FA, Azim HA Jr, Orecchia R, Hoekstra HJ, Pavlidis N, Kesci V, Pentheroudakis G; ESMO Guidelines Working Group. Cancer, pregnancy and fertility: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol*. 2013 Oct;24 Suppl 6:vi160-70.
7. J. Donnez, M.M. Dolmans. Ovarian cortex transplantation: 60 reported live births bring the success and worldwide expansion of the technique towards routine clinical practice. *J Assist Reprod Genet*, 32 (2015), pp. 1167–1170
8. Practice Committees of American Society for Reproductive Medicine; Society for Assisted Reproductive Technology. Mature oocyte cryopreservation: a guideline. *Fertil Steril*. 2013 Jan;99(1):37-43.
9. Hodes-Wertz B, Druckenmiller S, Smith M, Noyes N. What do reproductive-age women who undergo oocyte cryopreservation think about the process as a means to preserve fertility? *Fertil Steril*. 2013 Nov;100(5):1343-9.
10. Lambertini M, Del Mastro L, Pescio MC, Andersen CY, Azim HA Jr, Peccatori FA, Costa M, Revelli A, Salvagno F, Gennari A, Ubaldi FM, La Sala GB, De Stefano C, Wallace WH, Partridge AH, Anserini P. Cancer and fertility preservation: international recommendations from an expert meeting. *BMC Med*. 2016 Jan 4;14:1.
11. Chian RC, Huang JY, Tan SL, Lucena E, Saa A, Rojas A, Ruvalcaba Castellón LA, García Amador MI, Montoya Sarmiento JE. Obstetric and perinatal outcome in 200 infants conceived from vitrified oocytes. *Reprod Biomed Online*. 2008 May;16(5):608-10.
12. Noyes N, Porcu E, Borini A. Over 900 oocyte cryopreservation babies born with no apparent increase in congenital anomalies. *Reprod Biomed Online*. 2009 Jun;18(6):769-76.
13. Demeestere I, Simon P, Emiliani S, Delbaere A, Englert Y. Orthotopic and heterotopic ovarian tissue transplantation. *Hum Reprod Update*. 2009 Nov-Dec;15(6):649-65.
14. Ernst E, Kjærsgaard M, Birkebæk NH, Clausen N, Andersen CY. Case report: stimulation of puberty in a girl with chemo- and radiation therapy induced ovarian failure by transplantation of a small part of her frozen/thawed ovarian tissue. *Eur J Cancer*. 2013 Mar;49(4):911-4.
15. Poirot C, Abirached F, Prades M, Coussieu C, Bernaudin F, Piver P. Induction of puberty by autograft of cryopreserved ovarian tissue. *Lancet*. 2012 Feb 11;379(9815):588.
16. Andersen CY, Kristensen SG. Response: transplantation of ovarian tissue to postpone menopause - is it really more advantageous for women's health than menopause hormone therapy? *Reprod Biomed Online*. 2015 Dec;31(6):828.
17. Andersen CY, Kristensen SG. Novel use of the ovarian follicular pool to postpone menopause and delay osteoporosis. *Reprod Biomed Online*. 2015 Aug;31(2):128-31.
18. Liu K, Case A. Advanced reproductive age and fertility. *J Obstet Gynaecol Can* 2011;33:1165–75.
19. Petropanagos A, Cattapan A, Baylis F, Leader A. Social egg freezing: risk, benefits and other considerations. *CMAJ*. 2015 Jun 16;187(9):666-9.
20. Wallace WH, Kelsey TW, Anderson RA. Fertility preservation in pre-pubertal girls with cancer: the role of ovarian tissue cryopreservation. *Fertil Steril*. 2016 Jan;105(1):6-12.
21. McDougall R. The Ethics of Fertility Preservation for Paediatric Cancer Patients: From Offer to Rebuttable Presumption. *Bioethics*. 2015 Nov;29(9):639-45.
22. Frydman R, Grynberg M. Introduction: Female fertility preservation: innovations and questions. *Fertil Steril*. 2016 Jan;105(1):4-5.
23. Woodruff TK, Smith K, Gradishar W. Oncologists' Role in Patient Fertility Care: A Call to Action. *JAMA Oncol*. 2016 Feb;2(2):171-2.

OVARIAN AGING

14:30-16:00

ASSESSMENT OF OVARIAN AGING

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In the past decades, postponement of childbearing has led to increasing rates of age-related female infertility, which is almost exclusively owing to changes in the ovaries. The age-related decrease in follicle numbers dictates the loss of menstrual cycle regularity and the final cessation of menses at menopause at the average age of 51 years. The parallel decay in oocyte quality gives rise to the gradual decline in fertility and the final occurrence of natural sterility. The latter is supposed to take place at a mean age of 41 years. These changes imply that if women postpone pregnancy until after

the age of thirty, the chance of being faced with infertility may increase up to 30%. Also, in order to have a chance of at least 90% to realize a two-child family, couples should start trying to conceive when the female partner is 27 years of age or younger. Unfortunately, medical treatment modalities such as IVF may only partly solve these problems, such that with the availability of IVF this age limit may be pushed towards 31 years. The pacing of the ovarian ageing process is highly variable among women. This is evident from the large variation in age at menopause. Very early menopause, as in premature ovarian failure (ovarian arrest before the age of forty years), may represent the extreme of this variation. In view of this large variation in reproductive ageing, the identification of women who have severely decreased ovarian reserve for their age is clinically relevant, as it may identify specifically those women who cannot afford to postpone their pregnancy until their thirties.

In view of all these issues, there may exist a need to have advance notice on the stretch of the reproductive lifespan for an individual woman. Since menopause relates strongly to the occurrence of natural infertility some 10 years earlier, long term prediction of menopause may help women to timely start attempts to have children. Markers that could inform in advance on the individual timing of natural infertility and menopause, may be family history (mother's age at menopause) and quantitative ovarian reserve markers, like AMH and the AFC. Most of these Ovarian reserve (OR) markers have been tested with various reference states, such as ovarian response to maximal ovarian stimulation in IVF, natural fertility expressed as the time to pregnancy, the occurrence of menopause, or the assisted reproduction induced fertility, expressed as the one cycle or one-year treatment chance of ongoing pregnancy. Markers for ovarian response in ART such as AFC and AMH have shown to be quite accurate, although their beneficial effect when coupled to altered treatment approach needs to be demonstrated. AMH has been claimed to be predictive of natural fertility, but these claims have not been confirmed in most studies. Studies on the relation between OR markers and age at menopause have so far been very promising. However, the correct prediction of extreme ages at menopause, as well as a lack in precision of the forecasts, may prove problematic. Recent studies on serial AMH measurements seem to demonstrate that the decline rate for AMH may be varying between individuals, and that in women with high age specific AMH, decline may accelerate in later life so that discrimination for the occurrence of the end state of menopause may be more troublesome than expected. Family history, as an expression of genetic makeup, may well remain the simple factor to take notice of. In assisted reproduction technology, OR markers have failed to discriminate the pregnant from the not pregnant IVF patient. They may however help to modulate the probability prediction for ongoing pregnancy within age classes. Thereby, the use of these OR markers seems to lie mainly in ovarian response prediction, with the subsequent possibility to adjust the stimulation dosage in order to obtain egg yields in the best range of normality. Recent studies on individualized dosing have indeed demonstrated such an effect, but without a benefit to the final purpose of treatment, namely live birth rates. Main messages:

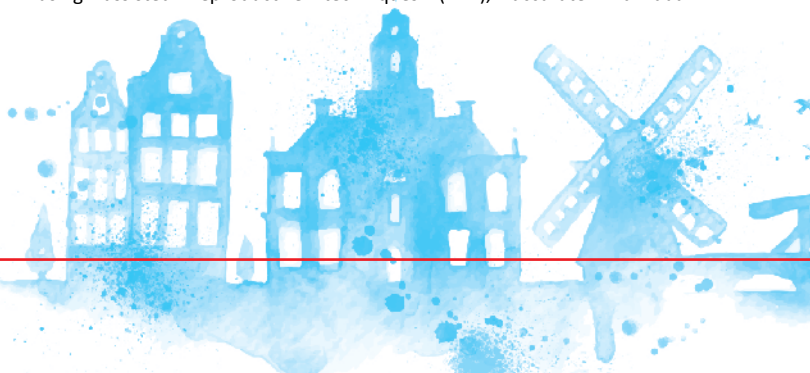
- Postponement of pregnancy leads to increased rates of couples that do not fulfil their desires on family building
 - Individual prediction of reproductive lifespan (RLS) may offer new solutions for this societal and individual problem.
 - The correct relation between fecundity and RLS has not been firmly established, as a correct marker for the quality aspect of ovarian reserve is missing.
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WHEN TO REVERT TO EGG DONATION

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Until what age should women perform an IVF cycle with their own oocytes? In a setting in which advanced reproductive aged women are increasingly using assisted reproductive techniques (ART), accurate individual



counselling regarding cumulative live-birth rates after undergoing one IVF cycle is of crucial interest for both patients and clinicians. The reproductive behavior is shifting worldwide. The availability of contraceptive methods, professional and financial issues, together with the lack of a partner, contribute to childbearing delay. In 2013, mean age at first child in Europe was 30.8 years, being Spain the country in the highest extreme (31.7 years). Due to the age-related fertility decline, this continuous postponement of motherhood leads to an increased risk of childlessness and of ART demand by women of advanced reproductive age. In fact, in Spain, 63.3% of the IVF cycles performed in 2012 involved women ≥ 35 years old. Nevertheless, it is widely known that IVF cannot fully compensate the age dependent decline in fertility. It has been described by several authors that age is the single most important factor in determining IVF success rates and, according to own unpublished data (analysis of 4483 embryo transfers), the turning point at which pregnancy rates significantly decline is 38 years old, which is in line with some classical publications. On the other hand, the number of IVF cycles performed in our Institution in women ≥ 38 years old is steadily increasing and comprises more than half of our IVF program. Studies assessing IVF outcomes in advanced reproductive aged women usually report results according to the number of oocytes retrieved, setting a fixed cut-off of 4-5 oocytes. Additionally, few take into account Cumulative Livebirth Rates (CLBR)'s and those that do consider CLBR's, either focus on women aged 40 and over, include several fresh IVF cycles or do not involve the resulting frozen embryo transfers (FET's). The purpose of this study was to analyze, in women ≥ 38 years old, the CLBR after a single IVF cycle (considering one fresh cycle plus the subsequent FET's) and to build a predictive model of CLBR according to age and oocyte yield. Our aims were, in essence, not different from patients' concern: "what is the chance of having a child if I go along this stimulation cycle"? This is a retrospective study of 6348 IVF/ICSI cycles performed in 4570 women. The study was carried out in a university-affiliated private fertility hospital. We will present the results obtained in each age group between 40-45 years. The Institutional Review Board (IRB) approved it.

INFERTILITY – HALL B

Saturday, November 12

ALTERNATIVE PERSPECTIVES ON INFERTILITY CARE

08:30-10:00

CONTEXT BASED INFERTILITY CARE

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Everybody is in favor of good infertility care. Doctors, nurses and infertile patients, all want that the right things will be done right. But, do they all agree about what good quality really means? Of course, infertility care should be safe, effective and efficient. The current idea is to start with scientific evidence, measure the different dimensions of quality, and base improvement on those measurements. This has led to an established science and quality industry with its own conventions and jargon. However, the first cracks in the system become visible. Firstly, professionals want to be meaningful in their work and find this in the relationship with patients, and not in anonymous quality systems or disciplining tools from managers. Secondly, the fundament of many quality tools, evidence-based medicine, is increasingly under discussion. What does group-evidence mean for the unique persons in front of you? How to deal with differences in the context of your population with the study population? Finally, there are questions about affordability, for patients and society as well. Despite many quality initiatives, the risk of overtreatment remains present, especially when the personal context is undervalued. Time for to rethink the concept of quality of infertility care and to determine the next steps. Quality journey: Let's start with my personal quality-journey as a fertility specialist. As a young doctor, I dreamt about being meaningful for couples with reproductive problems and decided to become a gynecologist. I learned a lot during my traineeship

and started my career in 1996 as a reproductive specialist in an academic IVF center. I was surprised by the absence of protocols, guidelines and indicators, and decided to change this. I made local protocols, became involved in the national guideline program and started a national IVF registry. However, transparency did not improve success-rates sufficiently and guidelines were hardly used. Therefore, I decided to focus on implementation. We did many studies on this topic, but the adherence to guidelines only marginally improved. That's why we chose an alternative strategy and put more emphasis on patients. We focused on patient-centered innovation, which gave a lot of energy but not the final answers. Quality appeared to be not the same for each patient. Every patient has a personal context that matters. Therefore, I decided to focus on the patient as a person. We developed personal health records, did studies on personalized decision making for the number of embryos and tried to personalize IVF by asking couples for their needs and preferences. These initiatives were promising, but also disruptive for current quality tools as guidelines and indicators, which are based on groups and not on the unique personal context of people. So I became confused. Quality tools had not brought me where I wanted to be. Personalization seemed promising, but wringed with the classic concept of quality. At the same time, I saw colleagues struggling with the gap between their dreams of helping people and the daily reality of disciplining quality tools. Left with an inconvenient feeling, and unsure where my 'Doctor's Odyssey' had led, I decided to consult a philosopher.

Philosopher: I discussed my dilemma's with Jur Koksma, a philosopher, who works at our university. Without overloading me with philosophical theories, he taught me a lot about the concept of quality of care. According to Koksma, quality is not a static concept based on objective and measurable facts. Quality is about how we make sense of the things that we observe in the outside world. It does not exist in that world, it exists in the hearts and minds of people. It is about good or bad; quality is a moral concept. It only becomes real if we talk about it with each other. Because human beings are all different (physically, psychologically, sociologically, et cetera), the moral judgement about quality is also different. That means that quality is not the same for everybody; quality is pluralistic concept that depends on the situational context of time, place and people. That implies that quality is not static, it is dynamic and changes over time. Koksma taught me that quality tools, like guidelines and indicators such as pregnancy rates, have a moral nature as well. The choice of an indicator and the tools we use to measure them are filled with moral judgements about what we think about good or bad. We should realize this when we have discussions about these so-called objective facts. The message of the philosopher was clear. Quality is not a static, objective and uniform concept. It is a dynamic, pluralistic and moral. There is not one quality, there are many qualities. Back to practice: So, facts do not exist and quality a pluralistic and moral concept? What does this mean for our daily practice? Should we end up in nihilism and stop all quality initiatives, such as improvement programs, ESHRE guidelines or IVF registries?

No, there is a way to proceed. We should not deny the complexity of the context of people; we should embrace it. We should be modest and realize that 'the' quality does not exist. Maybe it is helpful to redefine quality improvement as a journey without a clear destination. What could help us during this quality journey? How to work on quality in this new era where context of people is crucial? Maybe a travel kit with the following elements could be helpful:

1. Include different kind of people: patients, who know their own context best; doctors, nurses and other professionals, who are motivated to improve their work; payers, who have a legitimate role in saving societal costs; and young people, who are creative and have no vested interests.
2. Use all kind of sources of knowledges: not only evidence from the literature, but also local data, big data and stories of real people.
3. Fuzzy goals to create room for creativity, context of people and learning culture.
4. Use a compass of shared values, such as compassion, solidarity, autonomy.

In conclusion, the context of people is crucial for the way we try to improve the quality of our work. We should acknowledge this and start to explore the next steps.

INFERTILITY AND ITS IMPLICATIONS FOR COUPLES AND CHILDREN

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Infertility is a frequent reproductive disease, and in high-income, Western countries one in fourth to one in six couples are infertile in one or more periods during their reproductive years¹. Longitudinal cohort studies among couples in fertility treatment shows that 69-71% had achieved a live birth within 5 years after treatment initiation, either due to a treatment-related pregnancy or a spontaneous conception^{2,3}.

The mental well-being among children and parents in the “new families” (i.e., families created by different kinds of fertility treatment, lesbian and gay parents, single mothers by choice) have been studied extensively. Overall, children and parents have similar mental well-being compared to traditional families. However, contrary to expectations, quality of parenting in the new families, generally reflect a higher quality of parenting⁴. Explanations could be that parents in the new families are highly motivated for having children and that the children are planned. It is expected to be of importance for all human beings to know how they came into their family. We all construct a narrative identity, which is “the internalized and evolving story of the self that a person constructs to make sense and meaning out of his or her life”⁵. For children conceived due to the use of fertility treatment it is possibly of importance to know how they have been conceived. Infertility and fertility treatment are in many countries topics that are debated to a great extent in public settings including the medias. A majority of infertile parents have disclosed their infertility and treatment to (close) family, friends and colleagues⁶ and a majority of parents using donor gametes and having planned never to tell their child about conception had told at least one other person⁷. Despite this, a surprisingly high percentage of children born after a treatment-related pregnancy have not been told how they came into their family⁸. This recent systematic review and meta-analysis⁸ showed that overall only 23% stated that they have disclosed to their child, 44% intended to disclose, and 20% expressed they intended not to disclose in the future. Intentions to disclose is different from disclosing, and fewer parents disclose compared to having intentions to do so⁹. The meta-analysis of 26 studies showed no differences in parents’ disclosure among children younger than 10 years regarding whether the fertility treatment included use of donated gametes or not. However, in the studies covering offspring 10-22 years of age, significantly fewer had disclosed to offspring when donor gametes have been used⁸. Overall, there seems to be a paradox in how infertility and its treatment are well-known topics on a societal level while for many offsprings – the most important persons here – are kept as a secret. Parents’ reasons for disclosing is to be honest, that family secrets could be harmful, the risk of accidental disclosure from other people, and reasons for non-disclosing is to protect the child, that it is a private matter⁸. Studies have shown that late (i.e., after adolescence) or accidental disclosure is a risk factor for having negative consequences for the offspring compared to when children are told by their parents in preadolescence and in subsequent years^{10,11}. In conclusion, narrative identity is of importance for all people and it is reasonable to assume that an important part of narrative identity for offspring after fertility treatment includes knowledge about how they came into their family. A surprisingly large proportion of offspring after fertility treatment are not told and many parents are in doubt when and how to tell their children. It is of importance for fertility clinic staff and other health professionals to develop information on disclosing and to support parents in the disclosing process.

References:

1. Schmidt L. Infertility and assisted reproduction in Denmark. *Epidemiology and psychosocial consequences*. *Danish Medical Bulletin* 2006;53:390-417.
2. Pinborg A, Hougaard CO, Nyboe Andersen A, Schmidt L. Prospective longitudinal cohort study on cumulative 5-year delivery and adoption rates among 1338 couples initiating infertility treatment. *Human Reproduction* 2009;24:991-9.

3. Malchau S, Loft A, Henningsen AA et al. Long-term prognosis of live birth after ART, intrauterine insemination and spontaneous conceptions in women initiating treatment with homologous gametes – A Danish national cohort study. Annual Meeting, European Society of Human Reproduction and Embryology (ESHRE), Helsinki, 2016.

4. Golombok S. *Modern families. Parents and children in new family forms*. Cambridge: Cambridge University Press, 2015.

5. McAdams DP. Narrative identity. In: Schwartz SJ et al., eds. *Handbook of identity theory and research*. New York: Springer, 2011, pp. 99-115.

6. Rosholm R, Lund R, Molbo D et al. Disclosure patterns of mode of conception among mothers and fathers – 5-year follow-up of the Copenhagen Multi-centre Psychosocial Infertility (COMPI) cohort. *Human Reproduction* 2010;25:2006-17.

7. Readings J, Blake L, Casey P et al. Secrecy, disclosure and everything in-between; decisions of parents of children conceived by donor insemination, egg donation and surrogacy. *Reproductive BioMedicine Online* 2011;22:485-95.

8. Tallandini MA, Zanchettin L, Gronchi G et al. Parental disclosure of assisted reproductive technology (ART) conception of their children: a systematic and meta-analytic review. *Human Reproduction Update* 2016;31:1275-87.

9. Applegarth LD, Kaufman NL, Josephs-Sohan M et al. Parental disclosure to offspring created with oocyte donation: intentions versus reality. *Human Reproduction* 2016;31:1809-15.

10. Jadva J, Freeman T, Kramer W et al. The experiences of adolescents and adults conceived by sperm donation: comparison by age of disclosure and family type. *Human Reproduction* 2009;24:1909-19.

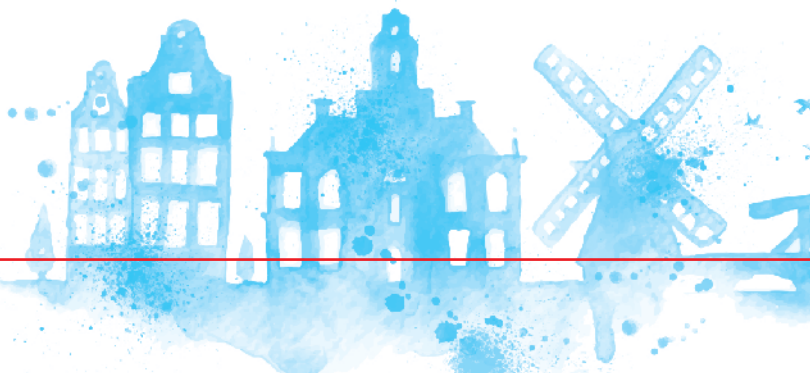
11. Freeman T, Golombok S. Donor insemination: A follow up study of disclosure decisions, child adjustment and family relationships at adolescence. *Reproductive BioMedicine Online* 2012;25:193-203.

FROM CROSS-BORDER REPRODUCTIVE CARE TO TREATMENT AT HOME: A TURNING OF THE TIDE?

Z. Gurtin², K. Ahuja¹

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Cross-border reproductive care (CBRC) – or “reproductive tourism” as it has often been called – has for more than a decade described the movement of patients from one jurisdiction to another in search of fertility treatments. Facilitated on the one hand by globalization, which makes the transnational travel of persons, technologies and ideas ever easier, and on the other by the increasing commercialization and competitiveness of the ART industry (Gurtin and Inhorn, 2011), CBRC was regarded as “a solution” (Shenfield et al., 2011) and even “a safety valve that reduce moral conflict” (Pennings, 2004) in a world of uneven ART legislation and access. However, we are now beginning to see a reversal of the CBRC tide as regulators, clinics and the ART industry respond to patient pressures for access to treatment in their “home” countries (Ahuja, 2015). Although there are many different reasons why individuals might seek fertility treatment abroad, these can usefully be grouped into four broad categories: 1) to circumvent legal and religious prohibitions at home; 2) as a response to resource scarcity; 3) to relieve quality and safety concerns; and 4) for personal preferences (Gurtin and Inhorn, 2011). Thus, while CBRC may in some cases represent an exercise of personal freedoms, it is both ethically and practically problematic when patients feel forced to seek treatment outside of their home countries, either because they are legally excluded from access or because high costs and long waiting lists make treatment prohibitive. Indeed, it would be more accurate to think of these men and women as “reproductive exiles” (Inhorn and Patrizio, 2009; Matorras, 2005), driven abroad due a lack of alternatives. And it is in such cases that we welcome a recent turning of the tide of CBRC. And indeed, it is perhaps not surprising that the drivers of this reversed trend are the patients themselves, who have been applying pressure to clinics and regulators for better access to treatment in their home countries. The vocal opposition to the restrictive Law 40 in Italy and its subsequent reversal (as discussed in Benagiano et al., 2014) is a good example of how patient activism can challenge and change legislative structures driving CBRC. In a very different context, we are now also seeing a reversal of the CBRC trend in the UK. Using data from our experiences at the London Women’s Clinic, The London Sperm Bank and The London Egg Bank, as well as from the HFEA, we can illustrate that the resource considerations – in particular the scarcity of donor gametes and the resulting long waiting lists



– that were driving British patients overseas for donor sperm and egg treatments are now being addressed, with awareness building, a better system of donor compensation introduced by the HFEA in 2011 (Human Fertilisation and Embryology Authority, 2011), and most recently by the innovative digital communication strategies that we are pioneering. The current UK gamete donation landscape is very different to the one in the immediate aftermath of the reversal of donor anonymity, where concerns over the “critical shortage” of donors created a media discourse of “crises” and drove UK patients overseas. Indeed, our experiences at the London Sperm Bank (www.londonspermbank.com) have been very positive. As early as 2011, we demonstrated that a programme reliant on good communication and personalized customer care could generate a significant increase in donor numbers (Bahadur et al., 2011). Currently, we are able to meet all our patient requests for donor matching online and have completed over 5000 treatments using donor sperm since 2010 (Ahuja, 2015). More recently, our mobile app has provided a novel and even more convenient means for patients to browse our donor catalogue, making the process of treatment choosing and ordering “home” sperm even easier. Similarly, our figures from the London Egg Bank also show that we are no longer in a state of chronic egg shortages. With the introduction of better compensation for egg donors by the HFEA in 2012 (at £750 per cycle) and our own digitalized recruitment programme, between January 2013 and July 2014 eggs were collected from 220 registered non-patient donors, ten times the number of the previous two years. Thus, at our own clinic in London we are now able to meet the demand (and matching preferences) of patients requiring egg donation, without long waiting lists. Although ESHRE’s “good practice guide” defines CBRC as a “solution”, and while it certainly can be in cases where jurisdictions unfairly restrict access to treatment, there are clearly many benefits to treatment at home. It is simply more practical and convenient for most people not to be forced travel for treatment. But more significantly, our patients can now feel the reassurance that the eggs and sperm used in their treatments are donated in accordance with the HFEA’s guidelines, which includes the provision of appropriate compensation to donors without commercialisation or monetary incentive, and the availability of identifying information to any potential children they conceive at age 18. Indeed, as the ESHRE guide also claims, the ideal situation is not cross-border care but “fair access at home for all patients” (Shenfield et al., 2011). For all these reasons, we are happy not only to be meeting the donor egg and sperm needs of patients in the UK, but also to be part of the reversal of the tide regarding CBRC, which signals smoother sailing for regulators, patients, and for potential donor conceived children in the future.

References:

- Ahuja, K. (2015) Patient pressure: is the tide of cross-border reproductive care beginning to turn? *Reprod. Biomed. Online* 30: 447-450.
- Benagiano, G., Filippi, V., Sgargi, S., Gianaroli, L. (2014) Italian Constitutional Court removes prohibition on gamete donation in Italy. *Reprod. Biomed. Online* 29: 662-664.
- Gurtin, Z. and Inhorn, M.C. (2011) Introduction: travelling for conception and the global assisted reproduction market. *Reprod. Biomed. Online* 23: 535-537.
- Human Fertilisation and Embryology Authority (2011) HFEA agrees new policies to improve egg and sperm donation services. <<http://www.hfea.gov.uk/6700.html>>
- Inhorn, M.C. and Patrizio, P. (2009) Rethinking reproductive “tourism as reproductive “exile”. *Fertil. Steril.* 92(3): 904-906.
- Matorras, R. (2005) Reproductive exile versus reproductive tourism. *Hum. Reprod.* 20 (12), 3571.
- Pennings, G. (2004) Legal harmonization and reproductive tourism in Europe. *Hum. Reprod.* 19(12): 2689-2694.
- Shenfield, F., de Mouzon, J., Pennings, G., Ferraretti, A.P., Nyboe Anderson, A., de Wert, G., Goosens, V. (2011) ESHRE’s good practice guide for cross-border reproductive care. *Hum. Reprod.* 26: 1625-1627.

LABORATORY WORK III

10:20-11:50

EPIGENETICS IN REPRODUCTION

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The simple presence or absence of genes or gene variants cannot sufficiently explain variation in gene expression, biological processes, physiology and disease. The last decades have seen and increasing interest in epigenetic processes, their role having initially been described in cancer biology. ‘Epigenetics’, which includes gene methylation, histone acetylation and micro RNAs, govern gene expression. For example, methylation of gene promoter sites is associated with decreased transcription, and lower gene expression. Similarly, histone acetylation provides a physical barrier for expression of genes wound around the target histone. Epigenetics processes are particularly relevant for the reproductive medicine for several reasons. Firstly, the early embryo undergoes almost universal demethylation in the first few days of its existence, to be remethylated by the time it reaches morula stage¹. It has been demonstrated that both demethylation and remethylation can be affected by the early embryo’s environment². Secondly, epigenetic processes govern tissue differentiation and are therefore essential for early embryonic development. Any factor with the ability to affect early embryonic epigenetic processes has the ability to permanently alter embryo survival and development. Thirdly, the fact that methylation of imprinted genes (that is, genes that are selectively maternally or paternally silenced) may be perturbed in individuals with subfertility³, or may be affected by altered periconception environment in assisted reproduction⁴, may underlie the excess in imprinting disorders in individuals conceived by intra cytoplasmic sperm injection (ICSI)⁵. Fourthly, because the early epigenetic changes in the developing embryo affect the cells that will form the entire soma as well as the placenta, it follows these alterations may affect both short-term embryo growth and development, but also could have consequences for fetal, neonatal and later life growth and health. Perturbations in the early embryo’s environment could therefore lead to persistent epigenetic changes, which could underpin changes in physiology in adulthood. Evidence for this phenomenon was found among men and women conceived during the 1944-1945 Dutch Famine, who exhibited altered gene methylation, and gene expression in adulthood and as well as altered physiology⁶-possibly underlying their increased disease risk⁷ and shorter life span⁸. The long-term effects of periconception exposure to maternal famine include impaired glucose tolerance, increased breast cancer morbidity and mortality, cardiovascular disease, altered food preference, increased stress response, psychiatric sequelae⁹, and increased reproductive success¹⁰. And finally, effects may be carried on into subsequent generations, that were not themselves exposed to famine in utero^{11,12}: the offspring of in utero famine exposed women had higher neonatal adiposity, and the adult offspring of men conceived in famine were heavier and more adipose. More mechanistic clues for intergenerational effects mediated by altered germline epigenetic state stem from experimental studies using dietary manipulation in animal models. Maternal dietary restriction¹³, selective methyl donor (eg folic acid) restriction¹⁴ and high fat diets¹⁵ have each been shown to contribute to multigenerational offspring health and epigenetic state alterations. Paternal high fat diet affected the epigenetic state and gene expression of pancreatic beta cell islets, as well as affecting insulin secretion and glucose tolerance in the female offspring¹⁶. Research on the role of paternal epigenetic intergenerational inheritance has demonstrated that prenatal paternal undernutrition has been associated with altered sperm methylome¹⁷. The role of micro RNA in sperm is still the subject of debate, but there is accumulating evidence that paternal stress is reflected in miRNA in sperm and can lead to altered HPA axis responsivity in the offspring¹⁸. In summary, epigenetics is relevant for reproduction due to its role in early development and tissue differentiation, and can mediate long term, transgenerational effects induced by the periconception environment. Future research should assess whether assisted reproductive technology could be a source of iatrogenic epigenetic modification.

References:

1. Smith ZD, Chan MM, Humm KC, et al. DNA methylation dynamics of the human preimplantation embryo. *Nature* 2014;511:611-5.
2. de Waal E, Vrooman LA, Fischer E, et al. The cumulative effect of assisted reproduction procedures on placental development and epigenetic perturbations in a mouse model. *Hum Mol Genet* 2015;24:6975-85.

3. Kobayashi H, Hiura H, John RM, et al. DNA methylation errors at imprinted loci after assisted conception originate in the parental sperm. *EurJHumGenet* 2009;17:1582-91.
4. Khosla S, Dean W, Brown D, Reik W, Feil R. Culture of preimplantation mouse embryos affects fetal development and the expression of imprinted genes. *BiolReprod* 2001;64:918-26.
5. Manipalviratn S, DeCherney A, Segars J. Imprinting disorders and assisted reproductive technology. *FertilSteril* 2009;91:305-15.
6. Tobi EW, Goeman JJ, Monajemi R, et al. DNA methylation signatures link prenatal famine exposure to growth and metabolism. *Nat Commun* 2014;5:5592.
7. Painter RC, Roseboom TJ, Bleker OP. Prenatal exposure to the Dutch famine and disease in later life: an overview. *ReprodToxicol* 2005;20:345-52.
8. Abeelen vAFM, Painter RC, Dijkgraaf MGW, et al. Survival Effects of Prenatal Famine Exposure. *CELSE, Cyprus, May 2010* 2010.
9. St Clair D, Xu M, Wang P, et al. Rates of adult schizophrenia following prenatal exposure to the Chinese famine of 1959-1961. *JAMA* 2005;294:557-62.
10. Painter RC, Westendorp RG, de Rooij SR, Osmond C, Barker DJ, Roseboom TJ. Increased reproductive success of women after prenatal undernutrition. *Hum Reprod* 2008;23:2591-5.
11. Painter RC, Osmond C, Gluckman P, Hanson M, Phillips DI, Roseboom TJ. Transgenerational effects of prenatal exposure to the Dutch famine on neonatal adiposity and health in later life. *BJOG* 2008;115:1243-9.
12. Veendelaal MV, Painter RC, de Rooij SR, et al. Transgenerational effects of prenatal exposure to the 1944-45 Dutch famine. *BJOG* 2013;120:548-53.
13. Barres R, Zierath JR. The role of diet and exercise in the transgenerational epigenetic landscape of T2DM. *Nat Rev Endocrinol* 2016;12:441-51.
14. Waterland RA, Travisano M, Tahiliani KG, Rached MT, Mirza S. Methyl donor supplementation prevents transgenerational amplification of obesity. *Int J Obes (Lond)* 2008;32:1373-9.
15. Dunn GA, Bale TL. Maternal high-fat diet effects on third-generation female body size via the paternal lineage. *Endocrinology* 2011;152:2228-36.
16. Ng SF, Lin RC, Laybutt DR, Barres R, Owens JA, Morris MJ. Chronic high-fat diet in fathers programs beta-cell dysfunction in female rat offspring. *Nature* 2010;467:963-6.
17. Radford EJ, Ito M, Shi H, et al. In utero effects. In utero undernourishment perturbs the adult sperm methylome and intergenerational metabolism. *Science* 2014;345:1255903.
18. Rodgers AB, Morgan CP, Leu NA, Bale TL. Transgenerational epigenetic programming via sperm microRNA recapitulates effects of paternal stress. *Proc Natl Acad Sci U S A* 2015;112:13699-704.

METHODS FOR EMBRYO SELECTION: TOWARDS SET FOR ALL 12:10-13:40

WHAT TO DO WITH EMBRYOS WITH REVERSE CLEAVAGE?

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Objective: Some cleavage stage embryos have been observed, through time-lapse technology, to undergo a reduction in cell number in a process referred to as reverse cleavage (RCL) or blastomere fusion. The objective of this study was to determine the frequency of reverse cleavage and its impact on obstetrical outcome of the replacement of these abnormally cleaving embryos.

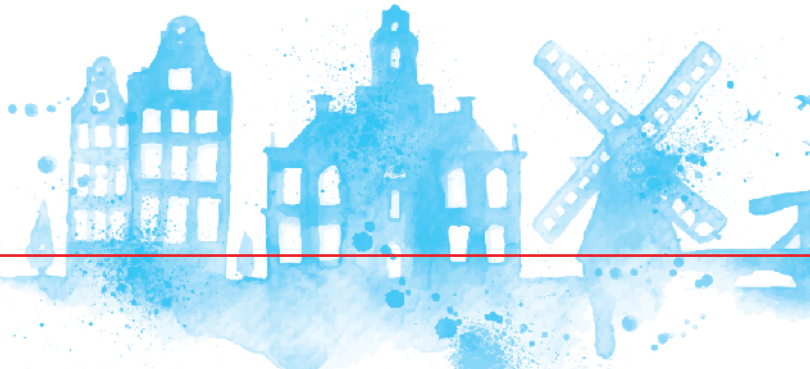
Introduction: For nearly four decades, since the birth of Louise Brown in 1978, embryologists have searched for a quick, non-invasive method to identify which embryo(s) have the highest potential for implantation and thus should be selected for embryo transfer in order to achieve the optimal outcome of the birth of a single healthy baby. Up until recently this decision was based on a single daily morphological observation. While daily morphology observations were, and still are, considered the standard in many IVF laboratories, they represent only a limited window at set time points in the embryos development limiting the information, the embryologist has, for selecting the best embryo(s). Recently, time-lapse systems have been introduced into the clinical setting of IVF laboratories providing the embryologist with a precise and continuous timeline of each embryos development without disrupting the culture conditions. This technology has allowed the embryologist to witness and document abnormal events which were suspected but rarely, if ever, seen. Time-lapse observations have shown that some early cleavage stage embryos can go

through a process of reduction in cell number before they keep advancing, now known as reverse cleavage or blastomere fusion. In the majority of cases the resulting blastomere, formed from the fusion of two blastomeres, is a hybrid cell containing two nuclei (Hulme, 2015). Reverse cleavage is not well documented in the literature. Estimates of its prevalence range from 1.24 percent (Quera, 2014) to 27.4 percent (Liu, 2014). Opposing views regarding links between reverse cleavage and the mechanism(s) controlling reverse cleavage i.e. GnRH antagonist vs. GnRH agonist (Liu, 2014; Hickman, 2012) have been suggested. Furthermore, known implantation data (KID) positive or implantation rate of these embryos has been reported to be between 0 percent (Liu, 2014) to 15.7 percent (Fishel, 2014). The aim of the present study was to determine whether or not reverse cleavage embryos should be de-selected for embryo replacement or should they be replaced in certain conditions.

Materials and Methods: This prospective-retrospective study included 170 consecutive IVF/ICSI time-lapse cycles in the IVF Unit at Laniado Hospital from February 2015 to December 2015 undertaken by 129 women (aged 32.0 +/- 12.0 years). A total of 841 normal fertilizations (2PN) derived from insemination (n=443) or ICSI (n=398), were cultured in continuous culture medium in the Esco Miri-TL imaging system between 2 to 5 days' post oocyte retrieval. Of the 841 embryos generated, 338 were utilized for fresh embryo transfer. Gamete Preparation, Insemination and Fertilization Check Sperm samples were collected either by masturbation or with the aid of Male-Factor Pak (Apex Medical Technologies, Inc.) by the husband prior to oocyte collection, after 0-4 days' sexual abstinence. Sperm were prepared by centrifuging samples through 80%:40% density gradient (PureCeption, Sage) and/or washing in Sydney IVF gamete buffer (K-SIGB, Cook Ireland, Ltd.). Prepared sperm were resuspended in either Sydney IVF fertilization medium (K-SIFM, Cook Ireland, Ltd.) or gamete buffer and held at 5.7% CO₂ in air at 37oC until use. In the IVF cases, OCC's were pooled post-oocyte collection and up to 6 OCC's were placed in central-well culture dishes (Falcon 3037) prepared the previous day and equilibrated overnight with fertilization medium (K-SIFM, Cook) under oil. Prepared sperm were mixed with OCC's 3-4 hours after oocyte collection at a concentration of 100,000/dish. Gametes were incubated at 5.7% CO₂ in room air at 37oC in a Forma Series II Water Jacketed CO₂ Incubator (3111) overnight. Fertilization was confirmed by visualization of two pronuclei (2PN) 18-19 hours' post-insemination following removal of cummuls cells. Fertilized oocytes were then moved to wash wells containing 20ul CSC-complete (Irvine Scientific) overlaid with 3.0 ml paraffin oil in Culturecoins (Esco Global) which had been pre-equilibrated in Forma Series II Water Jacketed CO₂ Incubator (3111) at least 12 hours prior to use. Oocytes were then individually distributed into the micro wells of the Culturecoin containing 20ul of CSC, up to 14 oocytes per Culturecoin, and then inserted into the Miri-TL for culture and imaging. In the ICSI cases, oocytes were transferred to the pre-equilibrated Culturecoin as described above immediately following the completion of ICSI, then inserted into Miri-TL for culture and imaging. Fertilization check on ICSI oocytes was performed in-situ with the use of Miri-TL Viewer (ESCO Global) without having to remove them from culture.

Time-lapse Culture, Image Acquisition and Annotation

Time-lapse Culture was performed at 37oC, 5.0% O₂ and 5.7% CO₂. Images were taken every 5 minutes on seven focal planes after insertion into the MiriTL. Time-lapse analysis of the most commonly annotated variables follow guidelines outlined by Ciray, et.al., 2014. Briefly, each embryo placed in time-lapse was annotated for the following variables: tPNf, t2-t8, compaction, morula, blastocyst; multinucleation, blastomere symmetry, fragmentation, reverse cleavage, direct and/or rapid cleavage. During manual assessment time-lapse images were rewound, with the aid of a jog wheel, to ensure that the correct frame had been selected for the annotation of each variable. In addition to standard variables, the Miri TL software was customized to mark reverse cleavage (RCL) and direct cleavage (DCL) and to reflect the timing of these events in the annotation menu. For the purpose of this study, each RCL event was re-evaluated and differentiated into Type I (RCL_T1) or Type II (RCL_T2) as described by Liu (2014). **RESULTS:** A total of 90/338 (26.6%) of embryos replaced showed



evidence of RC at least once with 27 (30.0 %) of these 90 embryos undergoing RCL 2-3 times during the duration of the time-lapse. Of the 127 events of RCL observed in these 90 embryos 83/127 (65.4%) were classified as Type I, namely complete and 44/127 (34.6%) as Type II or incomplete. In addition, RCL may occur at any stage of embryo cleavage, with the majority occurring in 3-4 cell embryos 57/90 (63.3%) followed by 5-8 cells 24/90 (26.7%) and less frequently in 1-2 cell embryos 9/90 (10.0%). Follow-up of the outcome of the replacement of these embryos was closely monitored in order to assess whether or not these RCL embryos should, like direct cleavage embryos, be de-selected for. Results of pregnancies derived from the replacement of these embryos are shown in the Table 1. Only pregnancies in which fetal heart beats were detected were included in the data. Of the 53 pregnancies documented during the study period 8 were the result of embryo replacements in which all of the replaced embryos had at least one RCL event, 8 were the result of mixed embryo replacements where at least one of the replaced embryos had at least one RCL event and 37 were the result of replacement of normal embryos only (i.e. no RCL).

Table 1. PREGNANCY RATIO IN 169 PATIENTS TREATED WITH E.T. OF RCL EMBRYOS, MIXED GROUP AND NORMAL EMBRYOS

No. (n)	Pregnant (n)	Not Pregnant (n)	% Pregnant
RCL E.T.	8	28	28.6
Mixed E.T. RCL + non RCL	8	34	23.5
E.T. of Normal Embryos	37	107	34.6
Overall	53	169	31.4

It was found that although, having a lower pregnancy rate overall, their contribution in the pregnancies established was quite significant. Further evaluation, of live births, indicates that the presence or absence of RCL did not place the patient at risk for pregnancy loss or fetal abnormalities (Table 2). No difference was observed in the live birth rate from embryo replacement of RCL embryos vs. Normal embryos only replaced and no fetal abnormalities have been reported.

Table 2. LIVE BIRTHS FROM THE REPLACEMENT OF REVERSE CLEAVAGE EMBRYOS VS. NO RCL

	All RCL embryos	Mixed ET RCL + No RCL	No RCL embryos
Live Birth	6/8 (75.0%)	7/8 (87.5%)	27/37 (72.9%)
Miscarriage	2/8 (25.0%)	1/8 (12.5%)	10/37 (27.1%)

Discussion: The present study was undertaken to determine whether or not RCL embryos should be de-selected for embryo replacement. When faced with exclusively RCL embryos, with the patients' consent, we decided to replace them. Encouraged by the results we decided to embark into this

larger study. Although there is very limited literature available on the clinical outcome of reverse cleavage embryos enough evidence (Stecher, 2014; Fishel, 2014) is available to warrant continued inclusion of these embryos into the selection pool. In the present study we found that embryos that had undergone RCL, at least once in their development, occurred at a much higher frequency than previously reported, perhaps due to the inclusion of Type II RCL, which accounted for 34.6% of embryos observed to undergo RCL or 13% of the total embryos. We also found that these embryos accounted for at least 15.1% of our pregnancies and at least 75% of these resulted in a live birth. Although we were unable to correlate the frequency of RCL with any factors such as age, ovulation induction protocol or sperm quality we did however observe, in patients undergoing multiple cycles, that the risk of RCL in subsequent cycles was higher if RCL had been documented in their initial cycle. Embryo selection remains the most critical task faced by embryologists in the IVF laboratory. Until recently this decision was based on a single daily static observation. With the recent introduction of time-lapse monitoring the dynamic processes of embryo development have been unveiled. As knowledge on human embryo morphology and development increases the clinical significance and impact of specific normal versus abnormal developmental patterns emerge. Many of these abnormalities, such as direct cleavage and multi-nucleation, have been studied more extensively than others such as reverse cleavage. Selection models (Rubio, 2014; Basile, 2015) have been proposed which suggest de-selection of embryos exhibiting direct cleavage and multi-nucleation while Liu (2016) suggests the de-selection of reverse cleavage embryos. The decision to follow a published selection model, although tempting, should be entered into with great care and only after validation in your laboratory with your clinical data. It has long been known that factors such as patient population, ovulation induction protocol, sperm quality, method of insemination, laboratory and culture conditions can all influence embryo development. Whatever the reason for our high RCL frequency rate I strongly believe that the early cleavage stage embryo has the ability to "self-correct" errors and that reverse cleavage is merely an example of this repair mechanism. In our laboratory, we will continue to replace and follow the outcome of these embryos.

References:

Basile N, Vime P, Florensa M, et. al. The use of morphokinetics as a predictor of implantation: a multicentric study to define and validate an algorithm for embryo selection. *Hum Reprod.* 2015; 30: 276-283.

Ciray HN, Campbell A, Agerholm IE, et. al. Proposed guidelines on the nomenclature and annotation of dynamic human embryo monitoring by a time-lapse user group. *Hum Reprod.* 2014; 29: 2650-60.

Fishel, Simon. (April 2014). Will Time Lapse Change Clinical Embryology? Paper presented at the 20th World Congress on Controversies in Obstetrics, Gynecology & Infertility (COGI), Barcelona, Spain. PPT retrieved from <http://www.comtecmed.com>

Hickman, CFL, Campbell A, Duffy S, et. al. Reverse cleavage: its significance with regards to human embryo morphokinetics, ploidy and stimulation protocol. *Hum Reprod.* 2012; 27 (suppl 2): ii103-ii105.

Hulme Davina. Reverse Cleavage/Blastomere Fusion. In: Campbell A, Fishel S, editor. *Atlas of Time Lapse Embryology.* CRC Press; 2015: 69-70.

Liu Y, Chapple V, Roberts P, Matson P. Prevalence, consequence, and significance of reverse cleavage by human embryos viewed with the use of the Embryoscope time-lapse video system. *Fertil Steril.* 2014; 102: 1295-300 e2.

Liu Y, Chapple V, Freenan K, Roberts P, Matson P. Time-lapse deselection model for human day 3 in vitro fertilization embryos: the combination of qualitative and quantitative measures of embryo growth. *Fertil Steril.* 2016; 105: 656-662 e1.

Rubio I, Arancha G, Larreategui Z, et. al. Clinical validation of embryo culture and selection by morphokinetic analysis: a randomized, controlled trial of the EmbryoScope. *Fertil Steril.* 2014; 102: 1287-1294 e5.

Quera M. (May 2014). Frequency and impact on embryo development of reverse cleavage in human embryos. Paper presented at the 10th Biennial Conference of Alpha, Scientists in Reproductive Medicine, Antalya, Turkey. Abstract retrieved from <http://www.rbmojournal.com>

Stecher A, Vanderzwalmen P, Zintz M. et. al. Transfer of blastocysts with deviant morphological and morphokinetic parameters at early stages of in-vitro development: a case series. *Reprod. Biomed. Online.* 2014; 28, 424-435.



MULTIFOLLICULAR OVARIES, PRESENCE AND GROWTH IN HEALTH AND DISEASE

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The most prominent function of the ovary in the adult human female is to release on an approximate monthly basis a single vital cumulus oocyte complex from an ovulatory Graafian follicle together with production of endocrine signals that enable development and function of all other organs involved in reproduction. This is an extremely fine-tuned process and requires 1) storage potential and 2) control of initial recruitment of primordial follicles and 3) subsequently further mechanisms to govern among a multitude of growing follicles the selection of the one dominant follicle reaching for the final goal. We here aim to discuss a number deviation of (patho) physiological and pharmacological origin from this normally so highly sophisticated regulatory system and that were topics of intense study over past by our reproductive endocrine research group. One important endpoint of this system namely ovulation of a single cumulus oocyte complex is obviously not reached with no or multiple release namely with anovulation or multiple ovulation. When anovulation in presence of ovarian follicles results from insufficient levels of follicle stimulation hormone each intervention that resolves this insufficiently will potentially lead to follicle growth and ovulation. Administration of pulsatile GnRH for example in patients with supra-pituitary hypogonadotropic hypogonadism (HH) restores gonadotropin levels usually leading to ovulation. This is a highly effective patient satisfactory approach with little chance of multiple pregnancy however, not absent but mostly only occurs in the first ovulatory cycle. A cycle characterized by much higher FSH levels than in subsequent cycles. A pattern very similar as what is seen in peri-pubertal girls who have remarkably high nocturnal FSH secretion. It should be realized that women with HH during the startup of ovulation induction treatment recover from a certain endocrine pre-pubertal condition with temporary insufficient ovarian feedback on FSH secretion with multiple follicle growth and ovulation as consequence.

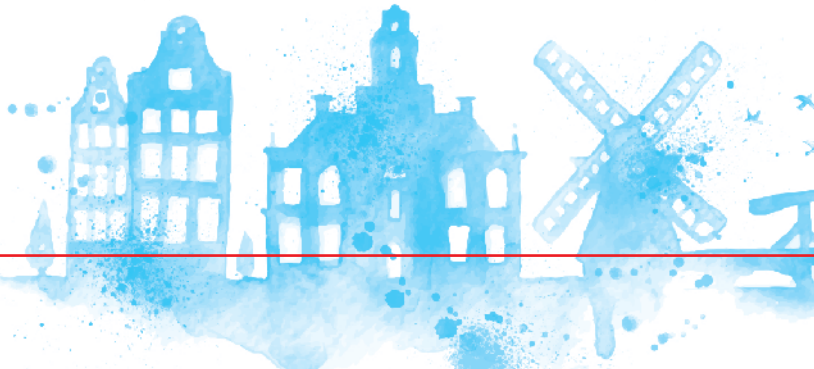
Remarkably on the other side of the spectrum is reproductive ageing highlighted by elevated FSH levels again as consequence of reduced ovarian feedback whereas the threshold for FSH to develop dominant follicle growth does not seem to change substantially. This endocrine "overshoot" condition can be held responsible for the increase to > 25 % of the cycles with multiple dominant follicle growth and explains the substantial increased risk for dizygotic(DZ) twinning in older women. Aside resulting from maternal ageing, DZ twinning also runs in families pointing to genetic components underlying multiple follicle growth. Again this is often in association with increased FSH levels. A recent genome wide association study (GWAS) indeed strongly indicates to the FSHB gene involved in DZ twinning but also to the SMAD3 gene which is likely responsible for an increased ovarian sensitivity to FSH. It should be noted that the FSHB gene is also identified to be involved in polycystic ovarian syndrome (PCOS) but not as in DZ twinning with increased but rather lower FSH levels. Levels lower than the ovarian threshold for FSH which is, as we showed in the past, being otherwise the same as in women without PCOS. The challenge still today in these patients is to achieve mono ovulation despite the presence of a multitude of follicles available for dominance. Small steps are made. For example, in understanding the possible roles of the hyperandrogenism and increased secretion of anti mullerian hormone (AMH) that are so typical for this syndrome. Progress in this area can still be made by advancing our knowledge further with regard to the complex interplay between the ovary

with its follicles either present in a multitude or minimized and FSH both in terms of its regulation and sensitivity to it.

GENETICS OF PCOS

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More than 105 million women aged 15-49 years have been diagnosed with the Polycystic Ovary Syndrome (PCOS) worldwide (Azziz et al JCEM 2005). The estimated prevalence of PCOS varies between 5-20%, thereby being the most common endocrine disorder in women of reproductive age (Azziz et al JCEM 2004, March et al. Hum Rep 2010). PCOS is usually diagnosed during early reproductive years and is characterized by ovulatory dysfunction, hyperandrogenism and polycystic ovarian morphology (ESHRE/ASRM Consensus meeting). It is a life-long condition with substantial variation of symptomatology regarding reproductive, metabolic and cardiovascular health throughout a women's life. The introduction of the additional phenotypes as defined by the Rotterdam criteria has increased the phenotypic heterogeneity as well as the prevalence of the syndrome remarkably (Broekmans et al 2006). The broad diversity of the phenotype emphasizes the need for individual health-risk estimation for a patient with PCOS and her family members in order to provide appropriate clinical care. Unraveling its pathogenesis has challenged many researchers over the last decades. PCOS is a complex genetic disorder. The disease itself as well as its associated co-morbidities cluster within families. Approximately 20-40% of the first degree female family members of patients with PCOS also suffer from the syndrome (Kahsar-Miller et al Fertil Steril 2001, Lunde Obstet Invest 1989). Moreover, associated co-morbidities, such as hyperandrogenaemia, hyperinsulinemia and disturbed insulin secretion, cluster within these families (Colila et al JCEM 2001, Legro et al Proc Natl Acad Sci USA 1998, Legro et al JCEM 2002, Yildiz et al Fertil Steril 2006). Finally, PCOS seems more common amongst sisters of monozygotic twin pairs compared to dizygotic twins indicating a high degree of heritability in patients with PCOS (Vink et al JCEM 2006). Its heritability, i.e., the proportion of the total phenotypic variation that can be attributed to additive genetic effects, is estimated to be around 65%. This estimated heritability indicated that genetic factors largely determine PCOS susceptibility. These genetic factors are partly responsible for the diversity of the phenotypic characteristics accompanying PCOS and might also have a role in predicting treatment outcome and development of long-term health sequelae. Up until recently, candidate gene studies have been the predominant approach used in PCOS genetics (for review see: Goodarzi et al Nat Rev Endocrinol 2011, Goodarzi Semin Reprod Med 2008, Urbanek et al Nat Clin Pract Endocrinol Metab 2007, Urbanek et al J Pediatr Endocrinol Metab 2000, Kosova Mol Cell Endocrinol 2013). Genetic studies has identified almost a hundred susceptibility genes associated with PCOS, mainly focusing on candidate genes selected from logical pathways involved in or regulating gonadotrophin secretion, steroid synthesis and insulin signaling (Goodarzi Semin Reprod Med 2008). Varying diagnostic criteria, small sample sizes and most importantly, the lack of positive replication studies along with the broad phenotype of PCOS have hindered progress in this field. In general, these candidate gene studies were not tremendously successful. The introduction of genome wide association studies (GWAS) have revealed enormous amounts of data, but most importantly they provided new insights in the etiology of PCOS. The first GWASs in patients with PCOS were performed in Han-Chinese women (Chen et al 2011, Shi et al 2012). These GWAS identified 11 susceptibility loci. The LHCGR an FSHR gene are plausible PCOS candidate genes due to their role in follicular development and ovarian physiology. Moreover, SNPs mapping FSHR have been previously been associated to be associated with PCOS (Laven et al Fertil Steril 2003) and FSH levels (Valkenburg et al Hum Rep 2009). The THADA region has previously been associated with type 2 diabetes in Europeans (Zeggini et al Nature Gen 2008). The GWASs in Han-Chinese patients with PCOS have also been successful in identifying PCOS susceptibility genes involved in unexpected and unknown biological



pathways, such as calcium signaling and endocytosis. Internationally large scale collaborations within international consortia had led to identification of many more genetic areas of interest using genome-wide genetic approaches. Recent GWASs in White women with PCOS of European descent identified loci in the region GATA4, NEIL2 and FSHB, ARL14EP (Mutharasan JCEM et al 2013). The loci near C9orf3, which was also observed in Han Chinese studies, was also confirmed in the patients of European descent. In a second GWAS study additional loci in ERBB4, RAD50 and KRR1 were identified (Day et al 2015). Cross-ethnic efforts have indicated that, despite large phenotypic differences between patients from various ethnic origins, GWASs across different ethnicities will reveal at least partly similar PCOS susceptibility loci (Louwers et al JCEM 2013). The relationship between these PCOS risk genes and quantitative traits have also been examined. However, clear associations between these genetic variants and the key PCOS phenotypes have not been identified. During the past decade the field of reproductive medicine has witnessed great advances in genome-wide association studies (GWAS) of PCOS, leading to identification of a number of promising genes involved in hormone action, type 2 diabetes and cell proliferation. Ultimately, the functional relevance of the identified variants of PCOS needs to be confirmed by *in vivo* and/or *in vitro* molecular biology studies, and further clinical studies, hopefully leading to new and exciting progress in our understanding of PCOS pathophysiology.

ANDROGENS AND CARDIOVASCULAR RISK IN WOMEN WITH REPRODUCTIVE DYSFUNCTION

N. Daan

Sint Antonius Hospital

Study question: Are differences in androgen levels in women with various forms of ovarian dysfunction associated with cardiometabolic abnormalities?

Summary answer: Androgen levels differed substantially between women with and without ovarian dysfunction, however increased androgen levels were associated with impaired cardiometabolic features in all women irrespective of their clinical condition. What is known already: Sex steroid hormones play important roles in the development of cardiovascular diseases (CVD). Extremes in low as well as high androgen levels have been associated with increased CVD risk in both men and women.

Study design, size, duration: Cross-sectional study in 680 women with polycystic ovary syndrome (PCOS), premature ovarian insufficiency (POI), natural postmenopausal women (NM), or women with regular menstrual cycles (RC) (170 women per group). Participants/materials, setting, methods: Measurement of serum testosterone, androstenedione and DHEAS using liquid chromatography-tandem mass spectrometry. Assessment of BMI, blood pressure, lipid profile, glucose, insulin, SHBG, calculation of the bioactive fraction of circulating testosterone using the free androgen index (FAI).

Main results and the role of chance: PCOS women appeared hyperandrogenic (median FAI = 4.9 [IQR 3.6 - 7.4]), and POI women hypoandrogenic (FAI = 1.2 [0.8 - 1.7]) compared to RC women (FAI = 1.7 [1.1 - 2.8]) after adjustment for age, ethnicity, smoking, and BMI ($P < 0.001$). After adjustment for age, there were no significant differences in androgens between POI versus NM ($P = 0.15$) and NM versus RC ($P = 0.27$) women, indicating that chronological ageing rather than ovarian ageing influences differences between pre- and postmenopausal women. A high FAI was associated with elevated triglycerides (Beta log FAI for PCOS: 0.45, $P < 0.001$, POI: 0.25, $P < 0.001$, NM: 0.20, $P = 0.002$), insulin (Beta log FAI for PCOS: 0.77, POI: 0.44, NM: 0.40, all $P < 0.001$), HOMA-IR (Beta log FAI for PCOS: 0.82, POI: 0.46, NM: 0.47, all $P < 0.001$), and mean arterial pressure (Beta log FAI for PCOS: 0.05, $P = 0.002$, POI: 0.07, $P < 0.001$, NM: 0.04, $P = 0.04$) in all women, with increased glucose (Beta log FAI for PCOS: 0.05, $P = 0.003$, NM: 0.07, $P < 0.001$) and decreased HDL (Beta log FAI for PCOS: -0.23, $P < 0.001$, NM: -0.09, $P = 0.03$) in PCOS and NM, and with increased LDL (Beta log FAI for POI: 0.083, $P = 0.041$) in POI women. Adjustment for BMI

attenuated the observed associations. Associations between FAI and cardiometabolic features were the strongest in PCOS women, even after adjustment for BMI.

Limitations, reasons for caution: Associations between androgen levels and cardiometabolic features were assessed in PCOS, POI and NM women only, due to a lack of available data in RC women. Due to the cross-sectional design of the current study, the potential associations between androgen levels and actual future cardiovascular events could not be assessed. Wider implications of the findings: This study affirms the potent effect of androgens on cardiometabolic features, implicating that androgens should indeed be regarded as important denominators of women's health. Future research regarding the role of androgens in the development of CVD and potential modulatory effects of BMI is required. **Study funding/competing interest(s):** NMPD is supported by the Dutch Heart Foundation (grant number 2013T083). With regard to potential conflicts of interest, there is nothing to disclose. LJ and OHF work in ErasmusAGE, a center for aging research across the life course funded by Nestlé Nutrition (Nestec Ltd.); Metagenics Inc.; and AXA. MK. is supported by the AXA Research Fund. Nestlé Nutrition (Nestec Ltd.); Metagenics Inc.; AXA had no role in design and conduct of the study; collection, management, analysis, and interpretation of the data; and preparation, review or approval of the manuscript. With regard to potential conflicts of interest, there is nothing to disclose. JSEL has received fees and grant support from the following companies (in alphabetical order): Ferring, Merck-Serono, Merck Sharpe & Dome, Organon, Schering Plough and Serono. During the recent 5-year period BCJMF has received fees and grant support from the following companies (in alphabetic order); Actavis, COGI, Euroscreen, Ferring, Finox, Genovum, Gedeon-Richter, Merck-Serono, OvaScience, Pantharei Bioscience, PregLem, Roche, Uteron, and Watson laboratories

IMPLANTATION OF THE EMBRYO: A MATTER OF QUALITY

Berkhout RP^{1,2}, Huirne J², Koolwijk P², Mijatovic V², Repping S¹, Lambalk CB², Hamer G^{1*}, Mastenbroek S¹, *

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* These authors contributed equally to this article

Introduction: Implantation failure is still common in IVF/ICSI. Approximately half of all embryo transfers is not followed by a pregnancy resulting in live birth. Not much is known about the interaction between the embryo transferred to the uterus in IVF/ICSI and the endometrium where it should implant. Endometrial receptivity is acquired during the luteal phase of the menstrual cycle concurrently with the decidualization of human endometrial stromal cells (HESCs) under the influence of a postovulatory rise in progesterone. Morphological assessment of each embryo is being used in IVF/ICSI to estimate its developmental potential and its ability to implant. Embryos are ranked using both the developmental stage of the embryo and its morphological quality. Transferring higher ranked embryos results in higher live birth rates. Whether higher ranked embryos achieve these improved live birth rates by actively interacting with the endometrium has never been elucidated. Recently it has been suggested that low quality human embryos, defined by the presence of three pronuclei, inhibit HESCs migration in culture. We studied whether we could replicate this effect, but now in dipronuclear embryos of both low and high quality, using regular morphological assessment to define embryo quality. To do this, we systematically studied HESCs proliferation and migration in response to embryo conditioned medium (ECM) from embryos of varying developmental stages and morphological quality. Methods: HESCs were obtained from endometrial biopsies from hysterectomy specimens of patients that received surgery for bleeding disorders due to a uterine scar niche. All included patients were premenopausal and had a history of proven fertility and at least one live birth. Patients received no hormonal treatment in at least 3 months prior to surgery. HESCs were decidualized for 5 consecutive days in DMEM/F12 phenol red free medium supplemented

with 10% heat-inactivated charcoal stripped fetal calf serum (FCS), 0.5 mM 8-bromoadenosine 3',5'-cyclic monophosphate, 1 μM medroxyprogesterone acetate and 1% penicillin/streptomycin. To measure cell migration (migration assay) a migration zone was created by scratching a monolayer of cells with a p200 pipet tip and followed by quantification of the cells entering the migration zone within a specified time. Migration assays were performed by culturing HESCs in embryo conditioned medium (ECM) pooled from 5 individually cultured embryos of similar quality and/or developmental stage. Results: We found stimulation of decidualized HESCs migration after co culture with ECM from high quality embryos with less than 20% fragmentation, irrespective of the developmental stage of the embryo. Accordingly, we found no significantly different migration response triggered by ECM from low quality embryos containing more than 20% fragmentation, irrespective of the developmental stage of the embryo. To investigate whether the migration response of HESCs depended on decidualization, we repeated the experiment with non-decidualized HESCs. Opposite to decidualized HESCs, the migration response of non-decidualized HESCs was inhibited by high quality ECM. ECM from low quality embryos had no influence on the migration response of non-decidualized HESCs. Furthermore, ECM of both high- and low quality human embryos did not influence proliferation of both non-decidualized and decidualized HESCs. Discussion: Our study identified a novel mechanism by which the human preimplantation embryo interacts with its surroundings during implantation. Paracrine signaling of high quality embryos, as defined by a low percentage of fragmentation, actively stimulates migration of the decidualized endometrium, whereas non-decidualized endometrium is actively being suppressed by these same high quality embryos. This indicates a shift in the responsiveness of HESCs to embryonic cues. This effect was found irrespective of the developmental stage of the embryo, and not found in lower quality embryos.

GYNECOLOGY – HALL C
Saturday, November 12

ADOLESCENT GYNECOLOGY (I)
08:30-10:00

USEFULNESS OF NONVALENT HPV VACCINE IN SEXUALLY ABUSED ADOLESCENTS

M. Merckx

Ghent University Hospital, Ghent, Belgium

Viral HPV transmission occurs in every age group; critical review of vaccination policy is mandatory. The age at which first intercourse occurs, has decreased over the last decades. In a population "Sexpert" study (2013) in Flanders, the average age of sexual debut for young adults (18-29 years) was 17 years. Child's sexuality can be influenced by the society where it grows up and is triggered by social, emotional, physical, cultural, economic and political factors. The correlation between the onset of sex at early age and higher HPV infection risk, creates a need for public health messages about the vaccination. Childhood sexual abuse is a mediator of anogenital HPV transmission. Genital HPV infection is rare in virgins but may occur after many forms of sexual abuse including genital-genital contact, genital-anal contact, oral-genital contact, fondling, and digital anal/genital penetration and result from non-penetrative sexual contact. Different studies have confirmed that HPV prevalence increases with teen age and the number of sexual partners. According to Garland et al (Lancet, Nov 2015), the likelihood of possible abuse in childhood before the age of 18, increases with age. It is estimated that 3-17% of boys and 8-31% of girls have been exposed to penetrative childhood sexual abuse of which 70% will occur before the age of HPV vaccination. Once abuse occurred, it leads to riskier behavior, associated with more early virus exposure with prevalence of HPV transmission varying from 3.4% to 33% and a decrease in the efficacy of a postponed vaccination strategy because prevalence of HPV transmission varies from 3.4% to 33%. One of the limitations of the current HPV

vaccination programs is that it could come too late for some children as it is currently not recommended for young children or newborns. It is time to rethink HPV prevention strategies as the success of future HPV vaccination programs depends not only on vaccination coverage rates but also on the timing of vaccination, especially before and even after unplanned exposure. The implementation of a vaccination strategy for both sexes in the post exposure prophylaxis of STI is a crucial way to control disease. The health care provider who examines victims of sexual assault is supposed to offer STI prophylaxis. HPV vaccination should be part of immediate medical aftercare. When considering the age of vaccination after sexual abuse, the safety of 2 and 3 dose regimen of HPV vaccination in girls (2v, 4v, 9v) and boys (4v, 9v) from the age of 9 years onward is well established. Below 9 years of age there are no (randomized) clinical trials with HPV vaccines. Some case reports of 4v HPV vaccination in young patients (< 9 y) with recurrent respiratory papillomatosis confirm good immune responses. Child sexual abuse is a call for extra protection as the risk of ongoing exposure with different HPV types is greater in these vulnerable children. Therefore, significant political and advocacy efforts need to be organized at global level and reinforced to achieve meaningful reduction in HPV transmission in this young population and its related benefit on health conditions and cancers. The arrival of new nine-valent HPV vaccine targeting a wider range of HR HPV types (6, 11, 16, 18, 31, 33, 45, 52, and 58) compared to the first generation HPV vaccine, offers the possibility for broader protection in this population at risk.

FERTILITY PRESERVATION IN HIGH RISK GIRLS AND ADOLESCENTS

E. Roos

Tergooi, Hilversum, the Netherlands

The diagnosis of cancer in childhood and adolescence is rare. Although it is one of the main causes of death in childhood, advancement in treatment has improved the survival rate up to 80% nowadays. Treatment of cancer has an immediate and delayed effect on reproductive health of girls and adolescents. Fertility risk assessment in children and adolescents depends on intrinsic and extrinsic factors. Intrinsic factors are depending on the health status of the girl. Extrinsic factors are time available for the procedure, surgery, chemotherapy and radiotherapy. The extend of the chemotherapeutic effect depends on age, type and dose of the agent used and the number of cycles. Gonadotoxicity is a known side effect of alkylating agents like cyclophosphamide and procarbazine. The adverse effect of radiation on the ovarian function depends on dose, age, pubertal development, extend of radiotherapy treatment field and concomitant use of chemotherapy. Acute ovarian failure is not frequent in childhood cancer survivors. In the Childhood Cancer Survivor Study is acute ovarian failure estimated about 6%. On the other hand studies do show a lower ovarian reserve and a higher risk of premature menopause after treatment for cancer. While it is difficult to predict the ovarian reserve, this smaller window of fertility for family planning might lead to problems. To test the ovarian reserve in adult women anti-Mullerian hormone (AMH) is used. The AMH value normally peaks around 26 years of age, so its use might be limited in pre- and post pubertal girls. However, there is accumulating evidence of the relation between AMH and the ovarian reserve in girls and adolescents before and after chemotherapy. AMH is detectable before treatment in girls of all ages and falls rapidly during and recovers after treatment. So, AMH can serve as an early marker of gonadal damage induced by cancer treatment in pre- and post pubertal girls. Whereas fertility preservation options currently exist also for the younger cancer patients, few patients participate in fertility preservation. The aim of fertility preservation is to protect the ovarian function from the negative effects of cancer treatment. Adolescents do have the physical maturity to undergo established fertility preservation techniques that collect and cryopreserve their gametes, but pre pubertal girls do not. Possibilities for pre- and post pubertal girls are ovarian transposition, embryo cryopreservation, oocyte preservation and ovarian cryopreservation. The last option is considered to be more experimental. The possibility of a girl becoming a mother at a later



date has a low priority in patients with oncological disease compared to the worries about survival after hearing the diagnosis. On the other hand, literature states that prior to initiation of cancer treatment girls and adolescents after cancer treatment and their parents would have appreciated information about the effects on menstruation and future fertility. So, at the same time it seems to be conflict of interest. What makes it difficult to have these oncofertility conversations? The main barriers in these conversations are divided into three domains. First, systemic barriers like lack of familiarity of the topic or lack on information about fertility preservation options & costs. Second, the professional related factors as discomfort with this topic or not recognize how important fertility can be for patients and their parents. Third, patient and family characteristics like poor prognosis or urgency tot start treatment for aggressiveness of the tumor. Another patient characteristic is that adolescents are still developing emotional abilities and cognitive skills like executive function as decision making. They also have an emerging sense of autonomy, but their authority to (co)decide depends on national legislation. On the other hand parents might feel uncertain in making a decision on fertility preservation on behalf of their young girl. In 2006 the term “oncofertility” was introduced. Globally, a lot of national fertility networks are appearing, besides grants for research collaborations like for instance the Oncofertility Consortium in the USA. This helped to rapidly advance this field. Although most of the networks are for adult women in their reproductive years, slowly the pediatric and adolescent population is also taken into account. domains. First, systemic barriers like lack of familiarity of the topic or lack on information about fertility preservation options & costs. Second, the professional related factors as discomfort with this topic or not recognize how important fertility can be for patients and their parents. Third, patient and family characteristics like poor prognosis or urgency tot start treatment for aggressiveness of the tumor. Another patient characteristic is that adolescents are still developing emotional abilities and cognitive skills like executive function as decision making. They also have an emerging sense of autonomy, but their authority to (co)decide depends on national legislation. On the other hand parents might feel uncertain in making a decision on fertility preservation on behalf of their young girl. In 2006 the term “oncofertility” was introduced. Globally, a lot of national fertility networks are appearing, besides grants for research collaborations like for instance the Oncofertility Consortium in the USA. This helped to rapidly advance this field. Although most of the networks are for adult women in their reproductive years, slowly the pediatric and adolescent population is also taken into account.

PREGNANCY IN ADOLESCENCE

G. Tridenti

Santa Maria Nuova Hospital – IRCCS, Reggio Emilia, Italy

According to WHO, adolescence is the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19. All over the world adolescent pregnancies are mostly unplanned, with 16 million live births a year. Mostly from 15-19 agers, 1 million of births is from 12 -15 agers. Every year 5 millions of adolescent abortions occur, of which 3 millions unsafe. Complications of pregnancy and delivery are the second main cause of death among 15-19 agers. 95% of all teenage pregnancies are concentrated in poor countries, mostly in Africa. The United states show the highest adolescent pregnancy rate in the Western Countries, with 7% pregnancies in minors. In Europe adolescent pregnancy outcomes differ across countries, with a higher percentage of abortions in Northern countries. Everywhere in the continent teenage abortions and birth rates are the main indicators of unmet needs for contraception. Legislation related to abortion differs among EU countries and in some of them reliable data are not available, with a general decline in teenage abortion rates since 1996 but wide variations still exist among member countries. In Europe 160.000 induced abortions in 15-19 agers were reported in 2011, with the lowest rate in Greece, Italy and the Netherlands (<10/1000 15-19 years women) and the highest in Sweden, UK, and Estonia

(20/1000 15-19 years women). EU countries number about 207.000 adolescent live births every year, that is 15 live births every 1000 aged 15-19 women, with highest rates in Romania, Bulgaria (46,7/1000) and UK (25/1000) and lowest rates in the Netherlands (5,2/1000), Italy (7/1000) and Germany. On the average a general decrease of 1,3% per year has taken place since 1996 but birth rates are still twice higher in Central-Eastern countries. Predisposing factors to teenage pregnancies are mostly socio-economic: low income family, low education level, unemployment, disadvantaged neighborhood, poor school results, mental deficits, belonging to ethnic minorities. The lowest is the socioeconomic level, the highest is the risk of early pregnancies. The lowest is maternal age, the worst are the outcomes, with higher incidence of preterm delivery, pre-eclampsia, eclampsia, urinary infections, anemia, depression, school abandonment, unqualified jobs, social security needs, early death. The newborns run higher risks of low birth weight, infections, intrauterine growth retardation, SIDS, neonatal and infantile death. Neonates from adolescent mothers are mostly bottle-fed and they are at higher risk of early pregnancy in their turn. Teenage pregnancy shows proper biological and social risk factors; among the former ones: still ongoing growth, still developing genitalia (within 3 years from menarche), low BMI, short cervix, deficit of central body fat, infections of lower genitalia, stress and depression; among the latter ones: poverty, black race, insufficient prenatal cares, smoking, alcohol drinking, substance abuse, school abandonment, sexual promiscuity, previous sexual abuse, poor social support. In adolescence a peculiar competition for nutrients occurs between the still growing mother and her fetus, with a higher maternal weight gain and a higher incidence of low birth weight neonates. To prevent preterm delivery and intrauterine growth retardation a close follow up is needed: adequate weigh gain must be attained, cervical cerclage must be considered, STDs and sexual abuse must be always screened. Careful psychological and social supports must be supplied. The adolescent pelvis is inadequate to delivery: slow progressing labours, dystocias and neonatal complications are frequent, so young girls are recommended to deliver in higher level hospitals. After delivery breast feeding must be encouraged, depression must be screened and repeated teenage pregnancies must be prevented supplying adequate contraception. Careful social, psychological and medical supports are mandatory.

ADOLESCENT GYNECOLOGY (II)

DEFICIENCIES IN THE ADOLESCENT: KEY SUPPLEMENTATIONS

S. Palacios

Palacios' Institute of Women's Health, Madrid, Spain

Adolescence is that period of life when children grow into young adults - physically, mentally and socially. This period of rapid growth and development requires proper nutrition and, as a consequence, it is a time of risk for the individual since nutritional status can impact their general health, cognition and subsequently their academic achievement. There are many factors and conditions which affect nutrient needs during adolescence including pregnancy, lactation, level of physical activity, and chronic illnesses. There are also many other considerations relating to general health (food supply, underweight, overweight, eating disorders, etc.), personal choice (eg. vegetarianism), and special circumstances (perioperative care and celiac disease), which the health practitioner needs to be aware of.

Iron deficiency is the most prevalent nutrient deficiency, and it is most common during infancy and adolescence because of the increased need for iron to support rapid growth. As a consequence, adolescents are especially vulnerable to anemia, particularly girls. Risk factors for anemia in female adolescents include poor diet (low intake of meat and fish and high intake of cereals and legumes), pregnancy, heavy menstrual losses. Should iron deficiency develop despite efforts to address dietary, lifestyle and gynecological issues, iron supplementation is essential. Iron supplementation is available in numerous salts (sulfate, glycine sulfate, fumarate, gluconate), in oral or parenteral forms, and as rapid- or

prolonged-release formulations. Drawbacks to oral iron supplementation are unpleasant gastrointestinal effects (nausea, constipation) and complexity of administration regimens leading to poor compliance. Oral ferrous sulfate extended-release preparations are preferred as they have demonstrated improved tolerability compared to other forms.

MANAGING FIBROIDS

12:10-13:40

HIFU for Uterine Fibroids

F. Orsi

European Institute of Oncology, Milan, Italy

Uterine fibroids are rather common benign tumors, affecting 20% to 40% of women aged 35 and above and may cause substantial symptoms affecting the quality of life. In 10–20% of cases uterine fibroids may lead to severe bleeding, pelvic pain, and bulk-related symptoms. While surgery such as open/laparoscopic myomectomy and hysterectomy have been the historical approach to symptomatic fibroids, currently many women prefer less invasive methods that may preserve the uterus, particularly during reproductive age. Therefore, more recently, emphasis has been placed on the development of less invasive treatments such as Uterine Fibroid Embolization (UFE) and High Intensity Focal Ultrasound (HIFU). In hysterectomy, the uterus is entirely removed surgically and the disease is completely cured. However, the removal of the uterus also means irreversible infertility and some very common side effects, such as incontinence or dyspareunia. As a result, uterine-sparing treatments have become preferred alternatives for women with the disease. UFE is one such uterine-sparing, minimally invasive procedure, performed by interventional radiologists, based onto the ischemia-induced necrosis by the selective administration of microparticles into the uterine arteries. More recently introduced in clinical practice, HIFU has shown promising results offering a virtually completely “non invasive” solution for this common problem. According to its non invasive nature, HIFU is becoming more and more attracting also the Gynaecological Community as a first attempt in the management of the fibroid related symptoms.

BACKGROUND: High intensity focused ultrasound (HIFU) is a highly precise medical procedure using high intensity focused ultrasound energy to burn and destroy the tumor tissue at depth within the body, selectively and without harming overlying and adjacent structures within the path of the beam. Currently, both B-mode ultrasonography (US) and magnetic resonance imaging (MRI) have been incorporated into HIFU devices, allowing for a very precise guidance during the treatment. Unlike radiofrequency, microwaves or cryoablation, which are also used to ablate tumors with the percutaneous deployment of a dedicated needle, HIFU is completely non-invasive. Guidance and monitoring of acoustic therapy is crucial to ensure a complete treatment and to minimize the damage to the adjacent structures. Real-time imaging, such as ultrasound, ensures that HIFU beam targeting is maintained within the correct area throughout the procedure. Both MRI and Ultrasound methods have their advantages and disadvantages. MRI has the advantage of providing temperature data within seconds after HIFU exposure (sonication), thanks to some dedicated thermo sensitive sequences. However, MRI guidance is expensive, labour-intensive and of lower spatial resolution in some cases, although it is superior to sonography in obese patients. US guidance provides “real time imaging” and the benefit of using the same form of energy that is being used for therapy. The significance of this is that the acoustic window can be verified with US, so only target visible to the US imaging can be safely treated. HIFU transducer produces high intensity ultrasound waves, focused at a variable distance into a small “focal spot”, where the energy is highly concentrated, in the same way as a magnifying glass focuses the sunlight on a particular point. By using the image guidance, such as US or MRI, the focal spot is moved within the body and located within the target, where the energy may interact with the tissue according to at least three different actions: heating, ischemic coagulation and cavitation. The heating effect is common to other

thermo ablative techniques, such as Radiofrequency ablation (RFA) and MicroWaves Ablation (MWA) and is based on the absolute sensitivity to the heat of any biological tissue. At a temperature between 60°C and 100°C a near instantaneous coagulative necrosis will be developed. The ischemic coagulation is caused, again, by the heating effect to the micro vessels which are coagulated and occluded due to the cauterization and leading for blood flow shut down. Cavitation, which can be obtained only when very high focused pressure (energy) is deployed, is the mechanical breaking of the tissue. Cavitation effect may be enhanced by the concurrent injection of US microbubbles contrast medium during the treatment. By increasing the acoustic impedance of the enhanced tissue, the focused ultrasound waves will interact more energetically with the target at the focal spot. For this reason, it is usually required a lower power than without contrast medium for achieving biological reaction during the HIFU sonication. Thanks to these three phenomena, HIFU may destroy any tissue at the level of the focal spot. The volume of the biological damage is related to many tissue specific characteristics and is usually defined as the Biological Focal Region (BFR). The geometrical shape and volume of the focal spot (the volume where the energy is focused) is called Acoustic Focal Region (AFR) and it is a specific characteristic of the transducer. By moving the focal spot within the target, sonication (energy deployment) after sonication, it is possible to ablate a large volume of tissue with any possible shape, as a 3D conformal therapy. Combination between imaging and technologies for local therapy has made ablative procedures more reliable and practical, allowing for safe and feasible application of HIFU treatments in clinical practice. Investigation and applications of HIFU are growing rapidly worldwide. Although major clinical application for HIFU is in treatment of benign and malignant solid tumors, several other potential therapeutic applications of HIFU are being investigated, including thrombolysis, arterial occlusion for the treatment of tumors and bleeding, hemostasis of bleeding vessels and organs. **INDICATIONS:** Symptoms control is the main indication for treating uterine fibroid, independently to the chosen technique (surgical or minimally invasive). Heavy bleeding, menstrual pain, pelvic pressure, constipation and urgency are the more common symptoms and are usually related to the position, size and number of the fibroids. The treatment of submucosal fibroids is usually possible but, due to the position, is more painful. After the treatment the patient may experience clot and necrotic tissue discharge for few weeks. Pelvic pressure, constipation and urinary urgency are common large subsierosal or peduncolated fibroids related symptoms. Due to their external position, HIFU treatment should be carefully performed in order to avoid any possible damage to the adjacent structures, such as bones, muscle and bowels. For HIFU treatment of uterine fibroids, the patient is located in prone position on the HIFU table which is quite different between the MRgHIFU and the USgHIFU equipments. Once the patient has been carefully located with the region of interest on the transducer, the HIFU bed is introduced within the magnet in the MRgHIFU equipment. Here the USgHIFU technique will be more deeply described.

NON HORMONAL MANAGEMENT OF MENOPAUSE

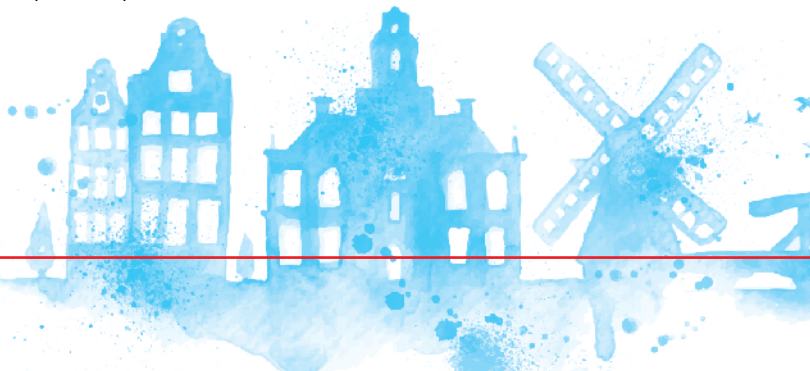
14:30-16:00

THE WHI AND OSTEOPOROSIS

R. D. Langer

University of Nevada, USA

Throughout the world, postmenopausal fractures due to osteoporosis, particularly hip and vertebral fractures, are a major cause of morbidity, with a high rate of accelerated downstream mortality. In the U.S., a woman's risk of hip fracture is equal to her combined risk of getting breast, uterine and ovarian cancer. Hip fracture is not a trivial event, approximately 1 in 4 hip fracture patients over the age of 50 die in the year following the fracture. Hormone therapy promotes both preservation of bone, and increases in bone density, in a physiologic manner. Clinical trial evidence demonstrates that Hormone Therapy (HT) is effective in reducing fracture rates in postmenopausal women. The most definitive evidence comes from the



Women's Health Initiative (WHI) clinical trial. In contrast to the populations studied in most clinical trials of interventions to prevent fractures, participants in the WHI hormone trials were not selected for increased fracture risk. And, because their average body mass index was somewhat higher than average for women of similar ages worldwide, their baseline fracture risk was lower. Nonetheless, even within that more challenging design, the WHI demonstrated significant reductions in hip, wrist, vertebral and total fractures. Other clinical trials have demonstrated significant improvements in bone mineral density (BMD) in women taking HT, and increased BMD correlates strongly with reduced fracture risk. However, in the aftermath of the early stopping of the WHI for a marginal increase in breast cancer and a lack of coronary benefit – driven by the fact that the average participant was more than a decade past menopause – there has been a dramatic shift away from the use of HT for the prevention of osteoporosis, although it remains licensed for this indication in most countries. Longitudinal studies conducted since the end of the WHI clinical trials have demonstrated that the flight from HT has been associated with a reduction in BMD and an increase in fractures, including the most devastating type, hip fracture. As these trends have become more obvious, major professional organizations, including the International Menopause Society and the North American Menopause Society have published recommendations supporting the use of HT for the prevention of osteoporosis, particularly in women below the age of 60. While other therapeutic modalities are also available, including bisphosphonates, HT remains an important option. The World Health Organization Fracture Assessment Tool, known as the FRAX, is a simple and critically important element in the assessment of disease risk in postmenopausal women. Versions optimized for most nations are available online. FRAX assessments should be conducted for all menopausal women and appropriate interventions, potentially including HT, should be initiated for any woman with risk above the intervention threshold.

NON HORMONAL TREATMENT OF MENOPAUSE

S. O. Skouby

University of Copenhagen, Denmark

Women who have contraindications to estrogens or who do not wish to take them may find non-hormonal management for menopausal symptoms helpful. Non-hormonal treatments for menopausal symptoms generally only address VMS, and other strategies may be needed to alleviate other troublesome menopausal symptoms e.g. genito-urinary syndrome of menopause, sleep disturbance, sexual dysfunction and mood disturbance. Extensive randomised controlled trial data supports the efficacy of selected SSRI and SNRI for VMS. Of the SSRIs, paroxetine seems to have the best evidence base of efficacy. Few other preparations have been directly compared to estrogen in randomised trials, but a systematic review has identified that also clonidine, and the gaba-agonist gabapentin are superior to placebo for VMS. Clonidine is therefore approved for the treatment of menopausal flushes in some countries, as it seems that it can reduce the occurrence of hot flushes after 3 months of use. There is insufficient or conflicting evidence from randomized controlled trials to suggest that exercise, supplements or a diet rich in phytoestrogens are effective for vasomotor menopausal symptoms. Cognitive-behavioral, behavioral, and mindfulness-based (CBBMB) therapies have been used to deal with menopausal symptoms. Alternative medicine interventions have also been tried, but the available evidence is still limited. The efficacy and safety of “bio-identical” hormone products is unknown, and the quality, purity and constituents of complementary therapies varies substantially.

POTENTIAL THERAPY IN MENOPAUSE

16:30-18:00

CAN OVARIAN RESPONSE TO STIMULATION PREDICT EARLY MENOPAUSE

F.J. Broekmans

University Medical Center Utrecht

The rate of ovarian aging is highly variable among women. This is evident from the large variation in age at menopause and also in age at onset of cycle irregularity. Early and very early menopause as in premature ovarian failure or menopause before the age of 45 represent the extreme of this variation. The question whether the occurrence of early or very early menopause can be anticipated 10 to 20 years earlier in the individual remains a very compelling issue.

Several markers for such event could be envisioned. They are likely to be related to the quantity of follicles present in the ovaries at a certain moment in time, where low numbers of follicles will possibly be predictive of early or very early menopause. The tools that are currently present to reflect this quantity of follicles will all relate to the antral follicle pool which is itself proportionally related to the size of the primordial follicle pool. Markers for the antral follicle cohort, such as a TVS based Antral Follicle Count (AFC), basal FSH, AntiMullerian Hormone (AMH) and possibly also the response of the ovaries to ovarian hyper stimulation may all serve as possible predictors of events that will take place 10 or 20 years thereafter. Studies so far have mainly used cross sectional data. From these it was demonstrated that for markers such as the AFC, AMH, primordial follicle number, and also for the number of oocytes obtained after ovarian hyper stimulation, the age specific level variation was related to the variation in age at menopause. All these studies have been based on the assumption that the decline in number of antral or primordial follicles across the third and fourth decade of life will be more or less identical for any woman. In recent years prospective studies have looked at the prediction of the timing of menopause based on testing of AMH or AFC, where follow up time periods of 10 to 15 years could be accomplished. These studies have suggested that individual forecasting of age at menopause could be possible but also suggested that prediction of these events in the fourth decade of life may become less accurate. As for ovarian response in ART treatment, earlier studies have demonstrated that poor responders in IVF indeed have a tendency to enter the menopausal transition clearly earlier compared to women with a normal response. However, long term follow up studies looking at the final event menopause to confirm these observations are currently lacking. The assumption that follicle number decline follows a fixed pattern across women has been recently studied in a large population based cohort, where AMH was measured every 5 years across a timeframe of 25 years. From these studies it appeared that women with a high initial AMH continued to demonstrate high age specific AMH levels over time, while for those with low AMH for age remained in the lowest percentile. However, the decline curves for AMH over time tended to convert to such an extent that discrimination between women with very early or very late menopause may appear to be troublesome. In other words, women with low age specific AMH tend to decline less rapid compared to those women with a high age specific AMH. If this would be confirmed in other populations the prior discrimination of the time of menopause may become jeopardized by such differences in the decline rate of follicles between women. It may also imply that other markers such as the poor response to ovarian hyperstimulation may be a target for renewed research.

YES! THERE IS A CRITICAL WINDOW FOR STARTING HRT TO PREVENT DISEASE

R. D. Langer

University of Nevada, USA

Prior to the unexpected early termination of the Women's Health Initiative trial of conjugated equine estrogens (CEE) and medroxyprogesterone acetate (MPA), the prevailing view was that postmenopausal Hormone Replacement Therapy (HRT) was a low-risk intervention with immediate value for symptom relief in recently menopausal women, and that HRT would provide long-term protection against major chronic diseases that become increasingly important after menopause. Coronary heart disease (CHD) is the leading cause of death in women in most developed countries, so a treatment that affects this risk has enormous implications for women's health. On the basis of non-experimental studies, and a major trial of intermediate markers (the Postmenopausal Estrogen Progestins Interventions [PEPI] trial), HRT was believed to be cardioprotective. The results of larger randomized controlled clinical trials, including the Heart and Estrogen Replacement Study (HERS) and the Women's Health Initiative (WHI), challenged that expectation. Critically, those studies were not designed to assess outcomes of typical use of HRT beginning near menopause. Rather they were designed to test whether the associations seen in women who started near menopause would be replicated in women starting a decade or more after menopause. The prevailing view of the relative benefits and risks of HRT changed dramatically shortly after the initial publication from the WHI, and use plummeted, driven by the fear of breast cancer together with skepticism about cardiovascular benefits. Stunningly, the contrasting findings of the WHI trial of conjugated equine estrogens alone reported two years later – which suggested prevention of coronary heart disease in women who began treatment before the age of 60, and a reduction in breast cancer overall -- were largely ignored. Even in the CEE+MPA trial, findings in the relatively small number of women within 10 years of menopause suggested no harm and hinted towards benefit. Those findings were lost in the cloud of negative press from the original report, and because the estrogen alone trial was also ended prematurely for concern about stroke which was driven by strong effects in women who were well past menopause at study baseline. A valuable lesson from the WHI is that the effects of HRT on most, perhaps all, organ systems vary by age and time since last physiologic exposure to hormones. In the decade since the first WHI reports, we have learned much about the characteristics of women who are likely to benefit from HRT. The Danish Osteoporosis Prevention Study (DOPS), like the WHI, demonstrated reduced rates of CHD and breast cancer in women starting HRT at younger ages. The recent report from the Early versus Late Intervention Trial with Estradiol (ELITE) study demonstrated lower rates of atheroma progression in the carotid arteries for women initiating HRT within 6 years of menopause, but not for women initiating more than 10 years after menopause. Clearly not all postmenopausal women will have indications for HRT. But for those with indications, benefits are both short-term (vasomotor, dyspareunia), and long-term (bone health, possible coronary risk reduction, possible cognitive protection). Critically, the 'facts' which most women and clinicians consider in making the decision to use, or not use, HRT are frequently wrong or incorrectly applied. Based on incorrect impressions from the WHI, they typically emphasize fear of breast cancer far in excess of the actual risk, and discount potential benefits. Few clinicians or women realize that the breast cancer rate in the WHI CEE + MPA arm was less than one case per 1000 women-years of exposure. And most women are unaware that they are far more likely to suffer significant cardiovascular disease than any major cancer. They are similarly unaware of the high incidence and morbidity associated with osteoporosis. The demonizing of HRT largely due to the WHI may already have set in motion a downstream burden of chronic disease that could have been mitigated or delayed. There is urgent need to correct these wrong impressions and re-establish an appropriate context for current therapeutic options in HRT.

FETOMATERNAL – HALL D

Saturday, November 12

PRETERM BIRTH

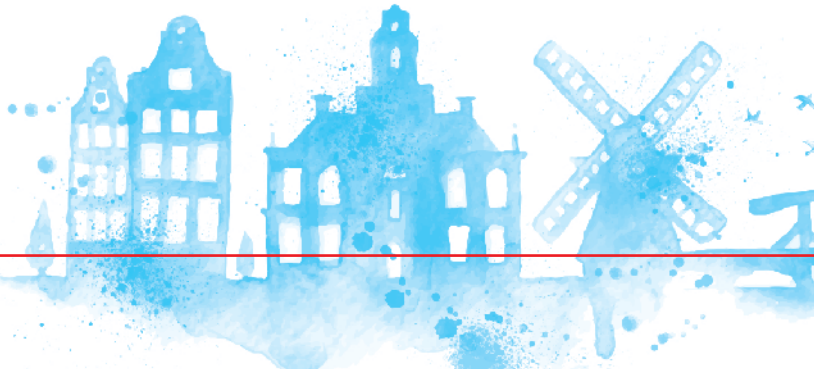
08:30-10:00

LIMITED EVIDENCE FOR THE USE OF TOCOLYTICS IN WOMEN WITH THREATENED PRETERM LABOUR

B.W. Mol

The Robinson Research Institute | School of Medicine, University of Adelaide; The South Australian Health and Medical Research Institute, Adelaide, Australia

Preterm birth is the most common cause of neonatal morbidity and mortality worldwide. Annually it affects 15 million children worldwide, of whom 2.4 million (15.6%) are born extreme or very premature (< 32 weeks of gestation) (1). Preterm birth is responsible for approximately 70% of all neonatal deaths and 40% of childhood neurological morbidities (2). There is an increased risk of life long health consequences such as breathing disorders and developmental problems, cerebral palsy being the most important one. Prematurity therefore has a major impact on the infant itself and on its parents (3). The short and long-term costs associated with prematurity are substantial (4-6). In England, the incremental cost per preterm child surviving to 18 years compared with a term survivor was estimated to be £22,764 (≈AU \$52,500), with 92% of the costs occurring during the neonatal period (6). The total additional cost of preterm birth to the public sector is estimated to be equivalent to AU \$1.4 billion over the first 18 years of life (6). In the United States preterm birth rate is around 12.0%, which equates to more than 500,000 babies being born preterm annually. (1) The annual societal economic burden associated with preterm birth is estimated at \$26 billion. (7) Since effective prevention of preterm birth is not possible, women presenting with signs and symptoms of threatened preterm birth will remain a frequent and challenging problem in obstetrics, affecting 15% of all pregnant women. This equates to 600,000 women in the United States annually presenting with signs and symptoms of preterm labor before 34 weeks. Once women present with symptoms indicating spontaneous preterm birth, current management focuses on transfer of a patient to a perinatal center with a NICU facility and to timely administration of steroids and magnesium sulphate (8 9). Consequently, postponing delivery for at least 48 hours in women who present with preterm labor is essential, and, tocolytics are widely used in these women (in the US 100,000 women every year are prescribed Nifedipine). A recent network meta-analysis to determine the most effective agent for delaying preterm delivery showed that the probability of delivery being delayed by 48 hours was highest with prostaglandin inhibitors, followed by magnesium sulphate, calcium channel blockers, beta-mimetics and the oxytocin receptor blocker Atosiban (10). No class of tocolytic was significantly superior to placebo in reducing neonatal respiratory distress syndrome. Prostaglandin inhibitors and calcium channel blockers had the highest probability of delaying delivery and improving neonatal and maternal outcomes. While oxytocin receptor antagonists are used across Europe, a recent review (14 studies; 2485 women) did not demonstrate superiority against placebo or other tocolytics while concerns about safety for the infant were raised (11). A recent Cochrane review on Nifedipine (35 studies; 3275 women) showed, when compared to beta-mimetics, an increased duration of pregnancy of 4.4 days, 95% CI 0.25 - 8.5, and an improvement of neonatal outcome (12). However, most of these trials suffer lack of blinding or had a small sample size. The two small placebo controlled trials (173 women) of Nifedipine showed a reduction in birth within 48 hours, but perinatal mortality and other clinically important outcomes were not reported. Unfortunately, tocolytic drugs have never been formally evaluated in terms of their effectiveness against placebo, using the condition of the neonate as the primary outcome. This is of particular importance in our current era, as dramatically more effective neonatal treatment options have become available. In addition, most tocolytic drugs,



including the calcium-antagonist Nifedipine that is used in the United States, are used off-label, as the pharmaceutical companies involved in these cardiovascular drugs have no interest in the small commercial market of pregnancy, or want to avoid it entirely for medico-legal reasons. Many other countries also use Nifedipine, the oxytocin antagonist Atosiban or Indomethacin, but some well-resourced countries (Ireland, Canada) do not use tocolytics at all. The WHO has recently published guidelines on preterm birth. Existing trials have shown that tocolytics can delay preterm birth by 2–7 days; however, there is limited evidence that they affect substantive perinatal outcomes, and they could have adverse effects on the mother. Consequently, the guidelines do not recommend use of tocolytics for the purpose of improving newborn outcomes (13). The question is mentioned in the Institute of Medicine's Top 100 Questions (effectiveness of clinical interventions to reduce incidences of infant mortality, pre-term births, and low birth rates, especially among African American women).

References:

1. Blencowe H, Cousens S, Oestergaard MZ, Chou D, Moller AB, Narwal R et al. National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications. *Lancet*. 2012 Jun 9;379(9832):2162–72.
2. Hack M. Outcomes of children of extremely low birthweight and gestational age in the 1990's. *Early Hum Dev* 1999; 53:193–218.
3. Mc Cain GC, Deatrick JA. The experience of high-risk pregnancy. *J of Obst and Neon Nurs* 1993;23:421–7.
4. Petrou S. Economic consequences of preterm birth and low birthweight. *BJOG* 2003; 110 Suppl 20:17–23.
5. van Baaren GJ, Peelen MJ, Schuit E, van der Post JA, Mol BW, et al. Preterm birth in singleton and multiple pregnancies: evaluation of costs and perinatal outcomes. *Eur J Obstet Gynecol Reprod Biol*. 2015 Mar;186:34–41.
6. Mangham LJ, Petrou S, Doyle LW, Draper ES, Marlow N. The cost of preterm birth throughout childhood in England and Wales. *Pediatrics*. 2009 Feb;123(2):e312–27.
7. Institute of Medicine. *Preterm Birth. Causes, Consequences, and Prevention*. Washington DC: National Academies Press; 2007
8. Brownfoot FC, Gagliardi DI, Bain E, Middleton P, Crowther CA. Different corticosteroids and regimens for accelerating fetal lung maturation for women at risk of preterm birth. *Cochrane Database Syst Rev*. 2013;8:CD006764
9. Nguyen TM, Crowther CA, Wilkinson D, Bain E. Magnesium sulphate for women at term for neuroprotection of the fetus. *Cochrane Database Syst Rev*. 2013;2:CD009395.
10. Haas DM, Caldwell DM, Kirkpatrick P, McIntosh JJ, Welton NJ. Tocolytic therapy for preterm delivery: systematic review and network meta-analysis. *BMJ*. 2012;345:e6226.
11. Flenady V, Reinebrant HE, Liley HG, Tambimuttu EG, Papatsonis DN. Oxytocin receptor antagonists for inhibiting preterm labour. *Cochrane Database Syst Rev*. 2014;6:CD004452.
12. Flenady V, Wojcieszek AM, Papatsonis DN, Stock OM, Murray L, et al. Calcium channel blockers for inhibiting preterm labour and birth. *Cochrane Database Syst Rev*. 2014;6:CD002255.
13. Vogel JP, Oladapo OT, Manu A, Gülmezoglu AM, Bahl R. *New*

metabolites as well as of estradiol may contribute to the frequently observed impairment of neurodevelopment with delayed psychomotor and mental development and sometimes severe neurological deficits like cerebral palsy. Thus, the effects of postnatal estradiol and progesterone replacement on brain development in extremely low birth weight children has been considered. Importantly, progesterone is a multifunctional molecule, which acts on a variety of cell types and developmental processes. Thus, progesterone not only regulates neuronal functions, but also the surrounding of axons with myelin sheaths by oligodendrocytes. The developing oligodendrocytes are particularly sensitive to injury, and in humans, a window of vulnerability exists between 23 and 32 weeks' gestation for the periventricular white matter. Damage of developing myelin is referred to as periventricular leukomalacia and corresponds to the principal form of brain injury in the premature infant and the predominant pathologic finding underlying cerebral palsy. There are multiple causes of developmental white matter damage, including premature birth, intrauterine infections, hypoxia–ischemia, neuroinflammation and axonopathies. In laboratory rodents, rats and mice, myelin formation in the central nervous system by oligodendrocytes only starts after birth and is maximal between the second and third postnatal week. This developmental period of myelination coincides with the window of great white matter vulnerability in humans, when precursor oligodendrocytes are abundant and myelination starts. A key role of progesterone and its intracellular receptor in oligodendrocyte maturation and developmental myelination has been demonstrated in organotypic slice cultures prepared from the cerebellum of postnatal rats and mice. Organotypic cultures offer an integrated system, which closely reproduces developmental events, and thus provide a unique model for studying the influences of progesterone and its metabolites on the myelination of axons.

References:

- Hertig A, Liere P, Chabbert-Buffet N, Fort J, Pianos A, Eychenne B, Cambourg A, Schumacher M, Berkane N, Lefevre G, Uzan S, Rondeau E, Rozenberg P, Rafestin-Oblin ME (2010) Steroid profiling in preeclamptic women: evidence for aromatase deficiency. *Am J Obstet Gynecol* 203:477 e471–479.
- Hill M, Paskova A, Kanceva R, Velikova M, Kubatova J, Kancheva L, Adamcova K, Mikesova M, Zizka Z, Koucky M, Sarapatkova H, Kacer V, Matucha P, Meloun M, Parizek A (2014) Steroid profiling in pregnancy: a focus on the human fetus. *J Steroid Biochem Mol Biol* 139:201–222.
- Schumacher M, Hussain R, Gago N, Oudinet JP, Mattern C, Ghomari AM (2012) Progesterone synthesis in the nervous system: implications for myelination and myelin repair. *Front Neurosci* 6:10.
- Schumacher M, Guennoun R, Mattern C, Oudinet JP, Labombarda F, De Nicola AF, Liere P (2015) Analytical challenges for measuring steroid responses to stress, neurodegeneration and injury in the central nervous system. *Steroids* 103:42–57.
- Schumacher M, Mattern C, Ghomari A, Oudinet JP, Liere P, Labombarda F, Sitruk-Ware R, De Nicola AF, Guennoun R (2014) Revisiting the roles of progesterone and allopregnanolone in the nervous system: resurgence of the progesterone receptors. *Prog Neurobiol* 113:6–39.
- Shaw JC, Palliser HK, Dyson RM, Hirst JJ, Berry MJ (2016) Long-term effects of preterm birth on behavior and neurosteroid sensitivity in the guinea pig. *Pediatric Research* 80: 275–283.
- Trotter A, Steinmacher J, Kron M, Pohlandt F (2012) Neurodevelopmental follow-up at five years corrected age of extremely low birth weight infants after postnatal replacement of 17beta-estradiol and progesterone. *J ClinEndocrinol Metab* 97:1041–1047.

PROGESTERONE AND NEURODEVELOPMENT

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The brain is continuously exposed to particularly elevated levels of progesterone and its 5alpha- and 20alpha-reduced metabolites during human embryonic development. Steroid profiling during early development has become possible thanks to the advent of accurate and sensitive mass spectrometric analytical methods: the coupling of gas chromatography (GC) or liquid chromatography (LC) to mass spectrometry (MS) or tandem mass spectrometry (MS/MS). The fetal steroid metabolome can be disturbed during disorders of pregnancy such as pre-eclampsia. This may have consequences for brain development. Imaging studies have indeed revealed that steroid hormones play an important role in the maturation of neuronal circuits in humans. In addition, animal studies have demonstrated that progesterone and its metabolite allopregnanolone (3alpha, 5alpha-tetrahydroprogesterone) protect vulnerable immature neural cells against hypoxic damage during fetal development. In response to deprivation, brain levels of neuroactive progesterone metabolites are increased, pointing to an endogenous neuroprotective mechanism. In the case of preterm birth, the disruption of elevated levels of progesterone and its neuroactive

CAESAREAN SECTION

WHY DO NICHES DEVELOP IN CAESAREAN UTERINE SCARS AND ARE THEY A PROBLEM?

J.A.F Huirne, A.J.M Vervoort, L.vd Voet, R.de Leeuw, I. Jordans, HAM Brölmann, BWJ Mol, WJK Hehenkamp
Umc

Cesarean section (CS) rates increase in many countries, consequently the number of women with a uterine scar is rising. A niche has been defined as an indentation of the myometrium at the site of the uterine cesarean scar and turned out to be very prevalent after a cesarean delivery. Using gel or

saline instillation sonohysterography, a niche is identified in more than half of the women who had had a CS, mostly with the uterus closed in one single layer, without closure of the peritoneum. Apart from the well-known complications, such as uterine rupture and pathologically adherent placentas, it has recently been proven that there is also an association with gynaecological symptoms such as postmenstrual spotting. Postmenstrual spotting is strongly related to the presence of a niche; it was observed in approximately 30% of women with a niche at 6–12 months after their CS. Other reported symptoms in women with a niche are dysmenorrhea, chronic pelvic pain, dyspareunia and subfertility. Because of these observations we focused on diagnostics, therapeutic and preventive strategies of uterine niches. Hereafter, we postulated some hypotheses on niche development. Possible factors that could play a role in niche development include a very low incision through cervical tissue, inadequate

suturing technique during closure of the uterine scar, surgical interventions that increase adhesion formation or patient-related factors that impair wound healing or increase inflammation or adhesion formation. However, these hypotheses are based on studies that include several shortcomings in terms of variations in used definitions, methods of niche measurement and lack of crown indicators. Futures studies with a proper design are needed to confirm or reject our hypotheses. We recently completed a Delphi procedure among experts within the special interest group on niches of the ESGE. This resulted in a consensus on the definitions and methods to be used to measure a niche. Based on these outcomes we are currently developing an e-learning program to improve uniform measurements and to improve future study outcomes.



ORAL PRESENTATIONS

O01

THE ASSOCIATION BETWEEN COENZYME Q10 CONCENTRATIONS IN FOLLICULAR FLUID WITH EMBRYO MORPHOKINETICS AND PREGNANCY RATE IN ASSISTED REPRODUCTIVE TECHNIQUES

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Problem Statement: Coenzyme Q10 (CoQ10) is an essential component of electron transport in the mitochondrial respiratory chain. It has been shown to improve oocyte developmental competence in previous reports. However, there is limited data about the association between follicular fluid CoQ10 levels and subsequent embryo quality. The aim of this study is to evaluate the association between follicular fluid (FF) CoQ10 levels and embryo morphokinetics and pregnancy rate. **Methods:** Fifty-nine infertile patients who underwent intracytoplasmic sperm injection (ICSI) cycles were included in the study. For each patient CoQ10 level of the follicular fluid was assayed by high performance liquid chromatography system. After ICSI of each oocyte the relationship between level of CoQ10 content of each follicular fluid and subsequent embryo quality, embryo morphokinetics and pregnancy rate were investigated. The relationship between the level of CoQ10 content of each follicle and optimal time lapse parameters for embryos of these follicles including t5, s2 and cc2 were also analyzed. Embryos were classified in four categories (Grade A, B, C and D) according to morphokinetic parameters using t5-t2 and t5-t3 (cc3). Results: Follicular fluid CoQ10 levels were significantly higher in grade A, B than grade C, D embryos ($p < 0.05$). The concentration of CoQ10 levels were significantly higher in the pregnant group ($p < 0.05$). There was no significant relation between optimal t5 and s2 morphokinetic parameters and and CoQ10 levels. However, CoQ10 levels were significantly higher in follicular fluid of embryos which had optimal cc2 ($p < 0.05$).

Table:

Table: The association between follicular fluid Coenzyme Q levels and clinical results

		CoQ10	R
t5	Optimal (n:23)	0.561±0.73	0.592
	Non-optimal (n:36)	0.458±0.70	
s2	Optimal (n:27)	0.521±0.72	0.825
	Non-optimal (n:32)	0.479±0.71	
cc2	Optimal (n:45)	0.572±0.80	0.013*
	Non-optimal (n:14)	0.261±0.06	
Embryo quality	Grade A-B (n:33)	0.526±0.64	0.038*
	Grade C-D (n:16)	0.390±0.55	
Pregnancy	Pregnant (n:27)	0.603±0.78	0.044*
	Non-pregnant (n:32)	0.379±0.62	

cc2 (second cell cycle) = t3 - t2, s2 (second synchrony) = t4 - t3 *: $p < 0.05$

Conclusions: High follicular fluid CoQ10 level is associated with optimal embryo morphokinetic parameters and higher pregnancy rates.

Disclosure of Interest: None Declared

O02

WHAT HAVE WE LEARNT FROM EXTENDED CULTURE OF REJECTED DAY 3 CLEAVAGE STAGE EMBRYOS: A RETROSPECTIVE COHORT STUDY

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Problem Statement: Embryologists and clinicians are both dubious when facing decisions involving an ongoing culture of a poor quality day 3 embryo; we tested whether these low score day 3 embryos ('rejected embryos') can still lead to successful blastulation and implantation. **Methods:** A retrospective cohort study performed in a single university affiliated IVF unit (Meir medical center, Tel Aviv University, Israel). All cycles ending in

embryos graded 2 or less, which were not considered eligible for an embryo transfer, were included (in a morphologic grading system where 4 is the highest score available). The following outcomes were recorded: blastulation, Day 5 fresh embryo transfer, freezing procedure, future thawing and pregnancy related outcomes. Embryos that were transferred along with high score embryos were excluded, as well as were blastocysts graded less than 3BB by Gardner score. Results: A total of 694 'rejected embryos' were included presenting a blastulation rate of 21.2% (147 embryos), as opposed to 50-60% blastulation rate reported in the literature. Mean maternal age was comparable between embryos ending in a successful blastulation and those discarded (31.2 ± 5.6 years versus 31.6 ± 5.7 years, P value 0.4). Mean day 3 score of embryos reaching the blastocyst stage was significantly higher than those arresting (P value < 0.01). In a univariate analysis were: male partner age, post wash TMC, BMI (female), ethnicity, main indication for treatment, infertility duration, number of previous treatments, day 3 hormonal profile, total amount of gonadotropins required for the stimulation, treatment protocol and smoking, were not showing a statistically significant correlation with blastulation. In a multivariate model, both day 3 grade and presence of a medical problem were significantly affecting blastulation: for each additional point on day 3 score in our cohort, the chances for blastulation increased 4.6-fold (95% CI 1.83-10.84) and the presence of a medical condition was reducing the chances for blastulation by 0.275 (95% CI 0.079-0.959). In the next step of our analysis we excluded all cases of blastocysts which were graded less than 3BB (51 embryos) and all blastocysts that were transferred along with an embryo of high day 3 score (29 cases). Following this step 67 embryos were eligible. None of the demographic parameters listed above, or the day 3 grading, was predictive of the blastocyst's grade. Out of those 67 blastocysts, 51 were so far transferred (40 fresh, and 11 thawed). Additional 3 embryos were thawed but did not survive the process and 13 are still frozen. Cumulative clinical pregnancy rate/transfer at this point is 32%, including 14 live births and a single miscarriage. In addition, 6 chemical pregnancies were recorded. **Conclusions:** Low score day 3 embryos, that are not considered transferable, can still end in a successful blastulation and live birth.

Disclosure of Interest: None Declared

O03

CD 138 IMMUNOHISTOCHEMISTRY IN CHRONIC ENDOMETRITIS IN WOMEN WITH RECURRENT IMPLANTATION FAILURE AFTER IN VITRO FERTILIZATION

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Centro Crea, Taranto, Italy

Problem Statement: Determine the role of endometrial biopsy and CD-138 immunohistochemistry in patients undergoing in vitro fertilization and embryo transfer who fail to conceive despite the transfer of at least one good quality embryo. **Methods:** Endometrial biopsies performed on patients who failed at least two consecutive cycles and then proceeded with either a fresh IVF-ET after the biopsy date (n_291). All biopsies were performed using a Pipelle catheter. Chronic endometritis defined as the presence of plasma cells in endometrial stroma and immunohistochemical study was performed (Cd 138). Chronic endometritis in patient's CD - 138 positive and in patient's CD-138 negative treated with Antibiotics and Steroids for ten days during stimulation. Each patient had one good quality embryo (at least 6-cell on day #3 after retrieval with grades of I-II) transferred. Our study population consisted of three groups: Group 1 (n_102) included patients with chronic endometritis CD - 138 positive, Group 2 (n_77) were patients with hysteroscopic diagnosis of endometritis and negative biopsies (CD-138 negative) and Group 3 (n_113) consisted of patients who failed two consecutive IVF-ET cycles and without any hysteroscopic finding and did not undergo biopsy. All cycles had a number of oocytes at retrieval more than five and at least one embryo top quality. Results: Chronic endometritis was found in 32.6% (85/291) of the patients biopsied. Age, number of previous failed cycles, number of transferred embryos and the number of good quality embryos were similar in three groups. Patients in Group 1 had

significantly higher ongoing pregnancy (50 %) and implantation rates (35 %) when compared to Groups 2 and 3 ($p_{.05}$). There were no differences in ongoing pregnancy and implantation rates between Groups 2 and 3. Conclusions: Approximately 25/291 of patients tested had chronic endometritis CD -138 positive, confirming the importance of sampling endometrium in recurrent IVF failures. This pathology may alter the integrity of biochemical milieu in endometrial cavity. Our study suggests that CD-138 immunohistochemistry defines patients who need therapy. Patients with chronic endometritis and negative CD-138 had same ongoing pregnancy and implantation rates in a subsequent cycle when compared to group of patients without any additional information in endometrial findings

Disclosure of Interest: None Declared

O04

THE EFFECTS OF MALE HYPERINSULINEMIA ON IVF OUTCOME

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Problem Statement: Combination of sedentary life and high fat/carbohydrate containing diets predisposes a person to elevated serum insulin level and insulin resistance. Raising serum insulin level has been recently suggested to inversely influence on normal spermatogenesis by altering in androgenic hormones profile. Hyperinsulinemia can also contribute to impaired sperm function by increasing in inflammatory chemicals, free radicals, and reactive oxygen species (ROS) production. Higher percentage of poorly compacted sperm deoxyribonucleic acid (DNA) was detected in hyperinsulinemic men. These research evidences prompted us to evaluate the influence of male hyperinsulinemia on in vitro fertilization (IVF) outcomes. **Methods:** A case-control study was performed on 114 infertile couples who were candidate for IVF program at a university – affiliated IVF Unit, in 2015. The precipitating males were the healthy and normozoospermic men. The participating women were younger than 36 years old with tubal factor as infertility cause and having more than three oocytes in a conventional stimulation programs. The subjects were divided in two groups according to male partner insulin levels; the patients with serum insulin level $\leq 9 \mu\text{IU/ml}$ as the control group ($n = 93$) and the patients with serum insulin levels $> 9 \mu\text{IU/ml}$ as the case group ($n = 21$). The main outcome measures were semen parameters, fertilization rate, number of embryos, embryo quality, biochemical pregnancy rate, and clinical pregnancy rate. **Results:** There was no statistically significant difference between the groups regarding the demographic data. Two groups did not differ statistically in terms of sperm parameter values including; sperm concentration, motility and morphology ($\rho = 0.41$, $\rho = 0.38$, $\rho = 0.22$, respectively). The fertilization rate of the group with normal serum insulin levels was statistically higher than that of the hyperinsulinemic group (72.12% vs. 43.61%, $p = 0.041$). There was a slight linear association between serum insulin levels and number of embryos ($r = 0.209$, $p = 0.038$). The hyperinsulinemic men had lower embryo quality than control group ($p = 0.013$). Nevertheless, no association were found between serum insulin levels and biochemical pregnancy rates (35.41% vs. 37.23%) and clinical pregnancy rates (26.34% vs. 29.58%) in the case and control groups ($p = 0.453$, $p = 0.764$, respectively). **Conclusions:** Male insulin levels may influence embryo quality and fertilization rates in an IVF program. In fact, these findings call for greater clinical awareness of adverse effects of male hyperinsulinemia on male reproductive health.

Disclosure of Interest: None Declared

O05

PREGNANCY OUTCOMES WITH DOUBLE TRIGGER COMPARED TO SINGLE TRIGGER IN ANTAGONIST IVF CYCLES

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Problem Statement: To investigate the effect of using double trigger for final oocyte maturation using combination of gonadotropin-releasing hormone (GnRH) agonist and human chorionic gonadotropin (hCG) on ovarian response, oocyte maturity, embryo quality and implantation rates compared to single hCG trigger in normal responders undergoing GnRH-antagonist in vitro fertilisation/intracytoplasmic sperm injection (IVF-ICSI) cycles. **Methods:** Study was conducted on 132 women undergoing IVF with antagonist protocol at a tertiary care IVF centre from July 2015 to January 2016. Women aged more than 40 years, serum AMH < 7 or $> 35 \text{ pmol/l}$, evidence of bilateral hydrosalpinx, fibroid or adenomyosis $> 4 \text{ cm}$ were excluded. Women meeting the inclusion criteria were then randomised to two groups; study group $N=66$, who received double trigger which included one dose of GnRH agonist (injection Leuprolide 2 mg subcutaneous) and one dose of rhCG (injection ovitrelle 250mcg) and control group $N=66$, who received single trigger which included a single injection of rhCG 250mcg alone for the same. Randomisation was done by using computer generated random no. sequence for two arm study with equal no. in each group after delivery. Allocation concealment was done by using opaque (serially numbered) sealed envelopes. Ovarian response, oocyte maturity, embryo quality and implantation rates were compared between the two groups. **Results:** Mean number of oocytes retrieved were same in the 2 groups (10.77 vs. 10.24 $p = 0.57$) with more mature eggs in double trigger group (76.9% vs 72.6%; $p = 0.14$) in ICSI cycles. The endometrial thickness and embryo quality were significantly better in study group ($p = 0.02$ and 0.049 respectively) and hence significantly better implantation rate and improved pregnancy rate and clinical pregnancy rate in the study group even though they did not reach clinical significance (study group: 76.2%, 32.7%, 29.3% vs control group: 56.28%, 27.59%, 24.13% respectively: $p = 0.03$, 0.54 , 0.18). There was no case of ovarian hyper stimulation in either of the two groups. **Conclusions:** Double trigger appears to improve implantation rate and clinical pregnancy rate marginally, possibly because of its beneficial effect on endometrial thickness and embryo quality. However, larger studies are required before conclusions can be drawn regarding the routine use of dual trigger in IVF cycles.

Disclosure of Interest: None Declared

O06

PIOGLITAZONE EFFECTS ON OOCYTE AND EMBRYO QUALITY AND PREGNANCY RATE IN RECURRENT IMPLANTATION FAILURE IN COMPARISON WITH METFORMIN IN POLYCYSTIC OVARIAN SYNDROME

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Problem Statement: recurrent implantation failure is one of the most problems in ART cycles. The purpose was to determine the efficacy of pioglitazone on quality of ovum and pregnancy rate in IVF cycle in comparison with metformin. It seems that pioglitazone is a Peroxisome proliferating activating receptor gamma-independent agent to increase the secretion of interleukin 6 and interleukin 8 secretion from primary endometrial stromal cells. **Methods:** In this interventional study that was performed as a randomized clinical trial, 149 consecutive infertile women with PCO were enrolled and randomly assigned to receive either 15 mg pioglitazone BD from 6 weeks before treatment or metformin twice a day since six weeks before IVF. Oocyte number and embryo quality and embryo



quality was evaluated in both groups. The pregnancy rate was compared across the groups.

Results: The results in this study demonstrated clinical pregnancy in 35 patients (45.5%) and 48 subjects (66.7%) in metformin and pioglitazone groups, respectively with statistically significant difference ($P=0.009$). The number of oocytes, quality and the embryo quality doesn't have any differences between 2 groups. Conclusions: Totally, according to the obtained results in this study, it may be concluded that pioglitazone is superior to metformin in IVF cycles in infertile women leading to higher pregnancy rate by immunoreactive effects

Disclosure of Interest: None Declared

O07 THE IMPACT OF ORAL LONG ACTING SPHINGOSINE-1-PHOSPHATE ANALOGUE ON SPONTANEOUS FOLLICLE APOPTOSIS RATIO IN A RAT-MODEL

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Problem Statement: In animal studies, intravenous continuous infusion or peritoneal injection of sphingosine-1-phosphate (S1P) has been shown to decrease chemotherapy and radiotherapy induced apoptosis on primordial follicles. Although an oral form of S1P analogue has been recently developed and utilized in women with multiple sclerosis, there is no data investigating its ability to avoid spontaneous follicle apoptosis. In the current study, we aimed to evaluate whether an oral preparation of S1P analogue might prevent spontaneous follicle apoptosis in an animal model when compared with placebo.

Methods: Ten months aged, a total of 30 female Sprague Dawley type rats were assigned randomly into three groups to test the protective effect of long acting oral S1P on spontaneous primordial follicle apoptosis. In GroupA ($n=10$), an oral analogue form of sphingosine-1-phosphate (FTY720, Fingolimod, Gilenya[®], Novartis, Switzerland) was administered with a dose of 0.1 mg/kg per day. In GroupB ($n=10$), 1 mg/kg per day was given. In GroupC ($n=10$), serum physiologic was given via oro-gastric feeding tube to conduct controls. All in experimental groups and controls, calculated dose of S1P analogue and serum physiologic were given for 60 days. Rats were sacrificed by an overdose of anesthetic application, intra-cardiac blood was taken to measure anti-Müllerian Hormone (AMH) levels via Cloud-Clone Corp (Houston, TX 77084-US) Enzyme Linked Immunosorbent Assay. Ovaries were fixed in buffered formaldehyde, embedded in paraffin blocks and serially sectioned to 5- μ m slices. Apoptosis was assessed by enzymatic labeling of DNA-strand breaks using deoxynucleotidyl-transferase (TdT)-mediated deoxyuridine triphosphate nick end-labelling with Cell Death Detection Kit (POD, Roche, Mannheim-Germany) For assessing immunohistochemistry results, only follicles with a visible nucleus in the oocytes were included and a quasi quantification scale was performed as follows: no staining, 0; faint staining, 1; medium staining, 2; and strong staining, 3. Only follicles with oocyte staining at the intensity of 2–3 were counted as positive stained. The percentage of non-apoptotic follicles was expressed as the ratio of non-apoptotic to total primordial follicle numbers on each animal. Results: When compared with GroupC, GroupB (1 mg/kg per day) had yielded higher mean level of AMH reaching to a marginal significance (5.72 ± 0.61 vs. 4.81 ± 0.85 , $p=0.05$). Notably, the mean AMH level in GroupA (0.1 mg/kg per day) was 5.25 ± 1.72 and higher than GroupC, but failed to reach statistical significance ($p=0.32$). When compared with GroupC, GroupA had higher non-apoptotic primordial follicle ratio ($67.0\pm 16.4\%$ vs. $29.9\pm 19.5\%$, $p<0.001$). Similarly, GroupB presented superior non-apoptotic primordial follicle ratio compared to GroupC ($51.1\pm 11.5\%$ vs. $29.9\pm 19.5\%$, $p=0.023$, respectively). Of interest, GroupA had statistically

higher non-apoptotic primordial follicle ratio than GroupB ($p=0.047$) (Fig). Conclusions: Our findings suggest that long acting oral analogue of S1P might decrease spontaneous follicular apoptosis when compared with placebo. However, further studies should focus on optimal dose of S1P analogue to be given and confirm those findings in women having multiple sclerosis and been treated with S1P analogue.

Disclosure of Interest: None Declared

O08 EMBRYO TRANSFER IS A RISK FACTOR FOR MASSIVE POSTPARTUM HEMORRHAGE AND BLOOD TRANSFUSION REQUIREMENT

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Problem Statement: Blood transfusion for massive postpartum hemorrhage (PPH) or coagulopathy is critical during pregnancy. Known risk factors of massive PPH and need for blood transfusion are typically related to the perinatal period, and include placenta previa, placental abruption, retained placenta, failure to progress during the second stage of labor, and lacerations. We evaluated risk factors for massive PPH and need for blood transfusion. Methods: We retrospectively accrued 4830 pregnant women at the Maternal and Perinatal Care Center, Seirei Hamamatsu General Hospital between July 2010 and March 2015. Emergency maternal transport cases were excluded. At their first intake visit, eligible patients were interviewed to assess for risk factors for delivery complications, which included maternal age, physical examination, medical comorbidities, complete gynecologic and pregnancy history, and history of assisted reproductive procedures. The cohort was initially divided into patients with massive PPH (defined as total blood loss > 1500 g) and those without. Multivariate logistic regression analysis was performed to assess for risk factors associated with massive PPH. The same analysis was repeated for blood transfusion requirement. Results: The number of patients with massive PPH and requiring blood transfusion was 127 (2.7%) and 43 (0.87%), respectively. The aetiologies requiring blood transfusion were uterine atony ($N=15$), retained placenta ($N=7$), placenta praevia ($N=6$), traumatic bleeding ($N=5$), placental abruption ($N=3$), coagulopathy ($N=3$), uterine rupture ($N=2$), amniotic fluid embolism ($N=1$), and Mallory-Weiss syndrome ($N=1$). Multivariate logistic regression analysis demonstrated that embryo transfer (OR 2.6, $p<0.001$), uterine myoma (OR 2.0, $p=0.002$), prior uterine surgery (OR 1.9, $p=0.03$), prior caesarean section (OR 1.8, $p=0.01$), and maternal age (OR 1.5, $p=0.03$) were independent risk factors of massive PPH. Embryo transfer was the only independent risk factor for requiring blood transfusion (OR 3.1, $p<0.001$). Conclusions: Embryo transfer, uterine myoma, prior uterine surgery, prior Caesarean section and maternal age are independent risk factors of massive PPH. However, embryo transfer was the only independent risk factor for requiring blood transfusion.

Disclosure of Interest: None Declared

O09 CHANGES IN SERUM INHIBIN B LEVELS THROUGHOUT CONTROLLED OVARIAN HYPERSTIMULATION, RATHER THAN INITIAL CONCENTRATIONS, ARE BETTER PREDICTORS OF OVARIAN RESPONSE

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Problem Statement: To determine whether alternations of inhibin B and anti mullerian hormone (AMH) throughout controlled ovarian hyperstimulation (COH) are associated with in vitro fertilization (IVF) outcomes. Methods: Patients undergoing IVF, ages 18–42 years, were enrolled. Inhibin B and AMH levels were measured before ovarian stimulation (lowest estradiol level) and on hCG administration day (highest estradiol level). The difference in serum

levels between these two points was calculated for both inhibin B and AMH. Spearman correlations were calculated for delta serum inhibin B and AMH levels and cycle outcomes. Results: A total of 27 patients were included. Serum inhibin B levels were significantly higher on day of hCG administration compared to starting point (544.64 pg/ml [IQR 272.59-1000.00 pg/ml] vs. 65.09 pg/ml [IQR 20.67-31.48 pg/ml], $p < 0.001$, respectively). No correlation was found between basal inhibin B levels and the number of oocytes retrieved ($r = 0.29$, $P = 0.14$). However, the increase in inhibin B was strongly correlated with the number of oocytes ($r = 0.76$, $P < 0.001$). Serum AMH levels were significantly lower on day of hCG administration compared to the starting point (1.73 ng/ml [IQR 0.34-3.94 ng/ml] vs. 2.54 ng/ml [IQR 1.03-5.38 ng/ml], $p < 0.001$, respectively). Basal AMH levels were positively correlated with the number of oocytes retrieved ($r = 0.72$, $P < 0.001$). A positive correlation was found between the absolute degree of AMH change and the number of oocytes retrieved ($r = 0.57$, $P = 0.02$). Conclusions: The study cohort demonstrated that serum inhibin B levels increase and serum AMH levels decrease during IVF treatment. The degrees of changes in inhibin B levels were better predictors of ovarian response than were basal levels.

Disclosure of Interest: None Declared

O10

A RARE CAUSE FOR ACUTE ABDOMINAL PAIN IN SECOND TRIMESTER OF PREGNANCY

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Problem Statement: We aim to submit a case report of ruptured heterotopic pregnancy at different gestational age (22 weeks' intrauterine gestation and 6 weeks tubal pregnancy). **Methods:** Case Report: 31-year-old nulliparous pregnant woman at 22+2 gestation presented to hospital with mild lower abdominal pain. Her clinical examination, blood investigations (WCC, CRP) and urine analysis were normal. She was discharged home but she returned to hospital in 18 hours with severe abdominal pain. She was hypotensive, tachycardic with falling haemoglobin. She had a laparotomy that revealed 22 weeks gravid uterus with a ruptured 6 weeks left ectopic pregnancy. Haemostasis was obtained by doing left salpingectomy. Histology confirmed the diagnosis of tubal pregnancy. **Results:** Discussion: Heterotopic pregnancy is a condition in which both intrauterine and extra uterine pregnancy coexist. Incidence of this condition in spontaneous conception is 1 in 30,000 pregnancies. Transvaginal ultrasound scan with colour Doppler is very helpful for diagnosis. It may present with rupture and acute abdominal condition, which can cause maternal shock leading to maternal mortality. This can be managed by laparotomy or laparoscopy and removal of ectopic pregnancy. The survival rate of intrauterine pregnancy with favourable outcome has been reported in 50 - 60% of cases. Our case has not had any risk factors for ectopic pregnancy and presented with tubal rupture with viable 22 weeks intrauterine pregnancy.

Conclusions: A heterotopic pregnancy, though rare, should be kept in mind even if an intrauterine pregnancy is diagnosed. The high index of suspicion, early diagnosis and intervention can save life.

Disclosure of Interest: None Declared

O11

PLACENTAL CYCLOPHILIN A EXPRESSION IN PREGNANT WOMEN WITH GESTATIONAL DIABETES MELLITUS

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Problem Statement: Cyclophilin A (CypA) is a member of immunophilin family which is present in high abundance in all eukaryotic cells. CypA exhibit many different functions such as protein folding and trafficking during the

cell homeostasis. The placenta, one of unique tissue of humans, provide common structural and functional features in pregnancy. The aims of this study was to evaluate placental CypA expression and association between maternal/fetal health outcomes in pregnant women with gestational diabetes mellitus (GDM).

Methods: Study subjects comprised of 23 pregnant women with GDM and 20 controls. Demographic characteristics, medical history and clinical findings of all participants were recorded in a database. For the purpose diagnosing GDM, carpenter and coustan criteria was used. All participants underwent a 50g glucose challenge test (GCT) at 24 to 28 weeks of gestation. A GCT cutoff of ≥ 140 mg/dl was selected. Women with an elevated GCT undergo prompt diagnostic testing with a 3-hour GTT. Immunohistochemistry for CypA was performed on formalin-fixed and paraffin embedded sections. Placental CypA reactivity was evaluated using a CypA immunohistochemistry kit. Relationship between placenta CypA reactivity and the clinical findings of GDM were evaluated. **Results:** The expression of placental CypA was significantly different between pregnant women with GDM and control subjects. There was increased expression of CypA in trophoblast cells, in decidual cells and in vascular endothelial cells of GDM pregnant compared with non-GDM subjects ($p < 0.001$).

Conclusions: This differences indicates a possible relationship between GDM and the immunohistochemical expression of CypA in placental tissue.

Disclosure of Interest: None Declared

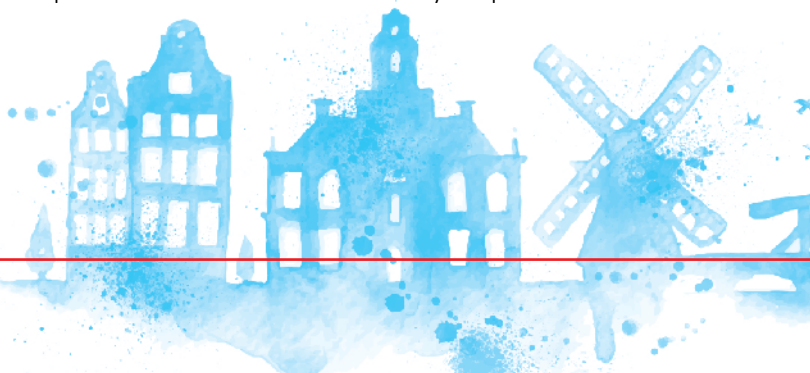
O12

FLECAINIDE AS FIRST-LINE TREATMENT OF FETAL SUPRAVENTRICULAR TACHYCARDIA

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Problem Statement: Fetal cardiac rhythm abnormalities mainly classified as Irregular Cardiac Rhythm, Fetal Tachyarrhythmias and Fetal Bradyarrhythmias. Premature atrial contractions are the leading cause of rhythm disturbances. Besides, Supraventricular Tachycardia (SVT) and Atrial Flutter (AF) are the most common forms of fetal tachyarrhythmias. Fetal tachyarrhythmia, which generally needs intrauterine treatment, is a life-threatening condition. Although SVT is such an important fetal disorder, since the lack of prospective randomized trial, there is no consensus over which agent should use as first line treatment in this setting. **Methods:** This retrospective study was conducted on fetal tachyarrhythmias, which treated and/or followed up in our clinic between December 2011 and May 2016. During this time period, the diagnosis of fetal tachyarrhythmia was established in 23 consecutive patients. Fetuses were considered hydropic if they exhibited two or more of the following findings: ascites, pleural effusion, pericardial effusion, or skin edema. If the treatment is necessary, flecainide was used as first line treatment in all cases and the dose was 100 mg three times daily orally. If the fetal condition is not improving or is deteriorating despite adequate utilization, the treatment was combined with digoxin. **Results:** There were 21 (91.3 %) cases of SVT and 2 (8.6 %) cases of AF (Table 1). Sixteen fetuses have sustained SVT and 5 fetuses have non-sustained SVT among the all patients and thus non-sustained SVT constituted 23.8 % of all SVT. The median gestational age at diagnosis was 30.4 weeks (range 17-37 weeks). The median heart rate was 233.4 beats/min (range 200-260 beats/min). Sixteen fetuses (69.5%) exhibited signs of hydrops at the time of referral. As additional structural disease, 2 fetuses had cardiac rhabdomyomas and hence they had the diagnosis of tuberous sclerosis. None of the fetuses had extra cardiac and chromosomal abnormality. Flecainide was used as first-line therapy both alone (15 patients) and in combination with digoxin (2 patients) if monotherapy fails. Initially, Flecainide treatment was started to all fetuses regardless of both VA intervals, long or short, and whether having signs of hydrops or not. We experienced maternal atrial fibrillation in only one patient as side effect.



Overall, in 15 of 17 treated fetuses (88.2 %) with flecainide monotherapy adequate response was achieved (conversion and rate control). The median time to conversion to SR was 3.6 ± 1.5 (range 1-6)(Flow Chart). The newborns were followed-up with a mean time of 22.8 month (range 6-48). Conclusions: According to our results flecainide is a feasible option with high effectiveness (88.2%), low side effect incidence and relatively easy utilization as first line treatment agent. If fetus has non-sustained fetal SVT with no signs of hydrops, expectant management with close follow up is feasible option since in this setting antiarrhythmic treatment required only 20% of cases. In view of postnatal maintenance of antiarrhythmic treatment, among the all prenatally diagnosed SVT cases without structural abnormality only 11,7 % of cases (2/17) required postnatal therapy and thus it should be underlined that first year pediatric cardiology follow-up is mandatory.

Disclosure of Interest: None Declared

O13

DIAGNOSING GESTATIONAL DIABETES MELLITUS IN THE FIRST OR IN THE SECOND TRIMESTER: WHAT ARE THE DIFFERENCES?

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Problem Statement: In Portugal, the diagnosis of gestational diabetes mellitus (GDM) is universal and established according to the International Association of the Diabetes and Pregnancy Study Groups (IADPSG). It is made either in the first trimester with a fasting glucose value of $\geq 92\text{mg/dL}$ or between 24-28 weeks of gestation, using a 75g Oral Glucose Tolerance Test, in which it is necessary at least one of the values to be altered, that is, $\geq 92\text{mg/dL}$ at fasting (0') and/or $\geq 180\text{mg/dL}$ at 60' and/or $\geq 153\text{mg/dL}$ at 120'. The aim of the present study is to compare the obstetric and perinatal outcomes of pregnancies diagnosed with GDM in the first versus in the second trimester. The prevalence of pregestational risk factors for GDM was also compared between these two groups. Methods: Data from a total of 487 women diagnosed with GDM that delivered in our hospital between 2012 and 2014 were retrospectively collected. Only singleton pregnancies were considered. All the cases with criteria for overt pregestational diabetes mellitus were excluded. The pregestational studied risk factors included family history of diabetes mellitus, weight and body mass index before gestation, parity and history of GDM or of macrosomia in former pregnancies. The obstetric studied factors included maternal age, requirement and gestational age at the beginning of antenatal insulin treatment, total dose and number of daily insulin administrations, 3rd trimester HbA1c value, presence of hypertensive gestational disorders, total maternal weight variation during pregnancy and type of delivery. The perinatal outcomes assessed were newborn birthweight, admission to neonatal intensive care unit, presence of neonatal respiratory distress syndrome, asphyxia, infection, hypoglycemia or jaundice. Statistical analysis was performed using the SPSS (v23.0)[®]. Two-sided P values < 0.05 were used to indicate statistical significance. Results: The incidence of GDM was 6.7% in our population during the studied period. GDM was diagnosed in the first trimester in 16.6% of the cases and the patients in this group were significantly older. Of the studied pregestational risk factors for GDM, only the presence of family history of diabetes mellitus and history of GDM in former pregnancies were significantly higher in the group diagnosed in the first trimester. There were no differences between groups in the incidence of antenatal insulin treatment requirement, total dose or number of daily insulin administrations, and total maternal weight variation. The group diagnosed in the first trimester started insulin administration significantly earlier and their mean 3rd trimester HbA1c value was significantly lower. No significant differences were found in the incidence of hypertensive gestational disorders, cesarean delivery rate, mean newborn birthweight and the remaining perinatal outcomes studied between the two groups. Conclusions: In conclusion, the diagnosis of GDM in the first trimester is

more frequent in women with pregestational risk factors. This early diagnosis allows a better metabolic control as shown by an inferior mean 3rd trimester HbA1c value. This seems to be necessary to achieve obstetric and neonatal outcomes similar to those of the women diagnosed in the second trimester using the IADPSG criteria.

Disclosure of Interest: None Declared

O14

EMERGING EVIDENCE OF METFORMIN ON THE PREVENTION AND TREATMENT OF PREECLAMPSIA

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Problem Statement: Preeclampsia is a pregnancy-specific syndrome causing 100 maternal and 400 perinatal deaths a day. However, current management mainly focuses on stabilizing the pregnancy until it is safe for delivery. Metformin, a drug commonly prescribed for diabetes mellitus, has recently been found to have therapeutic potential for preeclampsia. Methods: By analyzing 32 literatures from PubMed with a method shown in Fig 1, this review discusses three important areas: the latest knowledge of the clinical science of preeclampsia; the potential use of metformin to treat preeclampsia; and the preliminary comparative study between metformin, YC-1 and ouabain. Results: This review has found the most possible pathophysiology of the preeclampsia as summarized in Fig 2. The recent in vitro study by Brownfoot FC, et al has proven that metformin is able to alleviate preeclampsia by reducing the levels of sFlt-1 and sENG through blocking of complex I of mitochondrial ETC, rescuing endothelial dysfunction, vasorelaxation impairment of maternal vessel, and inhibition of angiogenesis. Fig 3 shows the different pathways proven in vitro to support the claim. Comparing with previously studied options of treatment of preeclampsia, namely YC-1 and ouabain, metformin seems to be the strongest candidate in terms of safety profile, effects on the level of sFlt-1, vasodilation effects, and statistical strength. In terms of safety profile, metformin has been proven safe for use in pregnant women with gestational diabetes. On the other hand, there are no in vivo study of YC-1 in pregnant women, and the study on ouabain did not provide safety analysis of the offspring once born, nor possible long term adverse effects. In terms of the effect on the level of sFlt-1 secretion, metformin has stronger results as compared to ouabain which shows insignificant effects and YC-1 which found reduction only at hypoxic state. In terms of statistical strength, the study on metformin outweighs the other two as it used biopsy specimen from 23 women with preeclampsia and 25 control subjects, a lot more than the study on YC-1 and ouabain. The limitations of the study include other findings with contrasting results after metformin intervention. However, these studies primarily investigate the effects of metformin in cases other than preeclampsia, resulting in possible non-optimum dosing and sampling. Furthermore, as the root of the problem occurs at the abnormal trophoblastic implantation (Fig 2), it is doubted if metformin can reverse the condition entirely. The study has also yet to clarify at which point of the progression of preeclampsia should metformin be introduced, and whether it should be used for treatment or prevention. As an option of treatment, metformin may only delay the progression without reversing the condition, whereas as a tool of prevention, its role as an insulin sensitizer might have unknown effects in normal pregnancy and its number needed to treat (NNT) may be too big to be implemented on a wide scale. Conclusions: In light of the good results in vitro, the remaining questions and doubts must be answered in the near future through further research, in vivo studies and clinical trials. These findings have the potential to catalyze further research into alternative prevention and treatment of preeclampsia in an effort towards improvement of maternal and child health worldwide.

Disclosure of Interest: None Declared

O15

RENAL TRANSPLANTATION AND PREGNANCY – EXPERIENCE OF A PORTUGUESE CENTER

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Problem Statement: Pregnancy in a patient with renal insufficiency is full of challenges. The increased incidence of obstetrical complications like preeclampsia, preterm birth or fetal growth restriction are associated with a possible worsening of renal function, which is not always reversible after termination of pregnancy. Transplantation is a remarkable advance in the treatment of renal failure. This technique allows an enormous improvement in the quality of life of these patients, and, at the obstetric point of view, transplantation restores fertility, and makes pregnancy possible again. Pregnancy in these patients adds to the risks associated with an impaired renal function, the necessity to deal with immunosuppressive medication and an increased risk of infection. The main objective of this study is to evaluate the obstetrics and perinatal outcomes of a cohort of Portuguese patients with kidney transplantation (KT). **Methods:** Retrospective study of all pregnant women with KT followed in a Portuguese University Hospital between 1999 to 2015. The pre-gestational studied factors included the obstetric history, length of time between KT and conception and associated pathologies. The gestational studied factors included maternal age, presence of hypertensive gestational disorders, gestational diabetes, renal function during pregnancy, episodes of graft rejection and medication used during pregnancy. The perinatal outcomes assessed were gestational age at delivery, neonate birthweight, type of delivery, admission to neonatal intensive care unit and postpartum kidney function. Statistical analysis was performed using the SPSS (v23.0)[®]. Two-sided P values <0,05 were used to indicate statistical significance. **Results:** 32 patients with 33 pregnancies were included. Mean maternal age was 28 years and the average graft age was 6 years. 52% of these patients had chronic hypertension and 15% moderate impairment of kidney function before pregnancy. 82,1% of pregnant women were medicated with prednisolone, 71,4% with cyclosporin, 60,7% with azathioprine, 35,7% with tacrolimus and 57,1% with nifedipine. All patients were medicated with 100 mg of acetylsalicylic acid. In this study, the incidence of preeclampsia was 29,6%, gestational diabetes was 11,1% and fetal growth restriction was 40,7%. The most frequent complication was preterm delivery (63,0%), where the mean gestational age at delivery was 34,2 weeks with 11% of cases born before 32 weeks of gestation. The average newborn birthweight was 2458g. There were no maternal deaths and we report 1 perinatal death. The global cesarean rate was 63%. 9% of these patients experienced a reversible deterioration of renal function during pregnancy. There were no cases of acute graft rejection or opportunistic infections. No significant difference in renal function was detected at postpartum. **Conclusions:** Pregnancy with KT is associated with a high incidence of preeclampsia, fetal growth restriction, preterm delivery and cesarean delivery. To ensure the best maternal and embryo-fetal outcomes, it is essential that pregnancy takes place in a period of immunological and functional stability of the graft, as well as monitorization by a multidisciplinary team prepared to control the pre-existing morbidities and complications that may arise during pregnancy.

Disclosure of Interest: None Declared

O16

CORRELATION BETWEEN PLACENTAL HISTOLOGICAL PATTERNS AND ANGIOGENIC FACTORS IN PREGNANCIES COMPLICATED BY HYPERTENSIVE DISORDERS OF PREGNANCY AND/OR INTRAUTERINE GROWTH RESTRICTION

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Problem Statement: The objective of our study was to correlate placental histological patterns with angiogenic factors in pregnancies complicated by different phenotypes of Hypertensive Disorders of Pregnancy (HDP) and Intrauterine Growth Restriction (IUGR). **Methods:** A dedicated pathologist performed histological examination of 85 placentas in blind, using Redline classification. In addition, maternal circulating concentrations of placental growth factor (PIGF) and soluble fms-like tyrosine kinase-1 (sFlt-1) were assayed.

We included 20 HDP-IUGR, 10 HDP-AGA (appropriate for gestational age), 14 severe IUGR, 25 mild IUGR and 16 controls. The groups were defined on the basis of maternal hypertension and fetal growth. **Results:** HDP-IUGR and severe IUGR groups showed histological alterations on the maternal vascular side in all the cases and most of the lesions were developmental placental abnormalities. On the other hand, HDP-AGA and mild IUGR groups frequently showed lesions on the fetal side, especially immaturity and iper-ramification of villi. We observed a reduction of PIGF plasma levels and an increased sFlt1/PIGF ratio in all groups respect to controls. Finally, we found an association between placental alterations on maternal side and an increased sFlt1/PIGF ratio, especially in the groups with a severe placental damage (HDP-IUGR and severe IUGR). **Conclusions:** Placental pathology may identify different phenotypes of HDP and IUGR and correlates with angiogenic factors.

Disclosure of Interest: None Declared

O17

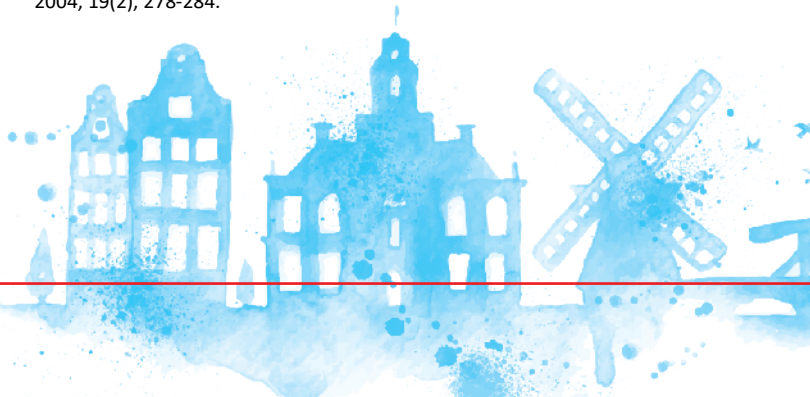
RECURRENT SCAR ECTOPIC PREGNANCIES – A CASE SERIES OF FOUR PATIENTS AND A REVIEW OF THE LITERATURE

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Problem Statement: An ectopic pregnancy within a caesarean section (CS) scar is a rare yet life threatening occurrence. Our aim was to investigate the incidence and risk factors of recurrent scar ectopic pregnancies due to the significant maternal complications associated with this condition. **Methods:** Data was collected from The Women's Hospital - School of Medicine, Zhejiang University in China between 1st January 2011 and 1st January 2016. The keywords used for searching the inpatient electronic database were: 'ectopic pregnancy in previous caesarean scar (EPCSS),' 'caesarean section scar pregnancy (CSP),' 'isthmus pregnancy' and 'lower uterine segment pregnancy.' More than 600 CSPs were found in this period and verified by judging them against clinical history, laboratory results and imaging criteria. However only four patients were found to have a recurrent scar ectopic, thereby comprising the case series group. **Results:** All four women who were diagnosed with recurrent scar ectopic pregnancies were managed with surgical interventions (including hysteroscopic and laparoscopic resection), with three of the women also receiving methotrexate (MTX), as summarised in table 1. All women fortunately had uneventful maternal outcomes, with hCG levels returning to normal between three and six weeks, and the disappearance of ectopic mass on ultrasound (USS) imaging between four and eight weeks. **Conclusions:** Recognised risk factors for recurrent caesarean scar ectopic pregnancies include a) multiple caesarean sections due to increased fibrous scar tissue, which was apparent with one out of our four patients; and b) placental pathology, which was the case for one patient, who had a previous placental abruption. It is important to be aware of the risk factors and thus the potentiality of this condition since if not diagnosed and managed early, recurrent scar ectopic pregnancies could lead to significant maternal morbidity.

[i] Maymom. R., Halperin. R. et al. Ectopic pregnancies in Caesarean section scars: the 8-year experience in one medical centre. Human Reproduction, 2004, 19(2), 278-284.



[ii] Fylstra. D. L., Pound-Chang. T., et al. Ectopic pregnancy within a caesarean delivery scar: a case report. American Journal of Obstetrics and Gynaecology, 2002, 187 (2), 302-304.

Disclosure of Interest: None Declared

O18

ANALYSIS AND COMPARISON OF THE PREGNANCIES AND PERINATAL OUTCOME IN ADOLESCENTS AND ADULT WOMEN IN ZENICA-DOBOJ CANTON IN 2011-2014

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Problem Statement: Adolescent pregnancies are often associated with the unfavorable perinatal outcome due to the biological immaturity, unwanted pregnancies, inadequate prenatal care and stress. Some research has shown that obstetric complications such as low birth weight, premature delivery, delivery completed with one of the vaginal surgeries and higher maternal and perinatal mortality rate can be more found among adolescent pregnancies, while others have found that adolescent pregnancies are not considered high-risk pregnancies. The aim of this study was to compare the perinatal outcome between adolescent and adult pregnant patients in Zenica-Doboj Canton in 2011-2014. Such research has not been conducted in this area. **Methods:** This is a retrospective study which included 1140 pregnant women (adolescent and adult) in 2011-2014. Data for the study were collected from hospital protocols of women who gave birth in Cantonal Hospital Zenica during the same period. The study included all underage patients (<18 years)-total of 205 patients, while 965 adult patients have been selected in the control group by randomization. Results were analyzed using SPSS program version 23.0. and MedCalc version 14.8.1. with the use of mean, median, Mann Whitney U test and ANOVA analysis, Fisher exact, Shapiro-Wilk and Kolmogorov-Smirnov test. Statistical significance was set at a P value of <0,05. **Results:** 17,52% of the patients were underage patients while 82,48% of them were adults. The mean age of the underage patients was 16,62 (age 14-17) while the mean age of the adults was 27,18 (age 18-46). Underage patients were mostly primiparas (93,70%) as compared to the adult patients (49,90%), while the adults were mostly multiparous, p<0,0001. Underage patients had given birth to the babies of lower birth weight and length, p<0,009. Babies born by the adult patients were, in general, in better condition after birth with better Apgar score in the 5th minute, p<0,005. Vaginal birth has been more often found among underage patients while adults have had more births finished with the caesarean section, but not with the statistical significance. Episiotomy has been more often found among underage patients, p<0,009. The rupture of the vagina and cervix has been more often found among underage patients, while the rupture of the perineum has been slightly more often found among adults, but not with the statistical significance. Slightly longer period of time between the rupture of the membranes and the baby expulsion was found among underage patients, not with the statistical significance. No statistical significance was found in pregnancy length and the placental stage of labor between both groups. **Conclusions:** Our results have shown that the underage patients were mostly primiparas, with higher incidence of natural birth, a slightly longer expulsion time of the baby and a lower baby birth weight and length. Underage patients have had discretely higher incidence of obstetric complication like vaginal and cervical rupture, while a better baby condition after birth has been found among adult patients. This all can be probably explained by their biological immaturity. All things considered, we could not confirm that underage pregnancies are high-risk pregnancies, although caution is advisable when we have a pregnant adolescent in labor.

Disclosure of Interest: None Declared

O19

PRENATAL SCREENING FOR MORBIDITY ADHERENT PLACENTA: A COMPARATIVE PROSPECTIVE STUDY

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Problem Statement: Morbidity adherent placenta (MAP) is a life-threatening obstetrical condition among women who have had a previous cesarean delivery, resulting in significant maternal morbidity and mortality. Antenatal diagnosis of MAP has the potential to improve maternal and fetal outcomes [1]. Currently, two imaging techniques are used: Ultrasound with grayscale and Doppler imaging and magnetic resonance imaging (MRI). In this report, we sought to compare these two techniques in predicting placental invasion in a high-risk population. **Methods:** This was a single-center prospective study including ten consecutive patients who had at least one cesarean delivery with a placenta previa overlying the previous uterine scar. The protocol was approved by the hospital's ethics committee. All participants gave their free informed consent. Using 2D gray-scale/color Doppler transabdominal and transvaginal ultrasonography we investigated the following parameters: loss of the retroplacental clear space (figure 1a); thinning or interruption of uterine-bladder interface (figure 1b), placental lacunar spaces grade 2 or 3 (figure 1a- c); Bridging vessels (figure 1d), smallest myometrial thickness (figure 1e), Exophytic placenta into the bladder. Using MRI we investigated the following parameters (figure 1 i): T2 dark intra-placental bands; Abnormal uterine bulging; disorganised intra-placental vascularity; heterogeneous placenta; disruption of the uteroplacental zone; focal interruption of the myometrial wall. Confirmation of MAP was based on histologic evidence of placental invasion from the hysterectomy specimen (figure 1 g,h). We studied the accuracy of each parameter, and we compared the overall performance of ultrasound and MRI using ROC curves. **Results:** Using ultrasound; the loss of the retroplacental clear space and the thinning of the myometrium were the most sensitive parameters (100% and 83.3%). The presence of placental lacunar spaces was less sensible 66.7% but highly specific (100%). The combination of at least three parameters had a sensitivity of 83.3%, a specificity of 75%, a PPV of 83.3% and a NPV of 75%. Using MRI; the abnormal uterine bulging and the disruption of the uteroplacental zone were the most sensitive parameters (66% and 75%). The focal interruption of the myometrial wall was the most relevant parameter with a sensitivity of 75% and specificity 66.7%. In this study, Ultrasound was more effective than MRI in predicting MAP (sensitivity= 83.3% Vs. 75%; specificity = 75% Vs. 33%; AUC: 0.896 Vs 0.458) (figure 1 f). **Conclusions:** Given that it is more accessible to patients and physicians, highly effective and applicable [2], ultrasound should be the first line imaging technique for MAP's screening. However, MRI can be helpful when the placenta is difficult to visualize on ultrasound due to a posterior location or to the patient's body habitus [3].

Disclosure of Interest: None Declared

O20

THE EFFECTS OF VAGINAL PROGESTERONE ADMINISTRATION ON THE FREQUENCY OF GESTATIONAL DIABETES MELLITUS AND IMPAIRED GLUCOSE TOLERANCE IN PREGNANT WOMEN

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Problem Statement: Background: Gestational Diabetes Mellitus (GDM) is a condition of maternal hyperglycemia that may develop subsequent to abnormal insulin production. On the other hand, preterm birth is a major complication of pregnancy and vaginal dosed progesterone is potentially

beneficial in preventing it in at risk women. However, progesterone-related GDM has been reported in the literature. Aims: This study aimed to evaluate the impaired glucose tolerance (IGT) indices, serum progesterone levels, and birth weight in the pregnant women who used vaginal progesterone and to compare them with normal control pregnant women. Methods: Patients and methods: This study was conducted on 48 women treated with vaginal progesterone as the case group and 49 untreated ones as the controls. The measured parameters included maternal age, height, weight, Body Mass Index (BMI), serum progesterone, Fasting Blood Sugar (FBS), Glucose Challenge Test (GCT), Glucose Tolerance Test (GTT) 1, 2, and 3 hrs, and infant's birth weight. Results: Results: The level of progesterone in the case group was significantly higher than that in the control group (48.73 ± 0.95 vs. 43.65 ± 1.05 ng/dL, $P=0.001$). The mean GCT result was also significantly higher in the case group compared to the control group (129.54 vs. 116.00 mg/dL, $P=0.007$). However, no significant differences were observed in the two groups between the two subsets of BMI; i.e., <25 and ≥ 25 kg/m², regarding all the parameters, except for FBS in the case group. FBS of the mothers with BMI ≥ 25 kg/m² in the case group was significantly higher in comparison to those with BMI <25 kg/m² ($P=0.016$) and this difference was induced by progesterone. Moreover, significant positive correlations were found between serum progesterone levels and infant's weight as well as between these two variables in the mothers with BMI ≥ 25 kg/m² in the case group ($P<0.05$). Conclusions: Conclusion: The patients who used vaginal progesterone during pregnancy were at an increased risk for IGT and this risk was higher in the mothers with BMI ≥ 25 .

Disclosure of Interest: None Declared

O21

STATUS ECLAMPTICUS – LIFE THREATENING HUMAN PREGNANCY COMPLICATION. – CAN WE AVOID IT?

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Problem Statement: Status eclampticus is defined as new-onset eclamptic convulsions without a break in healthy pregnant women without any neurological disorders during pregnancy, childbirth or in postpartum period. It is a rare but severe life-threatening complication of human pregnancy. The purpose of this paper is present a case of patient with pregnancy complicated by status eclampticus. Methods: Case report. Results: Case report. A 20-year-old primigravida at 32+3 week gestation was referred to the Department of Obstetrics and Perinatology of the Medical University Hospital in Lublin. The patient was unconscious, intubated with generalized oedema and tonic-clonic convulsions. She had multiple seizures for three hours outside the hospital. Her tongue was bitten several times by a violent action of the jaws. On admission her blood pressure was 160/120 mmHg. She had proteinuria. She had been complaining of persistent occipital and frontal headaches, altered mental status, vomiting and visual disturbances such as blurred and double vision for 2 days before admission. Intravenous access was secured and laboratory tests were obtained. The patient was immediately transported to the operating room. At the same time she was started on intravenous Magnesium Sulfate (initial 4 g loading dose). The urgent lower segment caesarean section under general anesthesia was carried out resulting in alive born son. At birth the boy weighed 1950g. Apgar scores were 1, 1, 5 and 7 points at 1st, 3rd, 5th and 10th minutes of his life respectively. The initial dose of MgSo₄ was followed by a maintenance of 1g infusion per one hour and continued for 24 hours after the c-section. Maternal vital signs were monitored every 15 minutes and her The patient had anuria and bilateral crackles at the lung bases, her BP was 180/120 mmHg. The risk of pulmonary oedema at the first hour after the c-section was the indication of intravenous administration of Furosemide (a half of an ampoule). The woman was under close continuous observation for 48 hours after delivery. Because of severe hypertension, i.v. antihypertensive medications to lower her blood pressure were administered. The maternal condition was stable, the patient was

unconscious but without any convulsions. On admission to hospital her blood tests revealed anaemia and increased levels of creatinine and uric acid. Urine output increased to 25 ml/1h. She regained consciousness and became violent 10 hours after delivery. After next two hours she was orientated to place and time. She was started on 500mg of oral Methyldopa every 6 hours. The first dose of 2g/ 24h was used and for next three days the dose was reduced to 1g/24h. This treatment was continued for 7 days. We observed continuous gradual progressive improvement in the patient's condition and in her laboratory tests. The patient was discharged after 8 days. Conclusions: Severe preeclampsia and eclampsia is extremely serious obstetric complication and patients with these pregnancy complications should be treated in a tertiary perinatal care centre with intensive care unit. Magnesium sulphate is the drug of choice in the treatment and control of eclamptic fits. Emergency caesarean section should be done as lifesaving option in eclampsia. Proper comprehensive treatment and close monitoring of the patient's vital signs and laboratory tests is equally important, because attack of eclampsia can occur also in postpartum period.

Disclosure of Interest: None Declared

O22

IS CERVICAL STITCH (CERCLAGE) A STANDARD FOR PREVENTING PRETERM BIRTH IN TRIPLET PREGNANCY?

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Problem Statement: The incidence of triplet gestations has increased dramatically in the recent years. Rates of premature delivery for triplet gestations also have risen, with a dramatic consequence on the neonatal outcomes. The aim of this study is to assess whether the use of a cervical cerclage in triplet gestations improves obstetrical and perinatal outcomes and prevents prematurity. The primary outcomes assessed were perinatal deaths and serious neonatal morbidity. Methods: A retrospective study conducted from September 2015 to August 2016 in the department of gynecology and obstetrics at the Farhat Hached Hospital, sousse, Tunisia, collecting all the triplet pregnancies delivered at the institution during that period. We collected a total of 25 triplet pregnancies: 10 had a prophylactic cervical cerclage and 15 had not. We compared those two groups regarding the gestational age of delivery and the maternal and fetal outcomes. Results: There was no statistically significant difference between the two groups of patients regarding the incidence of preterm labour and vaginal infection. The incidence of PPROM was higher in the group with cervical stitches ($p=0.045$). The gestational age of delivery was lower in the cerclage group ($p=0.042$). Those paradoxical result may be explained by a pre-existent cervical pathology that has indicated the cerclage at first. Conclusions: The use of a cervical cerclage in triplet gestations does not seem by itself to improve maternal, obstetrical and perinatal outcomes and does not prevent prematurity.

Disclosure of Interest: None Declared

O23

PERINATAL RESULTS IN WOMEN ABOVE 35-40 YEARS OF AGE IN FACULTY HOSPITAL TRENCIN

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Problem Statement: Our aim was to retrospectively analyze perinatal results in women above 35-40 years of age and compare them to younger group and to published data. Methods: We have retrospectively analyzed all births from 1.1.2012 to 29.2.2016 in our department. We defined three cohorts of women based on age at delivery: in cohort A were women up to 35 years old, cohort B consisted of women from 35 - 40 years old and in cohort C were women above 40 years old. We have compared our results of older women (above 35 or 40 years old) to young group (up to 35 years). Results:



During the study period, we had 8307 deliveries. Cesarean section was done on 1208 (14.5%). Our perinatal mortality was 4.8 ‰. There were 6614 deliveries in cohort A (79.6%), 1420 in cohort B (17.1%) and 273 in cohort C (3.3%). Cesarean section was performed in 13.2% in group A, 18.4% in group B and 27% in group C. Perinatal results are as follows (for cohorts A, B and C): preeclampsia (2.8% - 5.7% - 4.4%), HELLP syndrome (0.3% - 1% - 0.6%), type 1 diabetes (0.4% - 0.7% - 0.4%), type 2 diabetes (0.09% - 0.4% - 0.7%), gestational diabetes (2.5% - 3.7% - 2.6%), intrahepatic cholestasis of pregnancy (1.5% - 1.7% - 1.8%), intrauterine growth restriction (1.9% - 3.6% - 2.6%), twin pregnancies (2.1% - 1.9% - 1.8%), macrosomia above 4000 grams (10.4% - 8.2% - 8.4%), pregnancy after assisted reproductive technology (1.8% - 4.5% - 5.9%), breech position (4.1% - 6.1% - 6.6%), premature birth (9% - 7.8% - 7.3%), vacuum-assisted delivery (1.3% - 0.6% - 0%), and induced labor (17.3% - 16% - 16.8%). Perinatal mortality was 4.5‰ in group A, 5.6‰ in group B and 7.3‰ in group C. Discussion: In our retrospective study, we have observed higher probability of cesarean delivery in women above 35 years. Although age is not an indication for cesarean delivery in our department, this probability significantly rises in women above 40 years. Conversely, incidence of vaginal instrumental delivery declines with increasing maternal age. Even with intensified care, we have observed increase in perinatal mortality with increasing age. All preeclampsia, HELLP syndrome, gestational diabetes, intrahepatic cholestasis of pregnancy and intrauterine growth restriction are increasing with advanced age of mother. There is a significant increase in pregnancies in women with type 2 diabetes and after assisted reproductive technology. A noteworthy is age-related increase in breech position. On the other hand, there is a decline in multifetal gestation, premature birth and macrosomia. Frequency of labor induction is comparable among the three groups. We further compare and contrast our data to published literature. Conclusions: We have confirmed age-dependent relationship of some perinatal results to the maternal age. Considering that maternal age is increasing and family planning is being delayed, these data are important for development and direction of perinatology.

Disclosure of Interest: None Declared

O24 SPONTANEOUS PRETERM BIRTH AND CERVICAL LENGTH IN A PREGNANT ASIAN POPULATION

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Problem Statement: Preterm birth (birth before 37 weeks of completed gestation) is the leading cause of neonatal death, and has an incidence of 5-13% which is believed to be on the rise. The objective of this study was to determine the rate of spontaneous preterm birth and investigate the relationship between preterm birth and cervical length in a pregnant Asian population. **Methods:** 1000 women with single viable pregnancies at less than 14 weeks of gestation were recruited between September 2010 and November 2013. Cervical length was measured using ultrasound at each of the 4 antenatal visits (Visit 1: >14 weeks, Visit 2: 18-22 weeks, Visit 3: 28-32 weeks and Visit 4: >34 weeks) using the Fetal Medicine Foundation protocol. **Results:** There was a significantly shorter cervical length both in the 2nd trimester (18 to 22 weeks) and the 3rd trimester (28 to 32 weeks) in the preterm birth group compared to the term birth group ($p=0.028$ and $p<0.001$ respectively). In the first trimester (11 to 14 weeks), there was no statistically significant difference in cervical length between the two groups ($p=0.425$). ROC curve analysis for cervical length in the preterm birth group for Visit 2 and 3 showed an AUC of 0.605 and 0.725 respectively. At Visit 3, a cut-off level at 2.49 cm has a sensitivity of 54.8%, specificity of 82.5%, negative predictive value of 97.9% and positive predictive value of 11.1%. **Conclusions:** There is a significantly shorter cervical length in the 2nd and 3rd trimester in the preterm birth group. Cervical length is a moderate predictor of preterm birth with good negative predictive value and a relatively good specificity. Ultrasound cervical length screening between 28

and 32 weeks of gestation with a cutoff of ≥ 2.5 cm can help to rule out likelihood of preterm birth.

Disclosure of Interest: None Declared

O25 LAPAROSCOPIC TRANSABDOMINAL CERVICOISTHMIC CERCLAGE AT SECOND TRIMESTER; TIPS FOR SAFE PROCEDURE

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Problem Statement: Laparoscopic transabdominal cervicoisthmic cerclage (LTCC) at second trimester is very challenging due to the confined operation view by an enlarged uterus. Also it is difficult to pass the cerclage needle between the cervix and the uterine vessels without any vascular injury. Obtaining the adequate operation view and correct suturing under the direct visualization are essential to the successful LTCC at second trimester. **Methods:** 37-year-old G3P3 woman at 16 weeks of pregnancy underwent LTCC because of the severely deformed cervix. Surgical instruments for the safe procedure are as follows; 30-degree endoscope, laparoscopic articulating retractor for uterine manipulation, sponge stick for pushing the uterus cephalad to unfold the broad ligament. Surgical tips for safe LTCC are as follows; Make two windows at bilateral broad ligaments beside the cervix after incision of bilateral anterior broad ligaments and bladder peritoneum. This makes it possible to pass the suture needle between the cervix and the uterine vessels under the direct visualization of the needle tip without any vascular and ureteral injury and to place the suture material at the correct site. **Results:** LTCC was performed successfully and she discharged at the next day of LTCC. **Conclusions:** LTCC with making two windows at bilateral broad ligaments is a safe and feasible procedure for the second trimester of pregnancy with indications for abdominal cerclage.

Disclosure of Interest: None Declared

O26 CONTROVERSIAL ASPECTS OF POSTPARTUM HEALTH: LONGITUDINAL EVIDENCE FROM PAKISTANI WOMEN'S HEALTH STUDY

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Problem Statement: Primary objective of this study was to assess the prevalence of major physical and mental factors effecting postpartum health conditions of Pakistani women over the period of 12 months. **Methods:** Study spanned over a period of forty-two months, Jan-2013 to June-2016. Total 250 women were selected to be included in this study who participated in a parallel on going cross-sectional study, who visited Life Medicare outpatient department for postpartum checkup. Inclusion criteria was delivery after at least 28 weeks pregnancy. Whereas exclusion was the cases with fetal abnormality, multifunction gestation, maternal cardiovascular or endocrinal disease, postpartum hemorrhage necessitating blood transfusion and prolonged puerperal infection. Data collection was completed by administering a questionnaire about major factors identified in cross-sectional study. Total of five physiological factors were included in questionnaire along with a question about health facility where delivery was carried out. After applying exclusion criteria and obtaining of consent total of 215 women were eligible for final inclusion. **Results:** Results: Collected data was analyzed for internal consistency by calculating Cronbach's alpha and for cross verification Split-half correlation and Spearman-Brown prophecy was calculated. $\alpha=0.79$ was indicative of sufficient reliability. From total population $N=215$, Results showed tiredness was most prevalent factor 92%, up to 12 months, followed by back pain in 84% women. Bowel problem were the least prevalent with 48% carrying it up to 6 months. Correlation and regression analysis indicated strong positive relation of higher prevalence of these factors with quality and type of health facility and mental health of the respondent. **Conclusions:** Conclusion: This study confirms two significant issues, a) Prolonged Prevalence of these five major

physiological factors have strong correlation with mental health in postpartum period, b) There exist a strong relation between quality and type of consulted health care facility and postpartum health condition of mothers.

Disclosure of Interest: None Declared

O27

THE EFFECTS OF VITAMIN B1 ON AMELIORATING OF PHYSICAL SYMPTOMS OF THE PREMENSTRUAL SYNDROME

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Problem Statement: The premenstrual syndrome (PMS) is a series of physical, mental, and behavioral symptoms with various severities, and disturbs social and personal relationships. The syndrome appears during luteal phase of the menstrual cycle and is a common disorder of reproductive age. Different treatments have been introduced for the syndrome due to its unknown complicated causes. Vitamin B1 (Thiamin) may reduce symptoms of the syndrome through affecting the performance of coenzymes in the metabolism of carbohydrates and main branch of amino acid that plays an important role in appearance of physical and mental symptoms of the PMS. Vitamin B1 is the first water-soluble discovered vitamin. As it is effective in neural activity and muscle tonus in different body activities, including hematopoiesis, metabolism of carbohydrates, activities of the central nervous system and neuromuscular system, etc., it can be effective in this dysmenorrhea that is a disorder resulting from uterine muscular contraction. There are no enough studies and research on the effect of vitamin B1 on the symptoms of PMS, therefore, this study was conducted to determine the effect of vitamin B1 on the physical symptoms related to PMS in students residing at dormitories of Jahrom University of Medical Sciences in 2014. **Methods:** In this double-blind placebo-controlled clinical trial, 112 students with PMS residing at dormitories of Jahrom University were divided randomly into two groups, vitamin B1 and placebo. The severity of the physical symptoms of PMS in two cycles, before the intervention and during the intervention, was recorded by the students. The data were collected using an information collection form, PMS provisional diagnosis form, daily status record form, Beck Depression Inventory. The data were analyzed using descriptive and inferential statistics. **Results:** The comparison of vitamin B1 group before the intervention with that after the intervention showed that vitamin B1 reduced mean physical symptoms (21.02%) significantly ($P < 0.0001$). Moreover, there was a significant difference between vitamin B1 and placebo groups in terms of mean physical symptoms, as mean symptoms in vitamin B1 group was significantly lower than that in the placebo group ($P < 0.0001$). **Conclusions:** It seems that vitamin B1 is effective in recovery of physical symptoms of PMS. Therefore, this vitamin can be used to reach a major goal of midwifery, that is, reduction of physical symptom severity of PMS, without any side effects.

Disclosure of Interest: None Declared

O28

ECLAMPSIA IN A 26-YEAR-OLD WOMAN WITH THE LATE-ONSET PREECLAMPSIA

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Problem Statement: Reporting a case report of a 26-year-old woman with late-onset preeclampsia who was admitted in Sanglah General Hospital Bali in June 2016. She had routine antenatal care with unremarkable finding. The patient developed hypertension after the pregnancy reached term gestational age, and the patient was admitted in the hospital. No subjective complaint was reported by the patient, however the laboratory findings showed low platelet count, increased liver function tests, and increased

level of lactate dehydrogenase. The patient was diagnosed with HELLP syndrome and she was eclamptic 2 hours later after the patient was admitted. She was resuscitated and stabilized after the eclampsia, and caesarean section was performed afterwards. **Methods:** Case Report. **Results:** Fetal heart beat was found bradycardia during eclampsia, but the initial management was to stabilize and resuscitate the maternal condition. The caesarean section was performed 6 hours after the eclampsia moment, and the baby was born vigorously with good Apgar scores. Magnesium sulphate was given to prevent another episode of eclampsia after the caesarean section. Laboratory findings of platelet count, liver function tests, renal function tests, and proteinuria were improved afterwards. **Conclusions:** Pre-eclampsia can develop in late or term pregnancy, even to the patient who has been doing routine antenatal care and without previous history of hypertension. Moreover, eclampsia can occur anytime without any sign of subjective complaints. Based on this case report, we should still aware of any possibility toward eclampsia in all gravid patient. Further study can be conducted to investigate any marker or examination to predict eclampsia.

Disclosure of Interest: None Declared

O29

ANTICOAGULATION IN PREGNANT PATIENTS WITH MECHANICAL PROSTHETIC HEART VALVES - A CLINICAL DILEMMA

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Problem Statement: What is the best choice of anticoagulant agent for pregnant women with mechanical prosthetic heart valves? - clinical dilemma poses to clinicians and women. **Methods:** Case Report - A 27-year old gravida 5 para 4, who had mechanical valve replacement 3 years ago after infective endocarditis outside pregnancy. At that time she was diagnosed with Mitral valve regurgitation due to Rheumatic heart disease. She was started on lifelong warfarin treatment. She was referred to joint obstetric haematology clinic at 10 weeks of pregnancy. After discussing risks versus benefits of warfarin and low molecular weight heparin (LMWH), decision was made for therapeutic LMWH, as patient was concerned about the adverse fetal outcome. She had an ECHO at 26 weeks, which was normal. She had regular monitoring of anti Xa levels to maintain the therapeutic range (which was stopped after achieving stable level of 1.5). At 36 weeks, she presented in the evening, to accident and emergency (AE) department. She was feeling unwell, cough with brownish sputum and shortness of breath. Initial diagnosis was community acquired pneumonia with mild ARDS. She had her evening dose of therapeutic dose of LMWH prior to admission. She was treated initially with intravenous antibiotics and diuretics. But her clinical condition deteriorated over the night. She had emergency caesarean section 12 hours after admission under general anaesthesia. Prophylactic B-lymph suture applied on uterus to prevent postpartum haemorrhage, as she was anticoagulated with treatment dose in less than 24 hours. Following caesarean section, she was transferred to ITU. ECHO showed large blood clot (pannus) around prosthetic valve with heart failure and moderate pulmonary hypertension. Her critical condition necessitated her care to be transferred to cardiothoracic unit in a tertiary care centre. Patient recovered well after surgical removal of clot and biological prosthetic valve replacement. **Results:** N/A. **Conclusions:** Pregnancy in women with mechanical valve is associated with increased risk of maternal and fetal complications and managing the anticoagulation of these patients can be challenging. Prosthetic valve thrombosis is a devastating complication. Early diagnosis and prompt initiation of adequate therapeutic procedures are required for the successful management. Inadequate anticoagulant therapy can result in thrombosis of the mechanical prosthetic valve while, on the other hand, Warfarin is associated with foetal and maternal bleeding and teratogenic effects. What is considered to be an "acceptable level" of risk to mother and infant may differ from one clinician to another and it may also differ from patient to patient. An unbiased discussion of the pros and cons of each option is



required to allow women to make an informed and confident choice in this complex clinical situation. There is a growing need of national guideline for the anticoagulation in pregnant women with prosthetic valves.

Disclosure of Interest: None Declared

O30

ASSOCIATION BETWEEN HYPERTENSION IN PREGNANCY AND PRETERM BIRTH

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Problem Statement: Approximately 830 women die each day from a preventable causes related to pregnancy and childbirth. Almost all (99%) of maternal deaths occur in developing countries. Improving maternal health was 1 of the 8 Millennium Development Goals (MDGs) adopted internationally in 2000, in which countries committed to reduce maternal deaths by 3 quarters. Between 1990 and 2015, maternal mortality has dropped by about 43% worldwide. This result shows that more interventions needed to increase maternal health as a part of Sustainable Development Goals (SDGs). The target is to reduce the global maternal mortality ratio to less than 70 per 100.000 live births between 2016 and 2030. In Indonesia, maternal mortality rate is still unacceptably high. Based on demography and health survey of Indonesia in 2012, maternal mortality ratio is 359 per 100.000 living birth. Maternal death occurs as a result of complications during pregnancy and childbirth. Severe bleeding, infections, hypertension in pregnancy, and unsafe abortion are the major complications that account for nearly 75% of all maternal deaths. Hypertension complicate 5 until 10% of all pregnancies. Many studies have proved that hypertension is associated with poor outcomes of the pregnancy, including intrauterine growth restriction, neonatal thrombocytopenia, antepartum and intrapartum hypoxia, preterm birth, fetal demise or even fetal death. Preterm birth is the second leading cause of neonatal mortality after birth defect. Some studies show that there is significant increase risk of preterm birth in hypertension in pregnancy. The purpose of this study is to find the association between hypertension in pregnancy and preterm birth. **Methods:** This study was conducted by using case control study design. The population of this research are maternal and perinatal medical records at Dr. Hasan Sadikin General Hospital Bandung based on Maternal Care Monitoring (MCM) 2012. This study used total sampling methods to the respondents according to predetermined criteria. **Results:** From 2.455 subjects, 602 subjects with hypertensive disorder in pregnancy were selected as case and 1.853 subjects were selected as control. Risk of preterm birth is increased among woman with hypertensive disorder in pregnancy (OR 1,8 CI 1,5-2,3). **Conclusions:** There is a relationship between hypertension in pregnancy with preterm birth. Hypertension and other contributing factors should be managed carefully in pregnant women to reduce risk of preterm birth.

Disclosure of Interest: None Declared

O31

SIGNIFICANCE OF PRECONCEPTION COUNSELING ON THE COURSE OF PREGNANCY IN WOMEN WITH CERVICAL ECTOPY

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Problem Statement: Objective: To evaluate the value of preconception treatment of cervicitis in women with cervical ectopy. **Methods:** A study conducted in the years 2012-2015 (September) in the Perinatal Centre of Regional Clinical Hospital № 2 (Krasnodar, Russia). Total outpatients: 6508 pregnant women. The number of pregnant women with cervical ectopy (CE): 2252 (34.6%), of them with the complicated ectopy- 1163 (51.54% of the number of women with CE and 17.87% of all pregnant women), cervical

deciduous - 72 (3.2% of the women with CE and 1.11% of all pregnant women).

It was performed a prospective non-randomized, controlled, open examination of 174 women with CE: 52 women who had preconception counseling and treatment of CE complicated by cervicitis (main group); 72 women - without preconception counseling and treatment (comparison group). Preconception treatment of cervical ectopy complicated with exo-/endo cervicitis included the following: elimination of existing pathogens of bacterial infections; treatment of bacterial vaginosis; treatment of recurrent viral infection; recovery of function and endometrial receptivity. For the period of preconception treatment used a barrier contraception methods. The control group - 50 women without CE with physiological pregnancy and childbirth (control group). **Results:** Women were matched for age: $27,94 \pm 3,84$ years. Cytogram of inflammation has been identified in 27% (n = 14) of women of the main group; in the absolute number of women in the comparison group (p <0.001). In a comparison group determined colposcopy signs of exocervicitis in 42% (n = 30) of women (p <0.001), endocervicitis - in 51% (n = 37) of women (p <0.001). In 24% (n = 17) of women in the comparison group it was first identified cervical deciduous, complicated by bleeding of varying degrees of severity: 17% of women (n=12) had colposcopic picture of tumor deciduous form, 7% (n=5) – polypoid form. 7% (n=5) of women had a combination of deciduous, endo- and exocervicitis, resulted in bleeding, and total blood loss during pregnancy was $206 \pm 43,93$ (150-250) ml, anemia - decreased level of hemoglobin to $93,0 \pm 3,74$ (88-98) g/L, despite of antianemic treatment and appropriate diet. Cervical ultrasound in the II trimester of pregnancy revealed (Table 1) that for women with CE and especially endocervicitis, in the absence of CIN, is typical to have an increase in thickness and cervical width, diameter of the internal os and cervical canal, the resistance index (RI) and pulse index (PI) of the central vascular cervical area, the number of loci of active blood flow. **Conclusions:** Observation of women with cervical ectopy complicated with endocervicitis had revealed an increase of ultrasound parameters such as the diameter of the internal os, the thickness and width of the cervix, the number of loci of active blood flow hemodynamics in cervical vessels. Despite the large volume, edematous cervix with an increased diameter of the cervical canal is not always able to perform "obturator" function. Cervical ectopy complicated with endocervicitis is likely to be associated with the ascending infection, rupture (melting) of the lower pole of the membranes, PROM even the cervix if not "mature".

Disclosure of Interest: None Declared

O32

SOME CLINICAL CHARACTERISTICS OF WOMEN WITH EARLY SEVERE PREECLAMPSIA

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Problem Statement: Objective: To determine the clinical features of early pre-eclampsia on the example of the Territorial Perinatal Center (PC) of the Territorial Clinical Hospital №2 of Krasnodar (Russia). **Methods:** Was carried a prospective analysis of the clinical features of early PE, diagnosed in the PC for the period years 2012-2014. **Results:** The number of deliveries was in 2012 - 8623, in 2013 - 8446, in 2014 - 8573. The number of women with severe PE was in 2012 - 102, in 2013 - 234, in 2014 - 246. The number of women with severe PE in pregnancy up to 34 weeks was in 2012 – 58 (0.67% of all deliveries), in 2013 – 82 (0.97% of all deliveries), in 2014 – 101(1.18% of all deliveries); of them in pregnancies up to 28 weeks in 2012 – 9 (0.10% of all deliveries; 15% of all cases of severe PE before 34 weeks), in 2013 – 11 (0.13% of all deliveries; 14% of all cases of severe PE before 34 weeks), in 2014 – 8 (0.09% of all deliveries; 8% of all cases of severe PE before 34

weeks). Only 24% of women were residents of Krasnodar; 51% - residents of the village, 15% from other cities, 8% - other federal districts, 2% - foreigners. Age (m ± SD) of women was 28,47±7,6 (15-44) years. Gestational age at delivery - 31,27 ± 4,14 (21-34) weeks. Number of pregnancy in a row - 2,27 ± 1,42 (1-6), number of childbirth - 1,44±0,6 (1-3). Proportion of women with counseling and preparation for pregnancy - 12.2%. The first visit to the obstetrician in the present pregnancy - 10,5±4,4 (4-22) weeks. Gestational age with newly defined hypertension - 26,35±8,24 weeks. Maximum systolic BP 166,32 ± 19,82 mmHg, diastolic BP - 100,29 ± 9,77 mm Hg. Maximum proteinuria - 10,29±9,81 (0,75-39,2) g/l. The number of days in the ICU after delivery - 2,88±1,37 (1-8) days, the number of bed-days after delivery before discharge - 8,76 (2-15). The level of risk markers of severe PE were: at 14-19 weeks of PIGF=76,32±58,4; VEGF receptors=0,65±0,06; VEGF-A=29,25±25,56; at 20-24 weeks PIGF=231,85±40,75; VEGF receptors=0,48±0,08; VEGF-A=19,48±5,23; at 25-28 weeks of PIGF=49,56±38,02; VEGF receptors=1,96±1,54; VEGF-A=3,9±0,1. Considering the increase in peripheral vascular resistance microcirculatory as a pathogenic marker of PE, we made ultrasonic definition of dynamic resistance index (IR) of the uterine arteries, renal arteries and the central retinal artery. Was determined the significant decrease of IR 3-4 days after delivery in the uterine vessels from 0,69±0,015 to 0,57±0,015 (p<0.05), in the renal vessels from 0,73±0,015 to 0,57 ± 0,02 (p<0.05), in the central retinal artery 0,75±0,019 to 0,67±0,03 (p <0.05). Conclusions: Each clinical case of early PE is unique. At present, there are no routine procedures for pregnant women to predict the development of early PE and perform appropriate preventive or therapeutic measures. Doppler study of uterine, renal and central retinal blood vessels allow to estimate the effectiveness of the treatment of pre-eclampsia.

Disclosure of Interest: None Declared

O33 CLINICAL OUTCOME AND PLACENTAL CHARACTERISTICS OF EARLY- AND LATE-ONSET SELECTIVE INTRAUTERINE GROWTH RESTRICTION

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Problem Statement: To evaluate the differences in clinical outcome, placental territory discordance (PTD), number and diameter of placental superficial vascular anastomoses of monochorionic diamniotic (MCDA) twin pairs with early- and late-onset selective intrauterine growth restriction (sIUGR). **Methods:** From April 2013 to April 2014, 52 cases with sIUGR were analyzed in Peking University Third Hospital. Recording the clinical classification and gestational age at diagnosis, we defined cases of type I sIUGR as low-risk type, type II and III sIUGR as high-risk type. Analyzing clinical outcome, the inter-twin birth weight (BW) discordance ((the normal fetus BW - growth-restricted fetus BW)/the normal fetus BW), number and diameter of placental superficial vascular anastomoses, and placental territory discordance ((the larger placental territory - the smaller placental territory)/the larger placental territory) in early-onset sIUGR diagnosed before 23 weeks and late-onset sIUGR diagnosed at 23 weeks or later. **Results:** 1. In these 52 pregnancies, 14 were early-onset sIUGR, containing 10 cases with high-risk types, as well as 5 cases with single intrauterine fetal death (sIUFD), and 38 were late-onset sIUGR, containing 10 cases with high-risk types, as well as 3 cases with sIUFD. The MCDA twin pregnancies with early-onset sIUGR had a significantly higher rate of high-risk types (71.4% vs 26.3%, p=0.005), as well as higher incidence of sIUFD (35.7% vs 7.3%, p=0.020) than those with late-onset sIUGR. Meanwhile there was 1 double IUFD in both groups. 2. A larger BW discordance was observed in early-onset group than the other group (0.41±0.18 vs 0.33±0.10, p=0.065), which was close to statistic difference. 3. There was no significant difference between the two groups as to PTD and total anastomotic diameter. **Conclusions:** The pregnancies with early-onset sIUGR had a remarkable greater risk for type II or III sIUGR and single IUFD than late-onset sIUGR. Therefore, when it comes to prenatal consultations among these early-onset sIUGR, selective fetocide

of the sIUGR twin performed before 23 weeks might be an appropriate management.

Disclosure of Interest: None Declared

O34 THE RELATIONSHIP BETWEEN MOLECULAR MECHANISM OF MATERNAL IRON DEFICIENCY AND CENTRAL NERVOUS SYSTEM FUNCTION OF NEONATAL

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Problem Statement: Maternal iron deficiency since late pregnancy, labor and postpartum will provide indirect effect which decrease neurotrophine in fetal hippocampus. The Neurotrophic factor has play a role in process of learning, memory and behavior as a central nervous system function. This study is conducted to determine the relationship between molecular mechanism of maternal iron deficiency and central nervous system function of neonatal. **Methods:** This is an observational study with cross sectional design to 80 at term pregnant women who met the inclusion criteria and there were no exclusion criteria. Samples are taken in Yarsi Hospital in Padang, and BMC Hospital in Padang and are examined in 2016. The sampling technique is consecutive sampling. The haemoglobin, leukocytes and ferritin will be taken from maternal blood. After giving birth, the ferritin, neurotrophine and zinc will be taken from umbilical cord of neonatal by using ELISA method in Biomedical Laboratory Faculty of medicine, Andalas University in Padang. Statistical analysis is conducted by using computerization program. **Results:** The mean levels of neurotrophine neonatal in maternal with normal iron levels is 3816.35 ± 1370.406 and in maternal with iron deficiency is 2780.25 ± 1195.275, the mean levels difference of neurotrophine is 1036.100 with 95% CI 212.454 -1,858.746. In the t-test p <0.05 (p = 0.015). **Conclusions:** The mean neurotrophine level of neonatal in maternal with normal iron is significantly higher than with iron deficiency.

Disclosure of Interest: None Declared

O35 NEONATAL OUTCOMES FOLLOWING A TRIAL OF LABOUR AFTER CESAREAN DELIVERY: A POPULATION-BASED STUDY

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Problem Statement: Trial of labour after Cesarean (TOLAC) in select patients is a safe and reasonable alternative to elective repeat Cesarean section. Although it has been shown to increase the risk of perinatal mortality, findings in regards to neonatal morbidity are inconsistent and sparse. **Methods:** We conducted a retrospective population-based cohort study using the Centers for Disease Control and Prevention's Period Linked Birth/Infant Death Public Use File from 2011 to 2013. Multivariate logistic regression was used to compare the neonatal outcomes between women with at least 1 prior Cesarean who underwent a trial of labour with women who did not. **Results:** A total of 1,036,554 live, term, singleton deliveries following previous Cesarean were studied. Within this cohort, 17.5% of women opted for a trial of labour. As compared to women who did not undergo TOLAC, the women who had a TOLAC were more likely to deliver infants requiring admission to the Neonatal Intensive Care Unit (NICU) (4.67% TOLAC, 4.11% no TOLAC, adj. OR 1.12; 95% confidence interval (CI) 1.09-1.16), and requiring assisted ventilation (2.54% TOLAC, 2.29 no TOLAC, adj. OR 1.07; 95% CI 1.03-1.12). Overall, 0.18% of women developed uterine rupture following TOLAC, with 21% of neonates requiring NICU admissions compared with 4.64% in those without rupture (adj. OR 5.95; 95% CI 4.56-7.76). Term neonates delivered in the context of uterine rupture had a 16-



fold increase in mortality, 9-fold increase in assisted ventilation and 11-fold increase in the need for surfactant ($p < 0.0001$ for all three), compared to their non-ruptured counterparts. Conclusions: While there are slight differences in NICU admission rates and need for assisted ventilation among newborns of women who undergo TOLAC, neonatal morbidity and mortality is clinically comparable between women who opt for TOLAC versus those who do not, in the absence of uterine rupture. However, this rare but serious complication of TOLAC significantly increases the likelihood of NICU admissions, assisted ventilation, need for surfactant, and the risk of perinatal death. Appropriate counseling for patients should include a discussion regarding neonatal outcomes.

Disclosure of Interest: None Declared

O36 PRENATAL ATTACHMENT AND SOCIAL SUPPORT IN RISK PREGNANCIES

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Problem Statement: This analytical study was aimed to determine the level of prenatal attachment and social support in risk pregnancies. **Methods:** The population of this research was formed all women who hospitalized in risk pregnancy department of Maternity Hospital in Konya/TURKEY. The sample group was composed of 82 volunteered pregnant women who was older than 18 years and without psychological problems. The self reported data were collected via socio-demographic questionnaire form created by the researchers, the Multidimensional Scale of Perceived Social Support (MSPSS) and Prenatal Attachment Inventory (PAI). **Results:** The pregnant women hospitalized at the department of risk pregnancy were diagnosed as preterm labour (32.9%), pain (14.6%), fetal distress (13.4%), the diagnosis oligohydramnios (12.2%), other reasons (intrahepatic cholestasis of pregnancy, gestational diabetes, hypertension, intrauterine growth retardation, urinary tract infection, proteinuria, bleeding, etc.) (26.8%). The mean range of pregnant women's PAI score was 56.76 ± 9.23 (min=34, max=74), MSPSS score was 55.34 ± 15.96 (min=21, max=84). There was a positive correlation determined between PAI scores and MSPSS scores of pregnant women. There was no correlation between the PAI scores and subscales scores of MSPSS. **Conclusions:** In this study was positive correlation with PAI and MSPSS mean scores between of pregnant. However, this relationship is not high level. It was expected that when the pregnant women perceived more social support, the prenatal attachment levels become higher. Because perceived social support from husband, family and friends adapt pregnant women to the changes in pregnancy especially risky situations. In this context midwives are taking part in prenatal care, could be planned to take into consideration social support and prenatal attachment status of pregnant women.

Disclosure of Interest: None Declared

O37 LAPAROENDOSCOPIC SINGLE-SITE SURGERY (LESS) FOR ADNEXAL MASSES

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Problem Statement: Can benign adnexal masses be managed with LESS safely? This abstract assesses the feasibility, safety and operative outcome for the management of adnexal masses by LESS. **Methods:** We performed a retrospective chart review of patients who underwent LESS at our hospital for adnexal masses. We analyzed the patient's age, body mass index (BMI), operative time, estimated blood loss, Size of the mass, histopathology result and operative complications. The procedures were done through a 2.5 cm umbilical incision using the open technique. The operation was then done similar to procedures performed using the conventional technique. The specimens were retrieved through the umbilical incision. **Results:** We reviewed 43 patients. The mean age of the patients was 38 years (12-88),

the mean BMI was 29.2 (19-39.9), the mean operative time was 75 minutes (40-170), the mean blood loss was 60 ml (20-300) The mean diameter of the cysts was 16 cm (7-30). All patients had benign cysts except one patient with stage 1A Granulosa cell tumor. There were two conversions to laparotomies for extensive pelvic adhesions. There were no blood transfusions or operative complications. **Conclusions:** With proper patients selection and expertise, we believe that LESS may be a safe and favorable surgical option for the management of patients with adnexal masses and provides a great cosmetic benefit. The short-term outcome evaluated by the operative time, complications and blood loss was satisfactory.

Disclosure of Interest: None Declared

O38 COMPARING THE EFFECT OF DIFFERENT DOSES OF PIASCLEDINE AND HORMONE REPLACEMENT THERAPY ON HOT FLUSHING OF MENOPAUSAL WOMEN

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Problem Statement: menopause is one of the natural stage of women's life that usually begins in 45-55 years old. There is different opinions about using HRT. Recently, using herbal components especially the ones that containing phytoestrogens for treatment of the climacteric symptoms have been noted. PIASCLEDINE is a herbal drug that contains this components. The aim of this study is to comparing the effect of different doses of PIASCLEDINE and Hormone replacement therapy on hot flushing of menopausal women in jahrom city. **Methods:** 138 postmenopausal women that the last menstrual period of these women was one year ago referred to Dr. Rasekh clinic with chief complaint of flushing symptom. Initially, medical history, physical exam, Pap smear, transevaginal ultrasound, routine tests were performed then patients were divided in 3 groups; PIASCLEDINE capsule is a product to herbal origin witch containing total extract of unsaponifiables of Avocado and Soya 300 mg (1 part of unsaponifiables of Avocado plus 2 part of unsaponifiables of Soya, excipient {Butyl Hydroxytoluene 0.03 mg} q.s. per capsule). Group A; 300 mg oral capsule PIASCLEDINE daily; Group B; 600mg oral capsules PIASCLEDINE twice a day Group C; hormone replacement therapy (1.25mg tab conjugated estrogen for 25 day and 10 mg tab dydrogestrone for 15 days). Hot flushing of Menopausal symptoms were evaluated before and after intervention using Blatt-Kupperman Menopausal Index (BKMI). The data were analyzed by SPSS 21 software. **Results:** Blatt-Kupperman index which is a scale of measuring the postmenopausal symptoms in women. BKMI had a reduction of 17.91 in PIASCLEDINE group A, 20.9 in group B and 20.96 in group C. **Conclusions:** according to the result of this research, reduction of postmenopausal flushing symptom in HRT group and case group with using 2 capsules of PIASCLEDINE is similar to each other. But the fundamental difference is in HRT side effects like; hypertension, breast cancer, endometrial cancer and others. Therefore, using PIASCLEDINE one capsule daily is less effective than HRT, but using 2 capsules of PIASCLEDINE daily is effective as same as HRT but also has not the side effects of HRT and women will have more tendency to use it.

key words: menopause, hot flush, PIASCLEDINE, Hormone

Disclosure of Interest: None Declared

O39 ASSESSMENT OF PROBLEMS IN SEXUAL FUNCTION AND QUALITY OF LIFE DURING MENOPAUSAL PERIOD

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Problem Statement: Menopausal and postmenopausal period constitute about one-third of women's life cycle. Chronic diseases develop in many women who have insufficient health care during menopausal period and quality of life is adversely affected depending on being unable to manage menopausal complaints. Female sexual function is the main component for quality of life and is affected by several physiological, psychological, and sociocultural factors. Sexual dysfunction is a common health problem in women during this period and its prevalence increases with aging. The aim of this study is to evaluate the relationship between the sexual functions and quality of life and the problems during menopausal period in women aged between 40 and 60 years. **Methods:** This study is cross sectional-descriptive research. The study was conducted between 15nd October, 2015 and 15nd March, 2016 with 317 women who applied to the Menopause Polyclinic and met the research criteria. The data were collected through the Patient Information Form, Menopause Symptoms Rating Scale (MSRS), Female Sexual Function Index (FSFI) and Sexual Quality of Life Questionnaire-Female (SQLQ-F) form. Analysis of the data was performed using Oneway Anova test, student's t-test and Pearson correlation analysis. Ethics committee approval was received from Çukurova University Medicine Faculty Ethics Committee before the study was conducted. **Results:** The mean age of women was 49.55 ± 6.04 (40-60) years. A total of 55.2% of the women were at post-menopausal period. Of the MSRS subdimensions, the mean scores of somatic complaints, psychological complaints, and urological complaints were 5.76 ± 3.65 , 6.36 ± 3.95 and 3.34 ± 2.66 , respectively. The mean total FSFI score was 18.86 ± 8.75 , while the mean total SQLS-F score was 72.75 ± 13.73 . There was a positive significant correlation between somatic complaints and psychological complaints ($p=0.000$; p). **Conclusions:** According to this study results, women do not often experience serious menopausal symptoms, but have sexual dysfunction with a moderate sexual life quality. In addition, we menopausal complaints which women experience have a significant impact on the sexual function and sexual life quality.

Keywords: Menopause; sexuality; quality of life; nursing

Disclosure of Interest: None Declared

O40 SERUM PROCALCITONIN AND PROINFLAMMATORY MARKERS IN POLYCYSTIC OVARY SYNDROME

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Problem Statement: Some studies reported a significant association between polycystic ovary syndrome (PCOS) and proinflammatory markers. Therefore the aim of this study was to evaluate the levels of procalcitonin and proinflammatory markers in PCOS patients and to compare these with controls. **Methods:** The study consisted of patients with PCOS ($n=59$) and healthy age-matched controls ($n=26$) (total, $n=85$). Serum procalcitonin (PCT), white blood cells (WBC), high sensitive C-reactive protein (h-CRP), homocysteine levels, insulin resistance and lipid profile were compared between the PCOS and control group. The same parameters were also compared between the obese and non-obese group. **Results:** Serum PCT, homocysteine, h-CRP and WBC levels were similar in the PCOS and control groups. High density lipid levels were lower in the PCOS group when compared with the control group ($p<0.05$). Serum low density lipid (LDL), triglyceride, insulin and glucose were higher in the over-weight group compared with the normal-weight group ($p<0.005$). Serum HDL was significantly lower in the over-weight group compared with the normal-weight group ($p<0.005$). Serum WBC was significantly higher in the over-

weight group ($p<0.05$). There were no significant differences in the other serum proinflammatory markers (PCT, homocysteine, h-CRP) between the obese and non-obese groups. **Conclusions:** Serum PCT, h-CRP, WBC, homocysteine levels were within the normal range in patients with Polycystic Ovary Syndrome. These results may be related to the relatively young age and regional difference of the study group.

Disclosure of Interest: None Declared

O41 SURGICAL TREATMENT OF CERVICAL PREGNANCY UNDER TRANSIENT OCCLUSION OF UTERINE ARTERIES WITH AN ENDOSCOPIC VASCULAR CLIP

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Problem Statement: The aim of our film is to introduce a surgical technique of intraoperative bleeding control, called Transient Occlusion of Uterine Arteries(TOUA). It can be used during laparoscopic surgery expecting heavy bleeding. **Methods:** A 40-year-old married woman referred to our hospital for cervical pregnancy with 7 weeks of amenorrhea. She had history of abortion, one was spontaneous abortion and the other was artificial abortion. She had scanty vaginal bleeding. At the time of her visit, b-hCG was 2045.7 mIU/ml and there was mass-like lesion in her cervix. It was 5cm sized mass which has irregular margin, hyperechogenicity on the ultrasonogram. It did not have definite gestational sac like feature so that we did curettage biopsy for pathologic confirmation but it was incompletely done because of profuse bleeding. We did cervical cerclage for bleeding control. After that the patient received 4cycles of methotrexate(50mg/m²) weekly, but the mass had not been decreased and its vascularity was not diminished. With expectation of intraoperative heavy bleeding, laparoscopic tissue extraction under Transient Occlusion of Uterine Arteries(TOUA) was performed. **Results:** Laparoscopic excisional curettage and repair of the uterine cervix were performed successfully. After 7 days later, serum b-hCG level was in normal range, without any complications. **Conclusions:** To reduce intraoperative bleeding, laparoscopic TOUA can be a choice during the surgery expecting profuse hemorrhage.

Disclosure of Interest: None Declared

O42 HUSBAND'S SMOKING AND THE RISK OF SPONTANEOUS ABORTION OR STILLBIRTH IN CHINESE FEMALES AGED 20-49 YEARS

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Problem Statement: Husband's smoking is an important source of maternal passive smoking before or in the pregnancy. Previous studies had shown that active smoking during pregnancy could lead to adverse pregnancy outcomes, but the association between husband's smoking and the risk of spontaneous abortion or stillbirth in the pregnancy-preparing stage is still waiting for exploring. The objective of this study was to evaluate the association of husband's smoking and spontaneous abortion or stillbirth before pregnancy among females aged 20-49 years in China. **Methods:** Women participated in the National Free Pre-pregnancy Checkup Projects (NFPCP) and delivered between January 1st, 2013 and December 31st, 2015 were included in this study. Participants who were active smoking, missing husband's smoking, missing pregnancy outcome were excluded, participants born with preterm, low birthweight and ectopic pregnancies were also excluded, and eventually 4 752 356 pairs were included in the analysis. Husband's smoking status, smoking cigarettes per day and cigarette-years were designated as the main exposure, spontaneous abortion or stillbirth as the outcome. Logistic regression and restricted cubic splines function were used to measure the association and its dose-response



relationship. Results: Compared with the participants whose husband didn't smoking, the multivariable adjusted odds ratio (OR) for spontaneous abortion or stillbirth was 1.21 (95% confidence interval (CI): 1.19-1.22) for participants with husband smoking, were 1.14 (95% CI: 1.11-1.17), 1.14 (95% CI: 1.11-1.16), 1.18 (95% CI: 1.16-1.20) and 1.34 (95% CI: 1.31-1.36) for participants whose husband smoked 1-, 5-, 10- and 15- cigarettes per day respectively, were 1.37 (95% CI: 1.34-1.41), 1.45 (95% CI: 1.40-1.50), 1.46 (95% CI: 1.41-1.50) and 1.46 (95% CI: 1.41-1.51) for participants whose cumulative husband's smoking were 1-, 21-, 41- and 81- cigarette-years respectively. Subgroup analysis also showed that the association was independent on parities, adverse pregnancy outcome history, higher education, drinking, BMI or husband's smoking status during pregnancy. The restricted cubic splines also showed that the dose-response relationship of husband smoking and the outcome was non-linear ($P < 0.001$). Conclusions: Our study indicated that exposed to husband's smoking before pregnancy had association on spontaneous abortion or stillbirth.

Disclosure of Interest: None Declared

O43

CERVICAL PREGNANCY - DIAGNOSTIC AND THERAPEUTIC CHALLENGES

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Problem Statement: Cervical pregnancy is a rare condition with potentially life threatening consequences if not diagnosed and treated promptly. It is associated with high morbidity and mortality, with the massive haemorrhage being the common element. **Methods:** We present a case of cervical pregnancy following treatment by the artificial reproductive technique (ART) in a nulliparous woman with a history of complex surgery for extensive endometriosis. The innovative method of large loop excision and haemostatic cervical suture enabled bleeding control and saved patient from a potentially complicated surgery, in the case where systemic methotrexate failed. **Results:** A 39-year-old woman presented with primary subfertility due to endometriosis and a male factor. First cycle of ART was abandoned due to a poor response to stimulation and the development of hydrosalpinges-like structures. The hysteroscopic sterilisation with Essure proved impossible due to blocked ostia and the laparoscopic approach was discouraged in view of patient's complex surgical history. The second cycle, with donated oocytes, resulted in the transfer of two embryos on the third day. Positive pregnancy test followed. Three weeks later the patient presented with a mild unilateral abdominal pain and vaginal spotting. The ultrasound scan (USS) revealed a thickened endometrium of 7.2mm with no evidence of a gestational sac. A follow up with serial B-hCG showed a suboptimal rise in levels. Repeated USS showed an endometrium of 8.5 mm and the cervix distended by a heterogenous mass, possibly representing a blood clot. There was still no evidence of a gestational sac. In view of the B-hCG levels and USS findings, the diagnosis of a possible failing intrauterine pregnancy or pregnancy of an unknown location was made and the patient was offered systemic methotrexate. Despite the treatment there was a suboptimal drop in the B-hCG results. A second dose of methotrexate was considered but abandoned as suspicion of cervical pathology was raised during clinical examination. Subsequently, profound vaginal bleeding was encountered and required urgent treatment. In theatre, the enlarged cervix distended by the firm tissue partly visible in the external cervical was observed. Both transvaginal USS and hysteroscopy were used to assess the extent of the mass. To aid haemostasis, a modified Mc Donald cervical suture was placed before the large loop excision was performed. Histological examination confirmed a cervical pregnancy. The patient made a good recovery and is not planning further subfertility treatment. **Conclusions:** This case highlights many controversies not only in the diagnosis and treatment of cervical pregnancy but also the challenges faced by modern subfertility units. It shows how difficult the management of hydrosalpinges can be and illustrates that despite blocked Fallopian tubes,

ectopic pregnancy is still a possibility that should be considered by clinicians. Symptoms of cervical ectopic can be subtle, as illustrated by our case, with only mild abdominal pain and minor bleeding. We would recommend thorough clinical examination in all cases of 'pregnancy of unknown location' as it may lead to a diagnosis of cervical pregnancy. Effective teamwork and multidisciplinary team offering skills in endoscopy, colposcopy and ultrasound, with an interventional radiologist on standby, proved essential and led to safe outcome for the patient.

Disclosure of Interest: None Declared

O44

DOUBLE-BLINDED RANDOMIZED CONTROLLED STUDY FOR COMPARISON OF SURGICAL RECTUS SHEATH AND INTRATHECAL MORPHINE FOR POSTOPERATIVE PAIN CONTROL AFTER CAESAREAN SECTION

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Problem Statement: The aim of the study was to evaluate surgical rectus sheath block (RSB) and intrathecal morphine (ITM) in postoperative pain control in Caesarean section. **Methods:** It was a prospective randomized study involving patients undergoing lower segment Caesarean section using low suprapubic transverse incision, carried out in Queen Mary Hospital, The University of Hong Kong, Hong Kong. Patients were randomized into three groups – surgical RSB only group, ITM only group and both interventions group. The primary outcome of this study was pain score at rest and movement (elevation of head and shoulder at supine position) at 4 hours postoperatively. The secondary outcome of this study were the pain score at other time point measurements, the total requirement of oral analgesics at 6 hours, 12 hours and 24 hours postoperatively, and side effects including itchiness, nausea or vomiting. **Results:** Total 144 patients were recruited, but thirteen were excluded. 46 patients received surgical RSB only, 38 patients received ITM only and 47 patients received both interventions. The pain score at rest 4 hours postoperatively were 4.400 +/- 2.862, 2.811 +/- 2.810 and 1.638 +/- 1.900 for group 1, 2 and 3 respectively, $p = 0.000$. The pain score at movement 4 hours postoperatively were 6.011 +/- 2.815, 4.568 +/- 3.434 and 3.106 +/- 2.447 for group 1, 2 and 3 respectively, $p = 0.000$. More than 60% of participants experienced itchiness in groups receiving ITM, while it only occurred in 38% of participants in group whom only had surgical RSB, $p = 0.000$. There was no difference in term of experience of nausea or vomiting. There was no serious adverse effect observed.

Conclusions: Combination of surgical RSB and ITM provided the most effective postoperative pain control. Itchiness was a common side effect after receiving ITM, but there was no serious adverse effects observed. Surgical RSB can be considered as a safe alternative in patients contraindicated for ITM.

Disclosure of Interest: None Declared

O45

UTERINE MALFORMATIONS: IS THERE A NEW GOLD STANDARD IN DIAGNOSIS?

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Problem Statement: Congenital uterine malformations are frequently asymptomatic and highly unrecognized, representing an important burden in fertility and obstetric outcomes. This study aims (1) to report the diagnostic approach and surgical management in a series of women with uterine malformations; (2) to evaluate the accuracy of three-dimensional (3D) ultrasound (US) as diagnostic tool and its concordance with pelvic

magnetic resonance imaging (MRI) and other available diagnostic tools. Methods: Retrospective chart review of 39 cases of uterine malformations diagnosed in a tertiary university hospital between January 2014 and April 2016. All women underwent pelvic 2D and 3D US; RMI was performed in 10 cases and 11 women were submitted to diagnostic hysteroscopy. Descriptive statistical analysis was performed using the median and relative frequencies. Results: Thirty-nine women aged between 13 and 69 years were identified. Thirty-four patients were sexually active, from which 15 (44%) were nulliparous and 7 (21%) had at least one first trimester spontaneous abortion. Among women who achieved a viable pregnancy (n=16, 47%), the median number of gestations and parity was 2; 25% had one first trimester spontaneous abortion; half of cases delivered at least once by cesarean section, the majority of them due to abnormal fetal presentation. Regarding obstetric outcomes, there were 7 cases of infertility, 2 cases of fetal growth restriction and one of preterm delivery. Concomitant urinary tract defects were observed in 10 patients; other associated defects were anal imperforation with a rectovaginal fistula and unilateral cleft lip and palate. A case of Turner syndrome and a suspicion of Perrault syndrome were identified. Using 3D US as diagnostic tool, the following uterine malformations were identified: 11 cases of septate uterus, 8 cases of bicornuate uterus, 6 cases of uterine didelphys, 6 cases of arcuate uterus, 3 cases of hypoplastic uterus and 3 cases of uterus in "T" conformation. In two cases it was not possible to establish a definitive diagnosis. Ten cases underwent MRI, and concordance with 3D US diagnosis was found in all cases except one, which was later confirmed by diagnostic laparoscopy and hysteroscopy. A vaginal septum was reported in 4 cases, mostly in association with uterine didelphys. One case of Herlyn-Werner-Wunderlich syndrome was diagnosed. Six women underwent surgical repairs: 3 hysteroscopic resections of uterine septum, 2 resections of vaginal septum and one resection of the lateral uterine wall. One case of viable pregnancy was achieved after surgical procedure. Conclusions: Given the high accuracy and strong concordance with MRI in diagnosis of uterine malformations, transvaginal 3D ultrasonography should be the first step in the diagnostic approach. An adequate diagnosis will provide a weighted assortment of the most suitable surgical management, hopefully improving gynecological and obstetric outcomes.

Disclosure of Interest: None Declared

O46

RESIDENT TRAINEES INCREASE SURGICAL TIME: A COMPARISON OF OBSTETRIC AND GYNECOLOGIC PROCEDURES IN ACADEMIC VERSUS COMMUNITY HOSPITALS

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Problem Statement: Resident education in Canada is a hot topic with the evolution, present and proposed, of resident evaluation and surgical program completion. The use of simulation and laparoscopic trainers are recent developments that require assessment before extensive integration. The impact of resident involvement in the operating room for common procedures in Obstetrics and Gynecology can shed light on the resource demands of teaching.

Methods: This population-based retrospective cohort study compared surgical duration between academic (teaching) hospitals and community (non-teaching) hospitals. The cohort was made up of adult residents of Ontario, Canada between fiscal years 2002 and 2013 undergoing commonly performed Obstetric and Gynecologic procedures. The most commonly billed procedures, requiring surgical assist, were included: Cesarean section, Anterior or Posterior repair, Anterior and Posterior repair, Salpingo-oophorectomy, Myomectomy, Ectopic Pregnancy, Total/Subtotal Hysterectomy, Vaginal Hysterectomy, and Laparoscopic Hysterectomy. Linked administrative databases held at the Institute of Clinical Evaluative

Sciences (ICES) were used to define patient, surgeon, institution, and procedure-related variables to limit confounding. Surgical duration, determined by Anaesthetic billing records, was analyzed using a negative binomial regression. Results: The total cohort included 337 389 surgical procedures. Twenty-eight percent, 94 203 procedures, were conducted in academic settings. The mean surgical duration of the procedures of interest (excluding vaginal hysterectomy) were significantly longer in academic hospitals compared to community hospitals. With many controls for case variability, this time differential likely reflects the burden of teaching resident trainees. The operating time increased between 6% and 20% in academic centres depending on the procedure. See Table 1 for procedure-specific results. For example, the mean surgical duration of Cesarean sections was 20.6 minutes longer, or 19% longer, in academic hospitals. Furthermore, the data highlighted a trend of increased teaching time for laparoscopic procedures compared to open procedures. The time ratio was the greatest for salpingo-oophorectomy and surgical management of ectopic pregnancies. Conclusions: One cost of teaching is operative time. Resident trainee surgical involvement significantly increases the surgical duration of the majority of procedures regularly performed in Obstetrics and Gynecology. This can be used as a measure for program evaluation and advancement. Furthermore, laparoscopic simulation and training are of utmost importance as laparoscopic cases are seen to have greater teaching demands, as demonstrated by the larger time ratios in these subgroups.

Disclosure of Interest: None Declared

O47

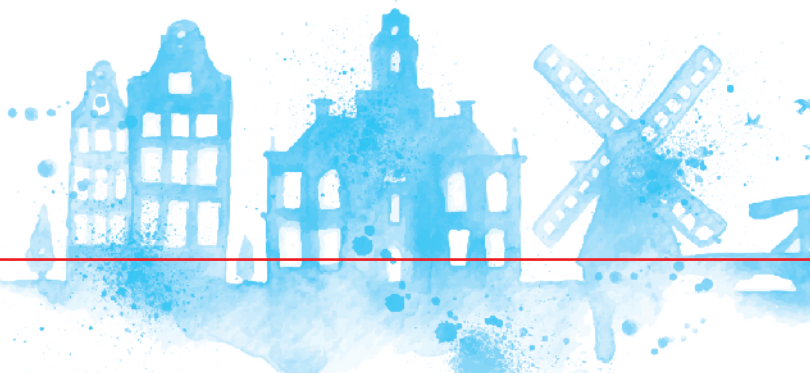
CONSCIOUS PAIN MAPPING USING MICRO LAPAROSCOPY IN EGYPTIAN WOMEN WITH CHRONIC PELVIC PAIN

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Problem Statement: Chronic pelvic pain is a common and significant complaint of women. It is estimated to have a prevalence of 3.8% in women. Chronic pelvic pain can be defined as intermittent or constant lower abdominal or pelvic pain of at least 6 months' duration not occurring exclusively with menstruation or intercourse and not associated with pregnancy. It is a symptom not a diagnosis.

Methods: 100 patients admitted to Tanta University Hospital, with chronic pelvic pain not responding to treatment. All patients gave a full-informed written consent. The age of women recruited ranged from 19- 40 years (mean 29.3 years), their weight 60- 75 Kg (mean 66.2) and the number of parity 0- 5 (mean 4). The duration of preoperative pain in months was 10-60 (mean 31.6 months). They were taught about degree of pain sensation and how to give it the rate from 0 to 10 using a visual analog scale (VAS) that rate their pain numerically, where the range of the preoperative VAS pain levels were 6- 10 (mean 8.9). The aesthetic method was a combination of intravenous anxiolytic and opioid medication, plus a local anesthetic at the trocar sites and sometimes in the peritoneal cavity. The used anxiolytic was diazepam, in a dose of 2.5 mg every 5-10 minutes and the maximum dose was 0.05-0.15 mg/kg. The used opioid was fentanyl in a dose 25-50ug every 5 minutes (0.5-1.0 ml) with a maximum dose 1-3 ug/kg The used local anesthetics were: Bupivacaine, concentration (0.25-0.50%) and the maximum dose was 2.5 mg/Kg. Lidocaine, concentration (0.5-1%) and the maximum 'dose of it with epinephrine was 7mg/Kg. Using a 3-mm microlaparoscope, manufactured by Karl-Storz, O'degree with its 3mm accessories, a 3 mm intra -umbilical incision was made. Conscious pain mapping procedure defined as successful if the patient tolerated the procedure and consistently identified the source (s) of her pain, or stated that no sources could be identified, According to the findings the patient was treated either surgically" microlaparoscopy, traditional laparoscopy



under general anaesthesia or laparotomy" or was treated medically. Women were followed up at 6 months, 9 months, 12 months and 15 months. At the 6 month visit the pain intensity was scored again using the VAS. A comparison of VAS documented pretreatment and at 6 month post-treatment was analysed statistically using the SPSS for windows and Fischer exact testing. Results: Conscious pain mapping was successful in 96% of cases and failed in 4%. The main pelvic pathology which gave positive pelvic mapping was endometriosis followed by adhesions representing 57.29% and 27% from all the patients (n=96) respectively (figure1). Six months after the appropriate treatment, 64.58% (62/96) were totally pain free, 20.3% (22/96) saw marked improvement with visual analog scale (VAS) level <3 (range 2- 3), 6.25% (6/96) improved with mean VAS level <5 (range 4- 5) and 6.25% (6/96) had no improvement at all VAS >8 (range 8- 10). Conclusions: conscious pain mapping can be done with reasonable success for evaluations and treatments for chronic pelvic pain. But further studies on large number of patients in randomized controlled studies are recommended.

Disclosure of Interest: None Declared

O48 FERTILITY OUTCOMES AFTER ABLATION USING PLASMA ENERGY COMPARED WITH CYSTECTOMY IN WOMEN WITH OVARIAN ENDOMETRIOMA

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Problem Statement: To compare the probability of postoperative pregnancy in infertile women with ovarian endometrioma larger than 3 cm in diameter, managed by either ablation using plasma energy or cystectomy. **Methods:** We performed a multicentric study enrolling 104 infertile patients managed for ovarian endometrioma larger than 3 cm diameter: 64 patients underwent ablation using plasma energy (cases) and 40 underwent cystectomy (controls). Patients were enrolled in CIRENDO prospective cohort database (NCT02294825) from June 2009 to June 2014 and managed in six different facilities. The minimum length of follow up was 1 year. Postoperative probabilities of pregnancy in cases and controls were estimated using Kaplan Meier method with 95% confidence intervals, and compared using the Log-Rank test. The Cox model was used to assess independent predictive factors for pregnancy. We performed a multicentric study enrolling 104 infertile patients managed for ovarian endometrioma larger than 3 cm diameter: 64 patients underwent ablation using plasma energy (cases) and 40 underwent cystectomy (controls). The minimum length of follow up was 1 year. Postoperative probabilities of pregnancy in cases and controls were estimated using Kaplan Meier method with 95% confidence intervals, and compared using the Log-Rank test. The Cox model was used to assess independent predictive factors for pregnancy. **Results:** Mean follow up was 35.3 ± 17.5 months (range 12 to 60 months). Patients managed by plasma energy were significantly older than patients managed by cystectomy, had significantly higher overall rAFS score and higher rate of Douglas pouch obliteration, deep endometriosis and colorectal localizations. Fertility outcomes were comparable. During the follow-up period 76 pregnancies were recorded (73.1%). Twenty-four pregnancies were due to spontaneous conception (31.6%) more frequently in plasma energy group: 18 cases (40.1%) vs. 6 (18.8%). The probability of pregnancy at 24 and 36 months after surgery in plasma energy and cystectomy groups was respectively 61.3% (95%CI 48.2-74.4%) vs. 69.3% (95%CI 54.5-83%) and 84.4% (95%CI 72-93.4%) vs. 78.3% (95%CI 63.8-90%). Patients managed by plasma energy were significantly older than patients managed by cystectomy, had significantly higher overall rAFS score and higher rate of Douglas pouch obliteration, deep endometriosis and colorectal localizations. During the follow-up period 76 pregnancies were recorded (73.1%). Twenty-four pregnancies were due to spontaneous conception (31.6%) more frequently in plasma energy group: 18 cases (40.1%) vs. 6 (18.8%). The probability of pregnancy at 24 and 36 months after surgery in

plasma energy and cystectomy groups was respectively 61.3% (95%CI 48.2-74.4%) vs. 69.3% (95%CI 54.5-83%) and 84.4% (95%CI 72-93.4%) vs. 78.3% (95%CI 63.8-90%). **Conclusions:** Postoperative pregnancy rates were comparable after management of ovarian endometrioma by either ablation using plasma energy or cystectomy despite an overall higher rate of unfavorable fertility predictive factors in women managed by ablation.

Disclosure of Interest: None Declared

O49 EARLY PREDICTIVE BIOPHYSICAL AND SERUM MARKERS OF PREECLAMPSIA

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Problem Statement: Despite of pre-eclampsia (PE) is a leading cause of perinatal morbidity and mortality, the pathophysiology of PE remains unknown. Early prediction of it would allow for timely initiation of preventive therapy. A combination of anamnesis, biophysical and biochemical markers are superior to other tests for early prediction of the development of PE. **Methods:** To evaluate the predictors of PE by investigating of biophysical markers and serum biomarker in the first trimester we prospectively recruited 645 women that underwent an 11-13 weeks aneuploidy screening. Among them 59 (9.15%) were diagnosed with PE. This woman was included in the first group. All women of the first group had mild PE with late onset (after 34 weeks of gestation). The second group included 589 patients without pre-eclampsia. We gathered the information of body mass index (BMI), level of mean arterial pressure (MAP) and one serum biomarker - pregnancy associated plasma protein A (PAPP-A). Body mass index was calculated as weight in kilograms/height in square meters. Mean arterial pressure (MAP) at the first prenatal visit was calculated as one-third of systolic blood pressure plus two-thirds of diastolic blood pressure. Blood samples were drawn at the first prenatal visit also between 11-13 weeks of gestation. Serum PAPP-A was measured using an automated immunoassay analyzer (DELFI System; PerkinElmer Life and Analytical Sciences, Turku, Finland) using reagents supplied by the manufacturer. Continuous variables are expressed as median and interquartile (Q) range. We also used Spearman test for the nonparametric correlation analysis. P-values for median values less than 0.05 were considered as significant. ROC curves for the prediction of PE were produced for all markers. Analyses were computed using Statistica 12.5 and MedCalc 15.8, MS EXCEL 2010. **Results:** The average age was similar among all studied groups: 32.2 years in first group and 29.5 years in second group. Median of PAPP-A in the first group was 2297 (1430-4656) IU/ml, in the second group was 2658 (1500-4373) IU/ml (reference intervals was 600-2500 IU/ml). There was no statistically significant difference in serum PAPP-A (p>0.05). Median of BMI in the first group was 27 (23-30) kg/m², in the second group was 23 (20-26) kg/m² (p=0,0001). Median of MAP in the first group was 84 (73-93) mmHg, in the second group was 77 (73-83) mmHg. There was also statistically significant difference (p=0.001). Correlation coefficients for MAP and BMI between groups 0.2 (p=0.000002) and 0.3 (p=0.04) respectively. We used logistic regression for forecasting of PE and ROC analysis for receiving a point of division with indicators of Se and Sp optimum for this case. Yuden's index gives us Cutoff - 0.385 and regression - the equation: 0.065*MAP+0.119*BMI-10.584>=0.385 with Se=54.2% and Sp=84.3% (the prognosis of PE). **Conclusions:** According our results PAPP could not be used as a predictive marker of PE. The maternal characteristics are provided as a possible screening for PE.

Disclosure of Interest: None Declared

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EFFECTS AND SAFETY OF USING AMMONIUM SUCCINATE SUPPLEMENTATION ON PARAMETERS OF HORMONAL AND LIPID METABOLISM IN PERIMENOPAUSAL AND POSTMENOPAUSAL WOMEN

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Problem Statement: Reduction of estrogen levels in perimenopausal and postmenopausal period associated with the formation of metabolic disorders, underlying the menopausal metabolic syndrome, which promotes the development of severe and often fatal cardiovascular diseases. In this regard, currently under active search for means of prevention and treatment of menopausal metabolic disorders. The aim was to evaluate the effectiveness and safety of using ammonium succinate dietary supplement on parameters of hormonal and lipid metabolism in perimenopausal and postmenopausal women. **Methods:** Randomized, double-blind, placebo-controlled trial was conducted among 140 women 42-60 years of age. The treatment lasted 3 months. The following were used: general clinical assessment, determination of plasma levels of gonadotropins (FSH, LH), estradiol, leptin, and apolipoproteins before and in 3 months of treatment. **Results:** The initial estradiol levels in the placebo group were statistically significantly higher. During the course of the study, estradiol concentrations in the treatment group gradually increased significantly by 3 months of therapy ($p < 0,05$), and the levels of estradiol were statistically significantly higher than those in the placebo group after 2 months ($p < 0,0001$). In the control group estrogen concentrations remained at the same level. In the treatment group, the levels of FSH and LH decreased with statistical significance after 2 months of treatment ($p < 0,05$), but no significant difference in their values compared to the placebo group was observed. In the main group concentrations of leptin were characterized by a significant reduction ($p < 0,05$) that was approaching normal levels; in the placebo group an increase in the levels of the hormone was observed. At the end of the treatment, there was a statistically significant difference in leptin levels between two groups. The level of apolipoprotein B significantly decreased in the study group ($p < 0,05$) and remained unchanged in the placebo group. A between-group differences in levels of apolipoprotein dynamics was not observed. Comparative analysis of vital signs, blood and urine tests did not show any negative effects of studied supplementation. **Conclusions:** Using of ammonium succinate supplementation in perimenopausal and postmenopausal women is safe and has a beneficial effect on parameters of hormonal and lipid metabolism. **Disclosure of Interest:** I. Kuznetsova Grant/ Research support from: Ingredient manufacturer (EcoMed) sponsored the clinical trial, Y. Uspenskaya Grant/ Research support from: Ingredient manufacturer (EcoMed) sponsored the clinical trial, V. Radzinsky Grant/ Research support from: Ingredient manufacturer (EcoMed) sponsored the clinical trial, D. Burchakov Grant/ Research support from: Ingredient manufacturer (EcoMed) sponsored the clinical trial

Disclosure of Interest: None Declared

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PREVALENCE OF EPISIOTOMY FOR VAGINAL BIRTHS IN A HOSPITAL IN TURKEY AND ITS EFFECTING FACTORS

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Problem Statement: Episiotomy, which is the incision operation of perineum in vaginal births, is one of the most common surgical procedure in obstetric operations. The benefits of episiotomy, usage conditions and its necessity are discussed recently, and it is also emphasized that instead of doing it as a routine in every delivery, it should be preferred when it is really necessary.

This study was done in a hospital located in a city centre in Turkey to determine the prevalence of episiotomy for vaginal births and its effecting factors. **Methods:** Retrospective and cross-sectional study was done in a training and research hospital in a city centre located in Central Anatolia Region in Turkey. The target population of the study was 3390 women who gave birth between 1 January and 31 December 2013. Without choosing a sample, all the target population was included in the scope of research. Data were collected from birth recordings in which women's ages, type of delivery, birth number, baby weight and baby length were registered. Data were evaluated using numbers, percentages, averages, standard deviation, median and Kruskal Wallis tests via computer. The significance level was accepted as $p < 0,05$. **Results:** The prevalence of vaginal births with episiotomy was found %32,5 in the study. The average birth number is $2,06 \pm 1,16$ and %37,5 of women are primipara. There is a significant relation between women's birth number and type of delivery ($KW=998,613, p < 0,05$). It is determined that vaginal birth with episiotomy rate is %59,5, caesarean rate is %33,3, vaginal birth without episiotomy rate is %6,6 and sutured vaginal birth without episiotomy rate is %0,5 for primipara women and, those rates are %16,2, %32,6, %43,3, %7,6 for multipara women, respectively. According to this, vaginal birth with episiotomy rate is higher and vaginal birth without episiotomy rate is lower in primipara women than multipara women. The average age of the women is $26,51 \pm 5,92$ and there is a significant difference between women's age and type of delivery. ($KW=333,314, p < 0,05$). According to this, vaginal birth with episiotomy is seen more often in younger women. (M=23 Min:14-Max:42). The average height of babies is $49,82 \pm 2,23$ centimetres and average weight is $3209,61 \pm 510,35$ grams. There is a significant difference between babies' height ($KW=14,026, p < 0,05$) and weight ($KW=21,370, p < 0,05$) and the type of delivery. So, it is ascertained that taller (Mean rank=1883,62) and fatter (Mean rank=1902,61) babies are born mostly with sutured vaginal birth without episiotomy. **Conclusions:** It is determined that vaginal birth with episiotomy is seen more frequent in younger and primipara women, and oversized baby causes sutured birth.

Key words: Episiotomy, Obstetric labour, Women's health.

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Disclosure of Interest: None Declared

052

EFFICACY OF VAGINAL AND LAPAROSCOPIC SACROCOLPOPEXY (VLSC), A DUAL APPROACH TO UTERO-VAGINAL PROLAPSE, COMPARED WITH LAPAROSCOPIC SACROCOLPOPEXY (LSC) ALONE

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Problem Statement: One of the successful operations which corrects prolapse while achieving a functional vaginal reconstruction is the sacrocolpopexy. This operation which classically required an open abdominal approach, can be done laparoscopically, but is time-consuming and requires experienced laparoscopists. A few years ago we introduced a dual vaginal-laparoscopic technique in which we combined the ease of vaginal suturing with the advantages of laparoscopic sacrocolpopexy (LSC). Our objective, now, is to evaluate the efficacy of this dual approach in comparison to the total laparoscopic operation. **Methods:** From 2007 to 2009 we performed 28 LSC operations for severe vaginal prolapse, grade 3-4 according to the POP-Q system. They were all done by the same surgeon and involved laparoscopic suturing of a 2X20 cm mesh to the apex of the vagina, in cases of vault prolapse post hysterectomy, and additional sutures to the cervix in cases of uterine prolapse. The mesh was then attached to the sacrum by three tuckers. As of April 2009 we modified the operation to the dual approach by introducing the mesh vaginally, and suturing it directly to the apex, or apex and cervix, accordingly. After closure of the vaginal incision, the rest of the operation continued laparoscopically by the same surgeon as before, by attaching the mesh to the sacrum with tuckers. We compared the efficacy and short term results of 61 patients who had the



dual operation to that of the 28 classical laparoscopic sacrocolpopexy patients. The study was retrospective and included analysis of patients' records. We also called the patients and encouraged them to come for a follow-up examination. We managed to examine 11 of the 28 LSC patients (39%), 3-7 years after the operation, and 35 of the 61 VLSC patients (57%), 1-5 years after the operation. Results: The short term results of the dual operation showed that it was faster, without compromising the wellbeing of the patients. For the long term results we examined the available patients and found that the subjective cure rate was 73% (8/11) for the LSC patients and 88% (31/35) for the VLSC dual operation. However, we observed some degree of vaginal prolapse in 82% (9/11) of the LSC operation, mainly cystocele or rectocele grade 1 or 2, but only 31% (11/35) of the VLSC patients had such prolapse. There were no mesh erosions or exposures in any of the groups. Conclusions: The dual operation combined the ease and accuracy of a vaginal operation with the benefits to the patient from a laparoscopic approach. It also enabled an easy method to add vaginal procedures that improved the surgical results, or complied with the patients' wishes.

Disclosure of Interest: None Declared

O53

PREVALENCE OF URINARY INCONTINENCE AND ITS EFFECT ON QUALITY OF LIFE IN MARRIED WOMEN

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Problem Statement: Urinary incontinence (UI) is defined by International Continence Society (ICS) as the complaint of any involuntary loss of urine that can be determined objectively and cause social and hygienic problems. UI is thought to be a common important public health problem that affects quality of life of thousands of women. The objective of this study was to determine the prevalence of urinary incontinence (UI) and its effect on quality of life in married women aged 15 years and over living in the city centre of Kırşehir. **Methods:** It is a cross-sectional study. The study was conducted with 421 women. A questionnaire involving some socio-demographic characteristics and incontinence-related properties of the women, incontinence severity index (ISI) and incontinence quality of life questionnaire (I-QLQ) were used to collect the data. Number, percentage, Kruskal Wallis, Mann Whitney U, Spearman correlation analysis methods were used in statistical analysis. **Results:** It was determined that 73.4% of the women had incontinence problems and 92.1% of them had incontinence problems for 5 years and less. Only 7.7% of the women stated that they consulted a doctor due to this problem. Severity of incontinence increased with increasing age and marriage duration. Median of quality of life questionnaire of the women was determined to be 84 (min:0-max:119). Quality of life decreased with increasing age and incontinence severity. **Conclusions:** It was determined that women's incontinence severity was mild but incontinence's frequency was high, and their quality of life was at moderate level. Studies in which nurses would take active roles in care, treatment, and consultancy services for preventing and eliminating UI are suggested to be planned.

Key words: Nursing, Prevalence, Quality of life, Urinary Incontinence, Women

This work was supported by the Ahi Evran University Scientific Research Projects Coordination Unit. Project Number: SYO.E2.16.003

Disclosure of Interest: None Declared

O54

THE DETERMINATION OF THE KNOWLEDGE LEVELS OF WOMEN WHO UNDERGO REGULAR PAP SMEAR TESTS ON HPV INFECTION AND VACCINATION AND THEIR ATTITUDES TOWARDS THE EARLY DIAGNOSIS OF CERVICAL CANCER: A CASE CONTROL STUDY

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Problem Statement: Cervical cancer comes 4th among the most common types of cancer seen in women worldwide, and is a preventable type of cancer. Today, inoculations against some types (for example type 16-18) of the Human Papilloma Virus (HPV), which is one of the reasons for cervical cancer, have been developed. Despite the developed vaccinations currently in use, the rate of knowledge regarding the inoculation was reported to be very low in various studies. Our aim in this study, which we planned as a case control study, is to determine the knowledge levels of women who do and do not undergo regular pap smear tests on HPV infection and vaccination and their attitudes towards the early diagnosis of cervical cancer as well as their health responsibility levels.

Methods: This study was performed with 300 (those who undergo regular pap smear tests: n=150, those who had never underwent a pap smear test n=150) women who presented at the Gynecology Polyclinic of a Women's and Children's diseases Training and Research Hospital located in the Anatolian side of the city of Istanbul. In data collection an introductory Information Form, the HPV Knowledge Scale, The Scale of Attitudes Towards Early Diagnosis of Cervical Cancer and Healthy Lifestyle Behaviors Scale II-Health Responsibility Subscale were used. In the statistical analysis of the data obtained from the study, percentages, mean values, chi squared, the T test for independent groups, and the Mann Whitney U test were used. **Results:** When the socio demographic characteristics of the participants were examined, it was found that the average age was 40.27 ±6.38 in the study group and 41.29±6.95 in the control group, that the majority of both groups were married (respectively %89.3, %90.3), elementary school graduate (respectively %82.6, %79.3), unemployed (respectively %88.0, %68.0), non smokers (respectively %68.7, %70), and had health insurance (respectively % 76.7, %78.7). It was found that 38% of the women who underwent regular pap smear tests and 56.0% of the women who didn't undergo pap smear tests would want to vaccination their daughters against HPV, and the difference between the groups was significant (p>0.002). When the knowledge levels of women who do and do not undergo regular pap smear tests on HPV infection and vaccination were compared, no statistically significant difference was found (p>0.05). When the perceived seriousness, susceptibility, benefits, barriers, and scale total scores regarding the early diagnosis of cervical cancer were compared between groups for women who do and do not undergo regular pap smear tests, an advanced significant difference was found (p<0.05). **Conclusions:** Even though having regular pap smear tests did not affect knowledge levels on HPV infection and vaccination, it was found to increase health responsibility in women and help develop positive attitudes regarding the early diagnosis of cervical cancer.

Disclosure of Interest: None Declared

O55

KNOWLEDGE OF MIDWIFERY STUDENTS IN CENTRAL OF TURKEY ABOUT HPV INFECTION AND VACCINE

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Problem Statement: Human Papilloma Virus (HPV) is the most common sexually transmitted infection that is highly related to cervical cancer. Cervical cancer is the eighth most common cancer in Turkey. The production of a vaccine was provided for HPV infection because it becomes an important public health problem. In order to determine the incidence of people vaccinated, midwives have the great responsibility following doctors. Midwifery students are essential by profession because of explaining and being accepted by the community of the HPV infection and its vaccine. There is not enough study in Turkey for the knowledge and the attitude of midwifery students about HPV infection and the vaccine. In this study, we

aimed to evaluate the knowledge and the attitude of students about HPV infection and its vaccine. Methods: In this descriptive type of research, the students in Ahi Evran University, the department of midwifery (n=196) were involved. 156 (%81,3) students were included for the study. The survey designed from literature was composed of 33 questions. These questions in the survey consist of sociodemographic information, history of health, the knowledge and attitude about HPV infection and its vaccine. The research is convenient to declaration of Helsinki. The first twelve questions of survey about HPV knowledge and prevention consist of choices 'True', 'False' and 'No idea'. The true answer is given 1 point and the other choices are given 0. For the comparison of categorical variables Mann-Whitney U test and Kruskal Wallis test were used. $P < 0.05$ was accepted as significant. Results: The average age of participants was 21.17 ± 2.31 . 3.3% of students are married, 79.1% of students are from middle income class and 60.8% come from Central Anatolia. 5.2% of students have cancer story in their family and 43.8% of students indicate that they go to a gynaecologist in the last one year. The average point of survey according to knowledge about HPV and its vaccine was 4.75 ± 2.64 (rank: 0-10 median:5). When the answers related to knowledge about HPV and its vaccine were analyzed, 9.8% of students received 0 point and 47.1% received 6 points and above. Only 56.0% of students think that HPV vaccine is necessary. In addition, 45.1% of students think that vaccine has side effects. The answers given to the questions for the knowledge about HPV and its vaccine are shown in figure 1. 49.7% of students indicate that HPV vaccine is protective against cervical cancer and 62.7% indicate that HPV causes cervical cancer. When the average points of questions about HPV and its vaccine are analyzed, the average of the students in their first year is lower than the average of others. The difference of average between the students from different classes is statistically significant ($p=0,031$). The students who are going to gynaecologist have higher average point of questions about HPV and its vaccine and this result is statistically significant from students who are not ($p=0.002$). Conclusions: As a result, the knowledge of midwifery students about HPV and its vaccine is intermediate level. Further studies might be required in order to increase the knowledge of midwifery students. Finally, it seems that the midwifery students who have an important profession to give information about HPV and its vaccine to the society are needed to be comprehensively informed. Project Number: AEU TIP.E2.16.014

Disclosure of Interest: None Declared

O56

CLINICAL PERFORMANCE OF HPV16/18 GENOTYPING, REFLEX CYTOLOGY AND P16/KI-67 DUAL-STAINED CYTOLOGY TO TRIAGE OF HRHPV+ WOMEN: PILOT NESTED IN THE SCOTTISH PAVDAG STUDY

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Problem Statement: It has been demonstrated that screening for high-risk Human Papillomavirus (hrHPV) is more effective in reducing the burden of high grade cervical intraepithelial neoplasia (CIN2 and CIN3) and cervical cancer (CC) than cytology. However, all hrHPV positive (hrHPV+) women have to undergo further triage in order to reduce unnecessary intervention. The objective of this study was to examine clinical performance of HPV16/18 genotyping, reflex liquid based cytology (LBC) and p16/Ki-67 dual-stained cytology (CINtec PLUS) to triage of hrHPV+ women for detection of cervical intraepithelial neoplasia grade 2 or worse (CIN2+) in a Scottish population. Methods: HPV16/18 genotyping, liquid based cytology (LBC) and CINtec PLUS were performed using LBC samples of 61 women with CIN2+ and 279 controls (\leq CIN1). Results: Absolute sensitivities of HPV 16/18 typing, LBC at \geq borderline and CINtec PLUS for the detection of CIN2+ were 61.7% (95% CI, 48.2-73.9), 68.3% (95% CI, 55.0- 79.7) and 85.0% (95% CI, 73.4-92.9). Respective specificities were 70.5% (95% CI, 64.6-76.0), 89.1% (95% CI, 84.7-92.7) and 76.7% (71.1-81.8%). Table 1. All three individual triage options, if positive, exceed the threshold of 20% risk at which colposcopy would be indicated. However, none of the individual triage options conferred a post-

test risk probability for CIN2+ of less than $<2\%$; which would permit routine recall. Those who tested sequentially negative for HPV 16/18, prior to CINtec PLUS had a post test probability of CIN2+ of 1.7%. This was further decreased in all three triage co-tests negative women to 0.6%. The performance of the triage strategies was similar in hrHPV+ women identified using LBC sample and those tested hrHPV+ in self-collected vaginal samples. Conclusions: No individual (one test) triage had the capacity to safely return women to routine recall if test negative while various combinations of triage co-testing satisfied these criteria. The number of colposcopies required to detect a case of CIN2+ (NNR) increased from 3.4 using triage with HPV 16/18 and CINtec PLUS to 3.5 using the most optimal triage with all tree co-tests. The NNR is expected to reduce significantly when Scotland increases the age of starting cervical screening to 25 years and increasing number of HPV vaccinated women will enter the screening. This is one of the few studies to directly compare the performance of putative triage strategies of Hr-HPV+ women using cytology, CINtec PLUS and HPV 16/18 typing (in isolation and in combination).

Disclosure of Interest: None Declared

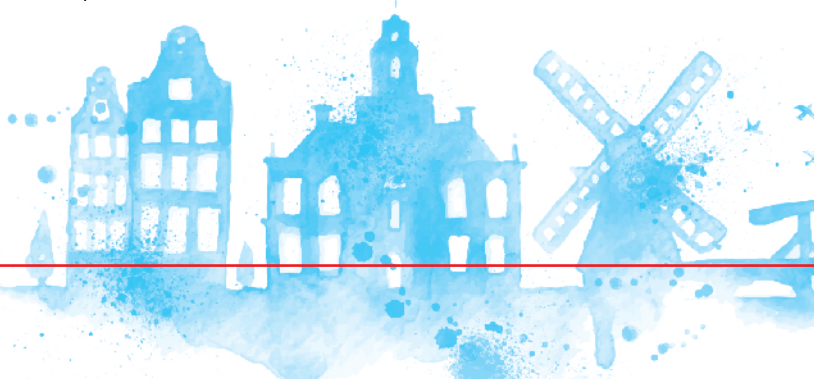
O57

NEW THERAPEUTIC METHOD AND TREATMENT FOR HIV POSITIVE PATIENTS OF BOTH SEXES WITH SEVERE FORMS OF GENITAL WARTS WITH VAGINAL AND ANAL LOCALIZATION - RADIO WAVE THERAPY IS BLOODLESS TECHNIQUE WHICH PREVENTS PROFESSIONAL EXPOSURE Igor Jeremic*

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Problem Statement: HPV infection is the epidemic of modern times. High occurrence of HPV infection as well as genital warts is greatly influenced by a very easy way of infection transmission. It takes only one unprotected sex intercourse (without a condom) and the infection is transferred. With immune compromised patients and patients on immune suppressive therapy (chemotherapy and corticosteroids) incubation period is extremely short. It takes only 45 days for the severe clinical forms of genital warts to appear. Mixed HPV infections (70% of the low and high-risk types) coupled with weak immune system impose additional responsibility to the doctors in therapeutic approach.

Methods: The study includes 100 patients of both sexes between 15 and 50 years of age, HIV and HBs Ag positive patients, patients on immune suppressive and chemo therapy, with medium and severe forms of genital warts on all parts anogenital region, with stress on the cervix, vagina, anus and intraanal localization. Everything above represents a big therapeutic challenge because of the following facts: 1. The sensitivity of anogenital region on forced trauma 2. Inaccessible area for intervention – intra-anal, vaginal or cervical warts.3. High vascularization-vagina-cervix-hemorrhoids' ranges. 4. Receptivity to infection - bacterial flora (vagina and colon) 5. Weak immune status. 6. The risk of professional exposure. Results: During 12 years of my work with 4MHZ radio wave therapy, I developed my own special technique so called radio wave vaporization. My technique involves melting of genital warts on the mucous membranes of anogenital region which as a result has a completely bloodless operating field and the accuracy in complete elimination of all forms of genital warts in just one treatment. With the exception of only 20% of patients, when we are dealing with really heavy forms of infections and in Buschke Loewenstein form, it takes two interventions. The intervention is performed in local anesthesia (cream). The duration of the intervention is 5 min to 30 minutes. Patients need not be hospitalized. Thanks to the new technique and specially designed extensions the lateral damage to healthy tissue is less than 10 microns. Minimum lateral damage and minimal bleeding do not affect local immunity, which represents the therapeutic key to a quick recovery without accompanying bacterial infections that often follow with HIV infected patients, with recidives percentage below 3%. Conclusions: My new technique and approach using 4MHZ radio wave frequencies system make it a very efficient, safe, painless and bloodless method with a maximum therapeutic and esthetic effect. It has the lowest so far known recurrence



rates (below 3%) in severe forms of genital warts and with patients with poor immune status. The ease of performing intervention in local anesthesia (cream) makes it the therapy of first choice to protect doctors from a professional exposure to HIV and hepatitis. Returning to everyday life activities including sexual activity regardless of clinical severity is possible after 5 weeks of intervention.

Disclosure of Interest: None Declared

O58

LONG-TERM PROBIOTIC ADMINISTRATION TO RE-ESTABLISH PHYSIOLOGIC VAGINAL ECOSYSTEM: A REAL TEAM-MATE AGAINST HPV-INFECTION

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Problem Statement: An ever-increasing interest has developed in microbiota, with the belief that probiotics could be able to promote women's well-being and illnesses in several ways. Commonly, human vaginal microbiota is lactobacilli-dominated but if not other microorganisms may grow reducing anti-bacterial defence mechanisms, promoting disorders such as bacterial vaginosis and yeast vaginitis, and then endorsing the occurrence of sexually transmitted diseases. This event might be the result of a transitional process, beginning by compromising the physiological vaginal eubiosis, increasing lactobacilli-mediated cytolysis and then reaching the stage of pathobiosis, when the vaginal ecosystem start to be defenceless and so vulnerable to a huge variety of infections. The aim of our study was to confirm that *Lactobacillus rhamnosus* BMX54 long-lasting implementation in women with dysbiosis and concomitant HPV-infections might be able to have an advantageous effect on viral infection control by re-establishing the natural balanced ecosystem. **Methods:** This is a pilot study, performed between February 2012 and December 2015 at Department of Gynecological Obstetrics and Urologic Sciences, "Sapienza" University of Rome. A total of 117 patients with BV/vaginitis and associated HPV-infection documented as PAP-smear abnormalities (ASCUS, L-SIL or H-SIL histologically demonstrated as CIN1) and/or positive HPV-DNA were included in the study. Patients were consecutively randomized in two groups, standard treatment plus short-term lactobacilli implementation (group 1, n=60) vs standard treatment plus long-lasting probiotic treatment (group 2, n=57). Standard initial treatment for bacterial or yeast infections was metronidazole 500 mg (orally twice a day for 7 days) or fluconazole 150 mg (orally once a day for two consecutive days), respectively. Probiotic implementation (vaginal tablets) was performed following this schedule: once a day for the first 10 days, once every 3 days for a month and then once every 5 days for another month in all patients. Then, patients belonging to long-term treatment arm (group 2) continued using probiotic vaginal tablets once a week for a 6-month period. All patients followed a strict follow-up (every 3 months) including, when indicated, PAP-smear, bacterioscopic exam and colposcopy check. HPV-DNA test was repeated at the end of the study period. **Results:** After a mean follow up of 15.6 months (range 9.6-24), probiotic long-term users demonstrated a chance twice higher to solve HPV-related cytological anomalies (71.9% vs 36.6%, p=0.04). Moreover, a total HPV-clearance was shown in 13.3% of control patients comparing with a percentage of 33.3% in probiotic users (p=0.05), assessed as negative HPV-DNA test documented at the end of the study period (Figure 1a and 1b). **Conclusions:** In this study, we used cytological and viral endpoints to evaluate a potential effect of probiotic long-term implementation in solving cervical abnormalities, through the re-creation of the physiological vaginal balance (eubiosis). The consistent percentage of clearance of PAP-smear abnormalities obtained in probiotic users was incredibly high and encouraging. Obviously, larger and randomized studies are warranted to confirm these boosting results, but we believe that eubiosis re-establishment is the key to tackle effectively even HPV-infection.

O59

INNOVATIVE DIAGNOSTIC PANEL FOR SEROUS TUBAL INTRAEPITHELIAL CARCINOMA DETECTION

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Problem Statement: Currently, the main source of origin for ovarian high-grade serous carcinoma (HG-SC) considered is to be a serous tubal intraepithelial carcinoma (STIC). Traditionally for the diagnosis of STIC ICH-markers p53 and Ki-67 in the epithelium of the fallopian tube are used. However, in some cases the application of these markers is not effective (border values of Ki-67 expression, moderate expression or negative expression of p53). Thus, the purpose of our study was to investigate the expression of p16, stathmin and laminin-gamma1 as additional markers. **Methods:** The study included 70 patients with HG-SC (125 fallopian tubes). The epithelium of the fallopian tubes was assessed morphologically, immunohistochemically (p53, Ki-67, p16, stathmin, laminin-gamma1). Statistical analysis was performed using Fisher's exact test and χ^2 test.

Results: The normal epithelium demonstrated wild-type p53 expression, the index of proliferative activity was low (<5%). stathmin expression was negative, and laminin-gamma1 showed weak expression in basal cell divisions, p16 is expressed in individual cells either secretory or ciliated. Of the 40 identified STIC p53-positive were 77%, p53-negative -23%. The expression of Ki-67 ranged from 10 to 60% in STIC. The positive expression of p16 was observed in 34 STIC (85%), the positive expression of stathmin was detected in 31 STIC (77.5%); positive expression of Laminin-gamma1 was typical for 36 STIC (90%). There was no evidence STIC, in which all three would be more negative marker. **Conclusions:** In the present study, we have demonstrated high expression of p16, stathmin and laminin-gamma1 in STIC both in p53-positive and p53-negative expression in atypical cells of the lesion. In all cases, at least two markers from the proposed panel showed positive staining, which allows to recommend its use in case of borderline or negative expression of p53 and Ki-67.

Disclosure of Interest: None Declared

O60

SQUAMOUS CELL CARCINOMA OF THE CERVIX, A RETROSPECTIVE STUDY OF 5 YEARS

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Problem Statement: The aim was to review all cases of squamous cell carcinoma of the cervix diagnosed and treated at Centro Hospitalar do Algarve, Portimão's Unit in the past 5 years. **Methods:** We collected information of all cases of squamous cell carcinoma of the cervix from 2011 to 2015, based on medical records. We evaluated risk factors (age, increasing number of sexual partners, younger age at first intercourse, increasing parity), reason for reference, means of diagnosis, stage and treatment of all cases, as well as the overall survival rate. We analysed the data with SPSS Software. **Results:** There were 40 cases of squamous cell carcinoma of the cervix diagnosed at our unit from 2011 to 2015. Median age was 53 years old (minimum 31, maximum 81). Most cases manifested by abnormal cervical smear and were referenced to our unit from a primary health care unit. Second reason for investigation was abnormal vaginal bleeding diagnosed in the emergency department. Diagnosis was obtained mostly by cervical biopsy. Clinical stage at diagnosis was: 13 cases for stage I (32.5%), 18 Cases for stage II (45%), 2 cases for III stage (5%) and 7 cases for stage IV (17.5%) of the FIGO classification. 35% underwent surgical

procedure, 3 of those cases treated with conservative surgery. Chemotherapy and/or radiation therapy was used in 72,5% of cases. Median follow up time was 16 months (minimum 1, maximum 58). Median survival time was 51 months for stage II, 13,5 months for stage III and 5,25 month for stage IV. There were no casualties for stage I. We had one case of successful pregnancy after conservative management of stage I squamous carcinoma. Conclusions: Squamous cell carcinoma is the most frequent cervical cancer with good prognosis if diagnosed in early stage. The main factors for improved survival were early diagnosis and timely treatment.

Disclosure of Interest: None Declared

O61

BREAST AND GYNECOLOGIC CANCER SCREENING BY ULTRASOUND - HAS THIS BECOME AN OPTION FOR POPULATIONS WITH LIMITED RESOURCES? Annina Wilkes*

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Problem Statement: The incidence and mortality rate of breast and cervical cancer has declined in the United States and Western Europe as a result of effective screening with Mammography and Pap tests. A majority of the global burden occurs in countries with limited resources. For these populations, the cost and infrastructure required to maintain successful screening programs is prohibitive. As affordability and accessibility improves, the use of diagnostic ultrasound is increasing in rural and underdeveloped parts of the world with women already benefitting from the obstetrical scanning utilized. There is now evidence of life saving benefits of screening for breast cancer with ultrasound. There is potential for the benefit of ultrasound screening and treatment monitoring for cancer of the uterus, ovaries and cervix as early or localized cancers can be well visualized on routine pelvic ultrasound. This research evaluates the current status and potential for ultrasound screening for breast and gynecologic cancers as it would benefit populations with limited resources.

Methods: A systematic review of the current status of ultrasound screening for breast, cervical, uterine and ovarian cancer from peer-reviewed literature was performed. This review was correlated with case reports of early diagnosis of breast, cervical, endometrial and ovarian cancer from Thomas Jefferson University Hospital and teaching experience as an International Visiting Professor in Africa and Central America with the Radiologic Society of North America. **Results:** The death rates from breast and cervical cancer are increasing in countries with limited resources. Mammography is the gold standard for breast cancer screening with proven reduction in mortality in populations who are regularly screened. PAP and HPV testing for cervical cancer has the same proven mortality reduction in populations regularly screened. The implementation of screening programs in countries with limited resources is an ongoing work in progress, the initiation and maintenance limited by financial, infrastructural and political constraints. Breast cancer screening with ultrasound, as it has become increasingly performed and studied has been shown to diagnose early as well as invasive cancers that are small, node negative and require less extensive treatment. There is no currently accepted ultrasound screening protocol for cervical, uterine and ovarian cancer. Yet, cancer in these organs is well demonstrated by ultrasound and can be diagnosed in early stages. The use, quality and application of ultrasound in countries with limited resources has increased in the past decade as the equipment has become less expensive, more portable, and more available. The best chance to improve cancer outcomes in these countries in the short and even long term is through interventions that are realistic, practical and cost-effective. **Conclusions:** The expanded use of an existing, well accepted modality for the development of an ultrasound screening program for breast and gynecologic cancers in countries with limited resources is not only based on practical considerations but on the ability of ultrasound to detect these cancers at an early stage. There is proven increase in survival rates from early diagnosis of these cancers in countries with limited resources.

Disclosure of Interest: None Declared

O62

AN ANALYSIS OF GYNECOLOGIC ONCOLOGY PATIENTS' AND THEIR MIDWIVES'/NURSES' PERCEPTION OF INDIVIDUALIZED CARE

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Problem Statement: This descriptive study was conducted to analyze gynecologic oncology patients' and midwives'/nurses' perception of and satisfaction with individualized care. **Methods:** The study was performed between June 1,2015 and September 30, 2015 at a university hospital and at a training and research hospital in Ankara, Turkey. The study sample included 152 patients who received inpatient treatment at the selected hospitals' gynecologic oncology clinics, and 18 nurses and 11 midwives working at these clinics. The number of the participating patients was determined using one-sample t-test power analysis. The study data were collected using a Socio-Demographic Characteristics Information form for midwives/nurses, the Individualized Care Scale, the Individualized Care Scale-Nurse, the Satisfaction with Nursing Care Scale and the Minnesota Job Satisfaction Questionnaire. The data were analyzed using Independent Samples t Test, the Mann-Whitney U test, ANOVA and the Kruskal-Wallis H tests. The Kolmogorov-Smirnov and Shapiro-Wilk tests were used to determine whether the distribution of the parameters was normal. **Results:** The study results indicated that midwives and nurses supported the patients' individuality at a moderate level (3.07±0.97) according to patients' perceptions. The patients felt that individualization of the care provided by midwives/nurses was at a low level (2.33). Their perception of individualized care by midwives/nurses rises as their perception of nurses/midwives supporting their individuality rises (r=0.736, p=0.001). The patients' satisfaction with care was at a moderate level (63,16±14,97). The patients' had a low perception of the nurses'/midwives' support for their individuality in care practices (1.65) and individualization of patient care (1.61). It was found that midwives/nurses provided patient care in a more individualized way when they increased their support of the patients' individuality in care practices (r=0.828, p=0.001). The midwives/nurses perception of providing support for patient individuality and the individualization of their care was lower than perception of the midwives/nurses support for patients' individuality and the individualization of their care. The study evaluated the midwives'/nurses' job satisfaction and found that they obtained high scores in general satisfaction (3.08), intrinsic job satisfaction (3.41). However, their extrinsic satisfaction scores were low (2.58).

Conclusions: The study's findings show that this study's collective evaluation of the patients and nurses regarding individualized care will contribute to the improvement of individualized clinical nursing care, the creation of individualized care protocols and increasing the awareness of gynecologic oncology care providers regarding the importance of individualized care.

Disclosure of Interest: None Declared

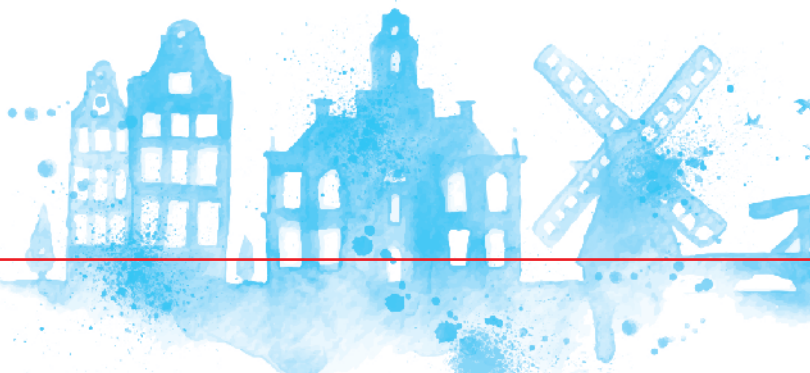
O63

SINGLE-PORT LAPAROSCOPIC SURGERY FOR MANAGEMENT OF SALPINGO-OVARIAN PATHOLOGY: A SINGLE-CENTER EXPERIENCE FROM SAUDI ARABIA

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Problem Statement: Minimally invasive surgery is promptly surfacing as the standard of care for management of various benign/malignant adnexal pathologies. However, there are inadequate data and few concrete deductions on the utility of single-port laparoscopic surgery (SPLS) in gynecologic procedures. In a recent systematic review of all SPLS-related articles, only about 9% of all reviewed articles were related to gynecologic procedures. The objective of our descriptive study was to review our single-center experience of SPLS for management of salpingo-ovarian pathologies. **Methods:** From January-2012 to February-2016, all gynecologic patients



who underwent SPLS procedures for adnexal pathologies were identified. Patients' details and SPLS feasibility, safety and surgical outcomes were retrospectively reviewed and analyzed. SPLS was done using a single multi-port trocar and standard laparoscopic instruments. Results: Sixty-five (n=56) patients underwent SPLS interventions. The median age and body mass index (BMI) were 37 years (range: 15-88) and 28 kg/m² (range: 19-44), respectively. Fifteen (27%) and twenty-one (38%) patients had ≥ 1 previous abdominopelvic surgeries and ≥ 1 co-morbidity, respectively. Sixty-nine (n=69) SPLS procedures were performed. The three most common procedures were unilateral ovarian oophorectomy (n=28/69; 41%), unilateral ovarian cystectomy (n=21/69; 30%), and adhesiolysis (n=5/69; 7%). No patient required addition of extra ports or conversion to conventional multi-port laparoscopy; however, 6 patients (11%) required conversion laparotomy. The median operative time, estimated blood loss and hospital stay were 74 min (range: 40-200), 10 mL (range: 20-2000) and 1 day (range: 1-4), respectively. No patient experienced major intraoperative or postoperative complications at 6 months postoperatively; however, one patient (2%) developed umbilical hernia at 7-month postoperatively. The median postoperative pain grade using the Wong-Baker FACES pain rating grade was 2 (range: 0-6). At six-weeks postoperatively, the median wound scar length (measured at outpatient clinic) was 1.6 cm. Almost all patients (95%), were subjectively satisfied with cosmetic outcomes. Conclusions: SPLS for management of salpingo-ovarian pathologies is largely feasible, potentially safe, and correlated with acceptable operative and postoperative outcomes. Future study includes comparison between conventional SPLS and robotic-assisted SPLS for management of salpingo-ovarian pathologies.

Disclosure of Interest: None Declared

O64

DEVELOPING CLINICAL RULES TO PREDICT URINARY TRACT INFECTION IN ANTENATAL CARE SETTINGS. AN ECONOMIC ANALYSIS OF AN OBSERVATIONAL COHORT STUDY

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Problem Statement: Culture and Sensitivity of Midstream urine specimen for suspected urinary tract infection based on protein in urine on near patient test (dipsticks) is one of the most common clinical test in the antenatal care settings.

Systematic reviews of many adequately powered studies that assess independent predictors of laboratory diagnosis, clearly states that proteinuria is not a predictor of UTI. It is well known that Glomerular Filtration Rate increases in pregnancy to about 50% more than normal level as early as the end of First Trimester. This increase in GFR in pregnancy has important clinical consequences. This contributes to glucosuria, proteinuria and enhanced urinary excretion of water soluble vitamins in normal pregnancy. The other factors that contribute to the proteinuria are pore size, tubular reabsorption rates and number of fixed charges in the glomerular filtration barrier which are altered in pregnancy. Urinary protein and albumin excretion increases during pregnancy, with an upper limit of 300 mg of proteinuria and 30 mg of albuminuria in a 24 - hour period. AIM: We conducted a validation study to see the number of culture positive Mid stream urine tests based on Proteinuria on dipstick as a predictor of infection on our asymptomatic antenatal patients, to estimate the cost effectiveness and to develop clinical decision rules. Methods: It is an Observational retrospective cohort study of 485 consecutive patients from Ysbyty Glan Clwyd who delivered between January 2015 and September 2015 was performed. Data was collected from the Labour ward diary and Welsh clinical portal (Hospital computerised result system). The data was assessed against the European Urine analysis guidelines. Results: Mid stream urine culture was negative in patients who had proteinuria and therefore Urinary Tract Infection was ruled out. Only Nitrite, Leucocyte Esterase and Blood on dipstick independently predicted the diagnosis of UTI. Out of

485 patients, 221 patients, (about 45.5%) had Mid stream urine cultured for asymptomatic proteinuria more than once in their pregnancy. Therefore, a total of 380 unnecessary midstream urine culture tests were done on 221 out of 485 patients. 3 specimens showed mixed growth suggesting contamination which were followed by negative test. The total cost of one MSU including the dipstick is estimated to be £32.00. The cost includes the time taken by all staff involved. Therefore, avoiding unnecessary MSU could save thousands of pounds and avoid unnecessary anxiety in the mothers. Conclusions: Proteinuria in pregnancy in asymptomatic women is not due to UTI. Therefore, avoiding unnecessary MSU for culture and sensitivity could save thousands of pounds and would also avoid unnecessary anxiety in the pregnant mothers.

Disclosure of Interest: None Declared

O65

PREVALENCE AND RISK FACTORS FOR DOMESTIC VIOLENCE AGAINST INFERTILE WOMEN IN A TURKISH SETTING

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Problem Statement: It is known that prevalence of infertility in Turkey is about 10-15% and this rate has increased up to 30% in recent years. Especially in certain countries where being a mother increases status of woman, women without children are treated as second class human and confront different dimensions of violence such as physical, psychological, economic. The aim of the study was to estimate the prevalence and risk factors for domestic violence among women seeking infertility treatment at an IVF center. Methods: This cross-sectional study was conducted with 423 infertile women who referred to the IVF Center in Antalya, Turkey between 1 January and 31 July 2016. The women were interviewed without their male partners by using the questionnaire and Infertile Women's Exposure to Violence Determination Scale. While the lowest score to be obtained from the overall scale is 31, the highest score is 155. High total score indicates presence of domestic violence against infertile women. The data were analyzed using SPSS software, version 16.0. Results: It was determined that 46.6% of the women were 35 years old and older, 32.2% were university graduate, and 33.8% were housewife. The women were found to be married for 7.96 \pm 3.83 years and to be infertile for 7.13 \pm 3.51 and 83.5% were primary infertile. Mean score obtained by the women from the Infertile Women's Exposure to Violence Determination Scale was 120.04 \pm 12.69. 95.5% of the women stated that they were exposed to physical violence, 92% to sexual violence, 94.8% to emotional violence, and 94.6% to economic violence. 83.7% of those who were exposed to physical violence expressed that they were slapped or thrown something, 83.9% of those exposed to sexual violence were forced for sexual intercourse, 87.2% of those who were exposed to emotional violence were affronted or subjected to swear, and 88.4% of those exposed to economic violence were prevented to work or forced to quit their job. 95.5% of the women stated that they were exposed to acts of violence by their spouses, 85.6% were exposed to violence because they were infertile, and 96.5% were injured as a result of violence. 53.2% specified that they did not ask for help in case of violence, and 38.3% of those, who did not ask for help, stated they did not ask for help because they did not want their family to be broken. The difference between mean scores of the Infertile Women's Exposure to Violence Determination Scale and women's age, residence place, educational level, profession, their spouses' age, educational level, and profession, income level of family, type of infertility, woman's request for help, and receiving psychological support was determined to be statistically significant (p<0.05). Conclusions: According to mean scores of the Infertile Women's Exposure to Violence Determination Scale and self-expressions of the women, it was determined that the women were exposed to high prevalence of violence, but nevertheless most of them did not mention anyone about this and did not ask for help. The women, who were 35 years old and older, lived in the city center, were employee and whose spouses were employee, had low

educational level and whose spouses had low educational level, had low income, were primary infertile, asked for help in case of violence, and received psychological support, were determined to be exposed to violence more than other women.

Disclosure of Interest: None Declared

O66

IDENTIFICATION OF THE ROLE, ATTITUDES AND PERCEPTIONS TOWARDS GENDER OF MIDWIFERY STUDENTS AT A COLLEGE IN TURKEY

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Problem Statement: Healthcare personnel have great responsibilities influencing the society into the gender roles by equally formalizing the judgments and attitudes towards gender. The present study was conducted to identify the role, attitudes and perceptions towards gender of midwifery students at a college in Turkey. **Methods:** The population of the descriptive study consists of 78 freshman and senior students who study at the Ahi Evran University Health College. To reach the population without selecting participants was aimed. A form for socio-demographic information, Gender Role and Attitude Scale (GRAS) designed by Zeyneloğlu (2008) and Gender Perception Scale (GPS) designed by Altinova and Duyan (2013) were used as the data collection tool. With 38 items in the GAS and 25 items in the GPS, high score implied a more equal attitude and high perception. The Cronbach alpha coefficient for GRAS is 0.65 and for GPS it is 0.46. The data was analyzed using the mean, standard deviation, median, percentage, one-way ANOVA, Mann Whitney U. Kruskal Wallis tests in the computer environment. In the study, significance was accepted as $p < 0.05$. **Results:** The participants' mean of age is 20.90 ± 2.29 . 51.3% of the participants were born in the center of the province and the place stayed the longest of 44.9% was again the center of the province. 82.1% live in a nuclear family. 25.6% of the mothers and 48.7% of the fathers of the participants received a secondary or above education. The mean score of the Gender Role and Attitude Scale (GRAS) is 103.78 ± 11.85 . A significance was found between the place of longest stay and the GRAS score ($p < 0.05$). It can be concluded that those living in the province center have a less equal attitude due to their lower GRAS score ($=99.54$). However, no significance has been found between the birthplace, family type, level of education of mother and father and the GRAS score ($p > 0.05$). The median of the Gender Perception Scale (GPS) is 71.0 (min:42-max:85). Significance was found between the birthplace, place of longest stay, family type and level of education of father, and the GPS score ($p < 0.05$). According to this, gender perceptions of student who were born in the center of province (mean rank = 34.08), whose place of longest stay is the center of province (mean rank = 30.70), who have a nuclear family (mean = 36.31) and whose father's level of education is high school (mean rank = 35.7) is lower. However, there is no significance between the education level of mothers and GPS score ($p > 0.05$). **Conclusions:** As a result, it can be stated that the students have an overall equal attitude and a moderate level of gender perception. Students who place of longest stay is the center of province have both a less equal attitude and weaker perception. Furthermore, family type and the education level of the father has an influence on gender perception.

Keywords: Gender role, Midwifery, Students

Disclosure of Interest: None Declared

O67

TREATMENT CONTINUATION AND SATISFACTION IN WOMEN USING COMBINED ORAL CONTRACEPTION WITH NOMEGESTROL ACETATE AND 17 β -ESTRADIOL: A MULTICENTER, PROSPECTIVE COHORT STUDY (BOLERO) Angelo Cagnacci¹, Manuela Neri², Chiara Benedetto³, Luana Calanni⁴, Michele Vignali⁵, Vincenzo De Leo⁶, Giuseppe Borrelli⁷

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Problem Statement: The real-world experience of women receiving norgestrol acetate (NOMAC)/17 β -estradiol (E2), the first monophasic 24/4 combined oral contraception (COC) to use 17 β -estradiol, structurally identical to endogenous 17 β -estradiol, is not known. The current study assessed treatment continuation and satisfaction of women prescribed NOMAC/E2 for contraception during routine clinical practice. **Methods:** This observational, non-interventional, prospective, multicenter cohort study was conducted in 17 centers in Italy. Eligible patients were premenopausal women 18-50 years old who received NOMAC/E2 (Zoely®, Teva Italia, Milan, Italy) for contraception. The primary efficacy outcome was the number of treatment cycles completed through 12 months. Secondary outcomes included menstrual cycle-related symptoms (5-point scale from absent to serious for 5 symptoms), libido level (5-point scale from very poor to very satisfactory), and treatment-related satisfaction (7-point scale from very unsatisfactory to very satisfactory). Safety was examined through report of adverse events (AEs). Data collection occurred at baseline, 3 months, 6 months, and 12 months. Treatment continuation was examined using Kaplan-Meier survival analysis. Secondary outcome analyses used general linear models for repeated measures, one-sample Wilcoxon signed rank test, and the Friedman test. **Results:** A total of 298 women (mean age, 29.2 ± 7.4 years; mean body mass index, 21.5 ± 3.1 kg/m²) were enrolled. Previous contraception (80.5% of women) included COC (56.7%), barrier contraception (35.9%), and natural methods (10.7%). The mean number of NOMAC/E2 treatment days was 303.2 ± 110.3 (median=361 days). The probability of treatment continuation through 12 months was 79.7% (95% confidence interval 73.8-84.4). Women reported significant improvement in menstrual cycle-related symptoms ($P < 0.0001$), libido level ($P = 0.03$), and treatment-related satisfaction ($P < 0.0001$) over 12 months. Menstrual cycle-related symptoms declined from a mean of 6.2 ± 4.4 at baseline to 2.9 ± 3.0 at 12 months. Most women reported their libido was either improved (24% to 28% of women at each time point) or unchanged (56% to 59% of women at each time point) during treatment. The majority of women (52% to 59%) reported improved treatment satisfaction at each time point. Treatment-related AEs were reported by 37.9% (113/298) of women. Two serious AEs were reported; 1 considered unrelated to treatment and 1 pregnancy. **Conclusions:** The real-world experience of women who were prescribed NOMAC/E2 during routine clinical practice indicates very good treatment continuation and high satisfaction through 12 months. Non-contraceptive benefits included significantly improved menstrual cycle-related symptoms and maintained or improved libido.

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O68

POSTPARTUM READMISSIONS IN CENTRO MATERNO-INFANTIL DO NORTE BETWEEN 2014 AND FIRST HALF OF 2016

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Problem Statement: Postpartum period may be defined as the time that goes from delivery until six weeks after it. Hospital stay after delivery usually varies according to type of delivery and complications' occurrence, being usually longer when a caesarean section is performed. In our hospital, Centro Materno-Infantil do Norte (CMIN), vaginal deliveries are applied a forty-eight hours' surveillance in hospital and caesarean sections a seventy-two hours before going home. After that, in our hospital we advise a medical appointment four to six weeks after delivery that can take place with the family doctor if the pregnancy and delivery had no risk factors. Nevertheless, many complications may occur during postpartum period, and they can be divided in two main groups: infectious and non-infectious complications.



Although a rare event, they are important and can be severe enough to motivate a new admission to the hospital. Postpartum readmissions are an important quality indicator of care and its analysis is critical to improve women's healthcare. Bearing that in mind, we aimed to analyze postpartum readmissions in our hospital in order to understand their motives, if they can be avoided and/or our performance improved. Methods: We collected data from all readmissions in thirty days after discharge in CMIN's Puerperium sector between first January 2014 and thirtieth June 2016. We excluded twin pregnancies and postpartum readmissions of deliveries outside our facility. Data collected included mother's information, pregnancy, labor and new-born characteristics as well as readmission motive and treatment performed. Results: In the studied period, ninety-two readmissions were registered which represents in our population an incidence of 1,19%, comparable with results of other studies which estimate an incidence of postpartum readmissions of 1.2 to 3%. From those readmissions, 53% of them were due to infectious causes, namely incisions' infection and endometritis, being the remaining caused by fever without a focus, headache, postpartum hemorrhage or others. In 37% of the readmissions, a caesarean section was performed which is superior to the global caesarean section percentage in our hospital, where they account for around 28% of deliveries. On the other hand, normal vaginal deliveries which account for 51% of global deliveries, only represent 43,5% of readmissions, confirming the bigger risk of postpartum readmission after assisted vaginal deliveries. On readmission, 43% of patients needed a new intervention, being resuture of the abdominal wall or of the episiotomy the most frequent procedures performed. Conclusions: Readmissions in our facility are comparable with others described in literature and it is clear that caesarean sections and assisted vaginal deliveries are more prone to be readmitted when compared with a normal vaginal delivery.

Disclosure of Interest: None Declared

O69

USE OF TRADITIONAL MEDICINE AND HEALTH PRACTICES IN WOMEN'S HEALTH IN SELECTED INDIGENOUS COMMUNITIES IN THE PHILIPPINES

Maria Stephanie Fay S. Cagayan*¹, Isidro Sia², Documentation of Philippine Traditional Knowledge and Practices on Health and Development of Traditional Knowledge Digital Library on Health: Selected Cultural Communities in the Philippines

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Problem Statement: The World Health Organization defines traditional medicine as the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health and the prevention, diagnosis, improvement or treatment of physical and mental illness. In a specific indigenous culture, practices related to health are usually transmitted within individuals, families and communities through oral means. These traditional practices are usually known to scientists only when they are collected and reviewed through anthropological studies. The WHO observed that "inappropriate use of traditional medicines or practices can have deleterious effects" and that "further research is needed to ascertain the efficacy and safety" of several of the practices and medicinal plants used by indigenous people. These conditions were mostly experienced by female community members therefore attention and investigation of the extent to which the plants and practices are being used is needed. Methods: The fieldwork was carried out for several years in several communities in the Philippines. Data gathering was conducted primarily by observation and interviews. Researchers lived among the communities. Key informants, mostly indigenous healers, were assigned by the tribe to the researchers. Videos and photographs were taken with consent of the concerned individuals and communities. In addition, medicinal plants measurements and samples were taken for proper identification. After initial data gathering, the researchers returned to the

community to validate their initial findings and allow the tribe to consider which data they were willing to share. Results: The study was able to identify a total of 350 plants to treat, 36 health conditions for women and 90 female informants in different communities in the Philippines. Among the various illnesses and condition documented, the researchers selected illnesses and condition that affects women's health which included: Pregnancy, menstrual abnormalities, cancer, cysts, labor and delivery.

Conclusions: Like other Asian nations, women's health in the Philippines is still greatly influenced by traditional knowledge and practices. It is believed that, one of the reasons why traditional knowledge and practices are still alive aside from being passed through generations is that most of the plants used in treating certain illness or affliction is readily available from their backyards at no cost. These beliefs and practices should be validated and incorporated in the practice of holistic medicine to benefit the most number of women in the country.

Disclosure of Interest: None Declared

O70

PATIENT SATISFACTION ON NURSING CARE: THE CASE OF GYNECOLOGY AND OBSTETRICS CLINICS

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Problem Statement: Patient satisfaction is the most important indicator for the quality of nursing services and nursing care. Identification of patients' satisfaction on nursing care is important in order to evaluate nursing care provided for the patients and to improve the quality. This study aims to identify satisfaction levels of patients who stay in gynecology and obstetrics clinics of hospitals that provide health services at various statuses. Methods: Population of the descriptive and cross-sectional study consists of 3871 patients that stayed in Gynecology and Obstetrics Clinics of four hospitals in Adana/Turkey (Hospital A: 570, Hospital B: 554, Hospital C: 2342, Hospital D: 405) within a month. Sample consists of 420 patients: 10% of the patients that stayed in the hospitals that are included in the study (Hospital A: 60, Hospital B: 60, Hospital C: 250, Hospital D: 50) within a month. Patients who stayed in the hospital at least for a night, were in the process of being discharged, were over 18 years-old, literate, whose state of health was not problematic for the study, who were conscious and willing to participate were included in the study. Confirmation of the ethics committee, permission of the hospital administrations and oral informed consent of the patients were collected for the study. The data were collected via "Patient Socio-demographics Form" and "Newcastle Nursing Care Satisfaction Scale" with face to face interview method. The data were analyzed on IBM 20.0 program through number, percentage, average, t-test and One-Way ANOVA. Results: The participants were all women and they stayed in Gynecology and Obstetrics Clinics of the hospitals included in the study. The average age of the participants was 30.34±8.910 (18-72 years), average time for staying in hospital was 2.67±8.927 (1-20 times) and average length of hospital stay was 2.90±4.235 (1-48 days). 97.92% were married, 52.2% were primary school graduates, 75.5% had middle level income, 32.6% had their first hospital stay and 49.0% stayed in the hospital for two days. The satisfaction level of the participants on nursing care based on the hospitals were as follows: Hospital A 70.68±15.515 (21-100), Hospital B 70.65±15.179 (40-100), Hospital C 65.41±16.480 (21-99), Hospital D 71.39±14.669 (40-100), and in total 67.2 ±16.132 (21-100). There were statistically significant relations between satisfaction levels of participants on nursing satisfaction based on the hospital, marital status, age, income level and length of hospital stay. Conclusions: Satisfaction levels of the participants regarding nursing care were above average. While the satisfaction levels were close to each other based on hospitals, the satisfaction levels for the private hospital, research hospital, teaching hospital and university hospital were higher than that of public hospital.

Disclosure of Interest: None Declared

O71

LONG-TERM RISK OF SURGERY FOR SMALL BOWEL OBSTRUCTION AFTER CESAREAN DELIVERY: A DANISH NATIONWIDE COHORT STUDY 1978-2010

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Problem Statement: More than 18 million caesarean deliveries (CD) are performed worldwide each year, and the number is increasing. Evidence is sparse on maternal long-term consequences of CD that are not related to pregnancy and delivery. Only a few studies estimated the burden of CD on adhesion development, and no studies have investigated the association between CD and the risk of having surgery for bowel obstruction. **Methods:** A cohort study based on nationwide registries. Women with a first-time delivery in Denmark during 1978-2010 were followed from first vaginal delivery (VD), first cesarean delivery (CD1), or second cesarean delivery (CD2+) until surgery for small bowel obstruction, death/emigration, 31 Dec 2010, or 25 years, whichever came first. We computed 25-year cumulative incidence of surgery for small bowel obstruction with corresponding 95 % confidence interval (CI) using the Kaplan-Meier method. We used Cox-regression analysis to compute hazard ratios (HR) as an estimate of the relative risk of surgery for small bowel obstruction stratified according to mode of delivery (VD, CD1, or CD2), adjusting for maternal age at delivery, Charlson comorbidity index, and previous intraabdominal surgery. **Results:** Among 790,351 women with VD, 205,280 women with CD1, and 58,193 women with CD2+, the 25-year cumulative incidence of surgery for small bowel obstruction was 0.30% (95% CI 0.28-0.32%), 0.64% (95% CI 0.57-0.71%), and 0.72% (95% CI 0.60-0.87%), respectively. Compared to women with VD, a multivariate Cox regression analysis revealed a substantially higher risk of surgery for small bowel obstruction among women with one (CD1 vs. VD; HR 2.1 95% CI 1.9-2.3) or more CDs (CD2+ vs. VD; HR 2.2 95% CI 1.8-2.6). **Conclusions:** We found a more than two-fold increase in the risk of surgery for small bowel obstruction after first CD, and the risk remained high after two or more CDs. This information should be taken into account when counselling women about mode of delivery.

Disclosure of Interest: None Declared

O72

MORTALITY AND CAUSES OF DEATH IN FINNISH WOMEN WITH HISTORY OF PLACENTAL ABRUPTION

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Problem Statement: The etiology of placental abruption is poorly understood. Defective trophoblastic invasion of the spiral arteries and consequent uteroplacental underperfusion may play a role. Thus, placental abruption, preeclampsia, and intrauterine growth restriction often share similar histopathology. Risk of premature cardiovascular disease is increased in these women, but little is known of the long-term mortality. History of preeclampsia increases the risk of death from any cause. History of placental abruption may be a risk factor for subsequent cardiovascular mortality. Several behavioral, maternal, historical, and pregnancy-associated risk factors for placental abruption have been identified. These risk factors could also be associated with subsequent mortality. Our goal was to study the overall and cause-specific mortality in women with history of placental abruption. **Methods:** Data on women with placental abruption diagnosed between 1969 and 2005 (n=7,805) were collected from the Finnish Hospital

Discharge Register and the Finnish Medical Birth Register. A matched reference cohort consisted of three women without placental abruption for each case (n=23,523). The causes of death were retrieved from the Cause-of-Death Register. The main outcome measure was the hazard ratio (HR) of cause-specific mortality in women with history of placental abruption compared with the reference cohort. Standardized mortality ratios (SMRs) were calculated to compare the mortality in both cohorts with that in the general population. **Results:** By the end of year 2013, 395 women with history of placental abruption and 863 women from the reference cohort had died. The overall mortality was increased in the abruption cohort when compared with the reference cohort (HR 1.39, 95% confidence interval [CI] 1.24–1.57). The abruption cohort had an increased risk to die from malignancies of larynx, trachea, bronchus and lung (HR 1.72, [1.05–2.82]), alcohol-related causes (HR 1.84, [1.25–2.72]), and external causes (HR 1.63, [1.19–2.22]), especially suicides (HR 1.71, [1.07–2.74]). The overall SMR was increased in the abruption cohort when compared with that in general population (1.13, [1.02–1.24]), especially for malignancies of larynx, trachea, bronchus and lung (1.79, [1.16–2.64]). **Conclusions:** Both the overall mortality and mortality from several specific causes are increased in women with history of placental abruption.

Disclosure of Interest: None Declared

O73

COMBINATION THERAPY WITH MIFEPRISTONE AND MISOPROSTOL FOR THE MANAGEMENT OF FIRST TRIMESTER MISCARRIAGE: IMPROVED SUCCESS WITHOUT INCREASED COMPLICATIONS

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Problem Statement: First trimester miscarriage is one of the most common clinical problems to be tackled in gynaecological practice. Avoiding surgery has the benefit of decreased surgical risk and hospital costs incurred by overnight stay and theatre time. Mifepristone is an anti-progesterone with well documented success when used in conjunction with misoprostol for first trimester abortion. However, there have been conflicting results when it has been added to treatment regimens for miscarriage. This study aims to determine if the addition of mifepristone to misoprostol reduces the rate of failed medical miscarriage management. **Methods:** We performed a retrospective cohort analysis of women presenting to the Acute Gynaecology Service of our tertiary referral centre for miscarriage management from December 2010 until December 2013. Patients were included in the study if they had a miscarriage at 13 weeks gestation or less and elected to have it managed medically. Patients given misoprostol alone were compared to those who received combination treatment with mifepristone and misoprostol. The primary outcome was failure of treatment as determined by the need for repeat medical management or surgical curettage. Failed treatment was diagnosed by pelvic ultrasound demonstrating intact gestational sac or endometrial thickness greater than 15mm. Secondary outcome analysed was length of hospital admission. **Results:** A total of 281 women were treated from December 2010 to December 2013. Of these, 179 received combined Mifepristone and Misoprostol and 102 received misoprostol only. Analysis of the baseline demographics for the two cohorts showed no significant difference in age, parity or gestation. Miscarriage was divided by type into incomplete or missed miscarriage. The primary outcome of failure of treatment was significantly different between the two groups, 73% of women in the Mifepristone and Misoprostol group required no further treatment compared to only 56% of women in the Misoprostol only group (p = 0.012). When subgroup analysis was undertaken, there remained a statistically significant difference between the two groups for the treatment of missed miscarriage (p = 0.003). There was also less required admission, with 24% of women in the combined therapy group being admitted compared to 42% of women in the Misoprostol only group (p < 0.001). No significant difference



was seen in the time to complete treatment between the two groups. Conclusions: The addition of mifepristone to medical treatment regimens for first trimester miscarriage significantly decreased the need for repeat medical dosing or surgical curettage. Furthermore, it decreased hospital admissions and did not increase the risk of infection or bleeding. We are currently undertaking a randomised controlled trial to further assess this benefit.

Disclosure of Interest: None Declared

O74

EFFECTS OF MYOINOSITOL IN METABOLIC AND CARDIOVASCULAR PROFILE OF PCOS WOMEN

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Problem Statement: Polycystic ovary syndrome (PCOS) is a common disorder in reproductive age. This pilot study investigated the effects of myoinositol (MI) treatment on metabolic and cardiovascular profile in PCOS women over 30 years of age. Methods: Between 2015 and 2016, 50 women with diagnosis of PCOS by the Rotterdam Criteria were included in the study. All women received MI 2 g plus 200 µg of folic acid (Inofolic, Health Parsian, Iran; twice daily) for 3 months. Baseline and 3-month serum samples were taken after an overnight fast to evaluate the insulin resistance index (HOMA-IR), fasting glucose, and the levels of triglyceride, total cholesterol, high-density lipoprotein (HDL), low-density lipoprotein (LDL), homocysteine, systolic blood pressure, and diastolic blood pressure. Participants' weight was measured before and after treatment and body mass index (BMI) was calculated. Results: The data showed a significant improvement in the serum level of insulin sensitivity and a reduction of cholesterol, LDL, and homocysteine after three months of treatment. Furthermore, blood pressure was significantly reduced in the treated patients. Three participants became pregnant during treatment. Conclusions: Results showed that supplementation with MI and folic acid in PCOS patients over 30 years of age could decrease the risk of cardiovascular problems by normalizing the metabolic profile.

Disclosure of Interest: None Declared

O75

EFFICACY OF PRE OPERATIVE VAGINAL CLEANSING WITH POVIDONE IODINE IN REDUCING POST CAESAREAN INFECTIOUS MORBIDITY

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Problem Statement: Caesarean section is the most common surgical procedure performed in obstetrics. One of the most frequent complications of caesarean delivery is infectious morbidity which includes fever, wound infection, endometritis, bacteremia, urinary tract infection. Postpartum endometrial, pelvic, and wound infections are mostly poly microbial and are usually dominated by vaginal organisms as the uterus is open to the vagina, more when the cervix is dilated as in case of patients in labour. It is imperative to take steps in the preoperative period in order to prevent vaginal contamination. Vaginal preoperative cleansing with povidone iodine used as an adjunct to prophylactic antibiotics is shown to reduce the postoperative infectious morbidity by various studies. Although, the previous studies have shown that preoperative cleansing of vagina with povidone iodine is efficacious in reducing the post caesarean infectious morbidity, these studies have not substantiated this benefit with the microbial swab cultures. Present study aims to objectively study the microbial status before and after vaginal cleansing and its effect on clinical outcome.

Methods: This prospective study was conducted in the Department of Obstetrics and Gynaecology, Nehru hospital of Post Graduate Institute of Medical Education and Research, Chandigarh. A total number of two hundred and fifty pregnant women undergoing emergency caesarean section were recruited into the study from the labour ward. Women having sensitivity to povidone-iodine, Severe foetal distress, Placenta previa, Cord prolapsed were excluded from the study.

Results: Febrile morbidity was documented in 19 patients (7.6%) of the total 250. One patient had clinical endometritis (0.4%). There is statistically significant correlation between the cervical dilatation and development of fever ($p=0.028$) more so if cervical dilatation is more than 6 centimetres. However there was no statistically significant correlation between the cervical dilatation and development of wound complication ($p=0.391$) or endometritis ($p=0.885$). There is statistically significant correlation between the longer duration of rupture of membranes and development of febrile morbidity ($p=0.007$). The preoperative and postoperative vaginal swab positivity in our study was 9.2% ($n=23$) and 6.4% ($n=16$) respectively. The most common organism isolated on the swabs was *E. coli* (62.5%). Out of the 23 patients who had growth on the preoperative vaginal swab, 17 patients showed no bacterial growth on the post operative vaginal swab. This can possibly be attributed to the effect of povidone iodine. Febrile morbidity was significantly higher in those with positive preoperative vaginal swab compared to those with negative pre operative vaginal swab ($p=0.007$). It was significantly higher in those with positive postoperative vaginal swab compared to those with negative postoperative vaginal swab ($p=0.024$).

Conclusions: Preoperative vaginal cleansing with povidone iodine being an inexpensive and easy procedure can be followed routinely as it is shown to reduce the bacterial load in the vagina. Further larger studies are required to demonstrate the association between vaginal bacterial load and post caesarean infectious morbidity.

Disclosure of Interest: None Declared

O76

MORTALITY AND CAUSES OF DEATH IN FINNISH WOMEN WITH HISTORY OF PLACENTAL ABRUPTION

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Problem Statement: The etiology of placental abruption is poorly understood. Defective trophoblastic invasion of the spiral arteries and consequent uteroplacental underperfusion may play a role. Thus, placental abruption, preeclampsia, and intrauterine growth restriction often share similar histopathology. Risk of premature cardiovascular disease is increased in these women, but little is known of the long-term mortality. History of preeclampsia increases the risk of death from any cause. History of placental abruption may be a risk factor for subsequent cardiovascular mortality. Several behavioral, maternal, historical, and pregnancy-associated risk factors for placental abruption have been identified. These risk factors could also be associated with subsequent mortality. Our goal was to study the overall and cause-specific mortality in women with history of placental abruption.

Methods: Data on women with placental abruption diagnosed between 1969 and 2005 ($n=7,805$) were collected from the Finnish Hospital Discharge Register and the Finnish Medical Birth Register. A matched reference cohort consisted of three women without placental abruption for each case ($n=23,523$). The causes of death were retrieved from the Cause-of-Death

Register. The main outcome measure was the hazard ratio (HR) of cause-specific mortality in women with history of placental abruption compared with the reference cohort. Standardized mortality ratios (SMRs) were calculated to compare the mortality in both cohorts with that in the general population.

Results: By the end of year 2013, 395 women with history of placental abruption and 863 women from the reference cohort had died. The overall mortality was increased in the abruption cohort when compared with the reference cohort (HR 1.39, 95% confidence interval [CI] 1.24–1.57). The abruption cohort had an increased risk to die from malignancies of larynx, trachea, bronchus and lung (HR 1.72, [1.05–2.82]), alcohol-related causes (HR 1.84, [1.25–2.72]), and external causes (HR 1.63, [1.19–2.22]), especially suicides (HR 1.71, [1.07–2.74]). The overall SMR was increased in the abruption cohort when compared with that in general population (1.13, [1.02–1.24]), especially for malignancies of larynx, trachea, bronchus and lung (1.79, [1.16–2.64]).

Conclusions: Both the overall mortality and mortality from several specific causes are increased in women with history of placental abruption.

Disclosure of Interest: None Declared

O77

GESTATIONAL DIABETES MELLITUS, FETOMATERNAL OUTCOMES AND IMPACT ON PLASMA 25(OH)D3

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Problem Statement: Gestational Diabetes (GDM) frequency among the population is a source of preoccupation for public health authorities because the undergoing fetomaternal complications, such as *in utero* death, fetal macrosomia, risks of newborn with respiratory distresses, and onset of maternal type 2 diabetes (T2D) after the delivery. Role of vitamins in diet, such as vitamin D or 25(OH)D3 is crucial to prevent several diseases (cancer, diabetes, infertility). Sufficient vitamin D intake improves insulin sensitivity and contributes in pregnancy and high quality embryos. This prospective study analyzes among high risk pregnancy women, the frequency of GDM, macrosomia and undergoing maternal T2D, associated to plasma levels of 25(OH)D3

Methods: 190 pregnant women aged 18-46 years included in this study present the following criteria: 24-28 weeks of gestation, not previously found to have overt diabetes or GDM, antecedent GDM, antecedent macrosomia. The screening and diagnosis of GDM were performed according to the International Association of Diabetes and Pregnancy Study Groups (IADPSG) guidelines (2010). Body mass index (BMI), HbA1c, fasting plasma glucose (FPG), 2-hour 75g oral glucose tolerance test (OGTT), plasma lipids, systolic and diastolic pressure and the birth weight were assessed. Overt diabetes is diagnosed if FPG is at least 7.0 mmol/L (1.26 g/L) and/or $4 < \text{HbA}_{1c} < 6$. GDM is diagnosed if one or more values equals or exceeds thresholds of FPG of 5.1 mmol/L (0.92 g/L), 1-hour plasma glucose level of 10 mmol/L (1.80 g/L), and/or a 2-hour plasma glucose level of 8.5 mmol/L (1.53 g/L). T2D diagnosis was performed HbA1c or FPG 3 months after childbirth. Plasma 25(OH)D3 was measured using RIA kit protocol.

Results: 39/190 pregnant women (20.5%) aged 25-41 years were diagnosed with GDM, of which 17 (43.58%) are overweight and 11 (28.2%) are obese, including two women with severe obesity (BMI>35). Among 154 births (32 GDM and 122 noGDM), cesarean section was practiced for 13 GD (40.6%) vs 32 noGDM cases, while 5 GDM cases showed hypertension (140/90 to 170/120mmHg). 8/32 births (25%) of GDM group showed macrosomia (weight>4kg) (3 obese, 2overweight, 3 lean) vs only 7/122 births (5.7%) in noGDM group (1obese, and 2 overweight,3 lean). 3 months after childbirth, 2/4 GDM patients presented T2D (normal BMI, HbA1c 9.81, OGTT+) and 2 cases of glucose intolerance (overweight, HbA1c<6, OGTT +). Vitamin D deficiency (<20ng/mL) was observed for both groups 18.60±0.969 vs

19.13±1.34). Obese GDM patients have lower 25(OH)D3 value than obese noGDM patients (18.40±1.82 vs 19.45± 1.62ng/mL).

Conclusions: Vitamin D deficiency may contribute more to increase the frequency of macrosomia in GDM patients. Supplementation in vitamin D for both overweight and obese pregnant women may prevent disturbances in embryogenesis and maternal calcium metabolism

Disclosure of Interest: None Declared

O78

LONG-TERM RISK OF SURGERY FOR SMALL BOWEL OBSTRUCTION AFTER CESAREAN DELIVERY: A DANISH NATIONWIDE COHORT STUDY 1978-2010

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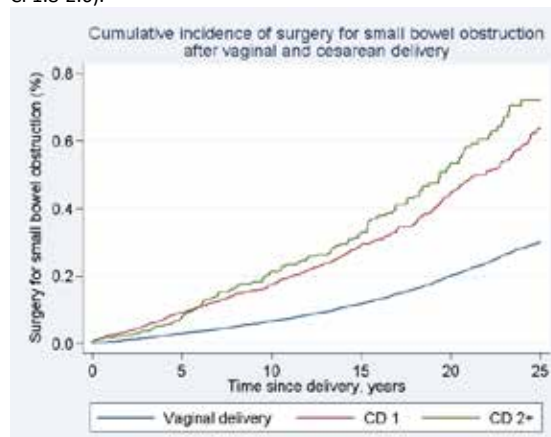
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Problem Statement: More than 18 million caesarean deliveries (CD) are performed worldwide each year, and the number is increasing. Evidence is sparse on maternal long-term consequences of CD that are not related to pregnancy and delivery. Only a few studies estimated the burden of CD on adhesion development, and no studies have investigated the association between CD and the risk of having surgery for bowel obstruction.

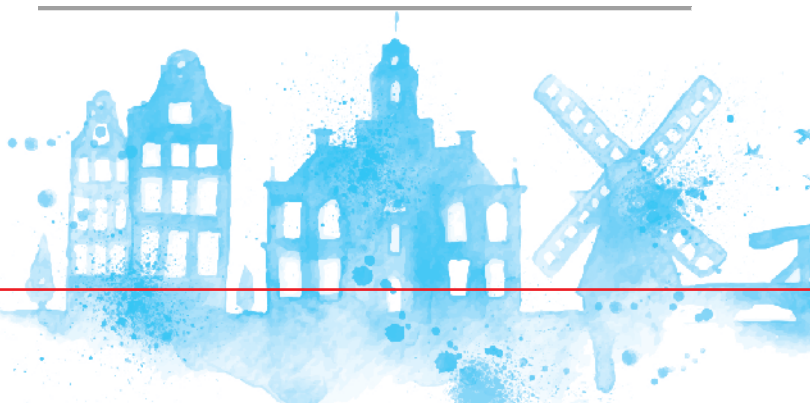
Methods: A cohort study based on nationwide registries. Women with a first-time delivery in Denmark during 1978-2010 were followed from first vaginal delivery (VD), first cesarean delivery (CD1), or second cesarean delivery (CD2+) until surgery for small bowel obstruction, death/emigration, 31 Dec 2010, or 25 years, whichever came first. We computed 25-year cumulative incidence of surgery for small bowel obstruction with corresponding 95% confidence interval (CI) using the Kaplan-Meier method. We used Cox-regression analysis to compute hazard ratios (HR) as an estimate of the relative risk of surgery for small bowel obstruction stratified according to mode of delivery (VD, CD1, or CD2), adjusting for maternal age at delivery, Charlson comorbidity index, and previous intraabdominal surgery.

Results: Among 790,351 women with VD, 205,280 women with CD1, and 58,193 women with CD2+, the 25-year cumulative incidence of surgery for small bowel obstruction was 0.30% (95% CI 0.28-0.32%), 0.64% (95% CI 0.57-0.71%), and 0.72% (95% CI 0.60-0.87%), respectively. Compared to women with VD, a multivariate Cox regression analysis revealed a substantially higher risk of surgery for small bowel obstruction among women with one (CD1 vs. VD; HR 2.1 95% CI 1.9-2.3) or more CDs (CD2+ vs. VD; HR 2.2 95% CI 1.8-2.6).



Conclusions: We found a more than two-fold increase in the risk of surgery for small bowel obstruction after first CD, and the risk remained high after two or more CDs. This information should be taken into account when counselling women about mode of delivery.

Disclosure of Interest: None Declared



O79

HEALTH-RELATED OUTCOMES AMONG WOMEN IN THE EUROPEAN UNION AND THE UNITED STATES USING MONTHLY-CYCLE ORAL CONTRACEPTION

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Problem Statement: Using the 2013 National Health and Wellness Survey (NHWS), women in the United States (US) showed better adherence and satisfaction with extended-cycle vs monthly-cycle oral contraception (OC). Recently, extended-cycle OC has become available to women in the European Union (EU), but whether EU women show similar improved outcomes is not yet known. We examined similarities between EU and US women using monthly-cycle OC to inform the possible extrapolation of extended-cycle OC benefits to EU women. Menstrual symptoms, sleep difficulties, impairment in work and daily activities, and use of healthcare resources were examined.

Methods: The 2013 NHWS, conducted in the US (N=75,000) and 5 EU countries (EU5 [N=62,000]: UK, France, Germany, Italy, Spain), provided the data for this study. Women aged 18-50 years old, without menopause or hysterectomy, who reported current use of monthly-cycle OC were included. Assessments included the Charlson Comorbidity Index (CCI), premenstrual syndrome (PMS)-related pain in the past 7 days (from 0 [no pain] to 10 [greatest pain imaginable]), menstrual symptoms, and sleep difficulties. Work and activity impairment due to health problems in the past 7 days, examined using the Work Productivity and Activity Impairment-General Health (WPAI-GH) questionnaire, included absenteeism, presenteeism (impairment in productivity while working), overall work impairment, and activity impairment. Healthcare resource use during the past 6 months was assessed through number of healthcare provider visits, general practitioner visits, emergency room (ER) visits, and hospitalizations. Treatment satisfaction was reported from 1 "extremely dissatisfied" to 7 "extremely satisfied." Means are presented and differences >10% between groups are reported.

Results: The mean ages of women enrolled from the EU5 (N=5,905) and US (N=3,616) were similar (EU5 30.4 y vs US 30.3 y), as were mean CCI scores (EU5 0.11±0.5 vs US 0.12±0.5). Mean PMS-related pain in the past week was similar (EU5 4.0±2.6 vs US 4.0±2.5). Most menstrual symptoms were similar; however, more US women reported bloating/fluid retention, fatigue, and food cravings and more EU5 women reported sadness/hopelessness. Women did not differ in sleep difficulties other than more US women reported daytime sleepiness (29.7% vs EU5 19.4%). EU5 women reported somewhat greater absenteeism (4.4±16.5% vs US 2.3±10.3%), presenteeism (15.8±22.5% vs US 12.3±20.8%), overall work impairment (18.7±26.4% vs US 13.7±22.8%), and activity impairment (20.9±26.0% vs US 16.4±24.0%). The number of ER visits (EU5 0.18±0.7 vs US 0.18±1.2) and hospitalizations (EU5 0.07±0.4 vs US 0.06±0.4) were similar, but total healthcare provider visits were slightly higher among EU5 women (4.4±5.7 vs US 3.7±5.9), as were general practitioner visits (1.8±2.2 vs US 0.9±1.8). The mean satisfaction rating was slightly lower among EU5 women (5.5±1.5 vs US 5.8±1.2).

Conclusions: Health-related outcomes were generally similar among EU5 and US women using monthly-cycle OC. As improved outcomes were previously shown in US women for extended-cycle vs monthly-cycle OC, EU5 women may benefit from extended-cycle OC.

Disclosure of Interest: R. Nappi Consultant for: Bayer Pharma, Eli Lilly, Gedeon Richter, HRA Pharma, Merck Sharp & Dohme, Novo Nordisk, Pfizer, Shionogi, Teva, L. Lee Employee of: Kantar Health, which received funding from Teva Pharmaceuticals to conduct this study, N. Flores Employee of: Kantar Health, which received funding from Teva Pharmaceuticals to conduct this study, I. Lete Consultant for: HRA Pharma, Merck Sharp & Dohme, Nordic, Teva, Speakers Bureau for: Merck Sharp & Dohme, Teva,

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O80

THE PREDICTIVE VALUE OF THE SELF-SAMPLING OF HUMAN PAPILOMAVIRUS DNA FOR THE DIAGNOSIS OF CIN AND CERVICAL CANCER

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Problem Statement: Cervical cancer (CC) is preventable and treatable if detected early by regular organized screening. High-quality screening with cytology has reduced mortality from CC, but the incidence rate is still high. Persistent high risk human papilloma virus (hr-HPV) infection is the primary cause of CC and an international group of experts has recently declared that "there is sufficient evidence that testing for HPV infection as the primary screening modality can reduce cervical cancer incidence and mortality rates". Many studies have shown the greater sensitivity (66-89.7 %) of HPV testing (compared to cytology) for detecting high-grade cervical intraepithelial neoplasia (CIN2+). Studies have shown that more than half of all invasive CC are diagnosed in women who are un-screened, so self-collected HPV testing has been suggested as an effective CC screening for these women. A recent meta-analysis showed that when PCR-based HPV tests were used, the clinical performance of self-HPV was similar to clinician-collected samples, irrespective of the type of device used.

Objective: To estimate the predictive value of the self-sampling of HPV DNA for the diagnosis CIN and cervical cancer.

Methods: This study included 150 women aged 25-59 years. All women were screened with 5 tests: cervical sample for routine cytology, sample for liquid-based cytology (LBC), sample for HPV DNA testing was collected by clinician and by using a self-sampling kit (Qvintip), colposcopy. Hr-HPV detection and genotyping were performed by polymerase chain reaction.

Results: Only 50.7% (n = 76) of women were negative on all 5 tests and 3.3% (n = 5) were positive on all tests. 16 cytology results were positive in which 11 cases had CIN1 and 5 cases had CIN2,3. Positive LBC was detected in 10 patients in which 8 patients had CIN1 and 2 patient had CIN2,3. Abnormal colposcopic features were found in 32 cases. HPV-positive result in 55 cases (36.7%). Among 74 women (49.3%) with abnormalities only 50 patients agreed to biopsy. Results: normal findings – 40 %; CIN1 – 27,5 %; CIN2 – 5%; CIN3 – 15%; ca in situ – 7,5 %; CC - 5 %. The sensitivity of these tests for the diagnosis of CIN1: cytology and LBC - 28,6%; clinician- HPV-testing – 57,1 %; Qvintip – 50,0 %; colposcopy – 42,9%. Interestingly, clinician-HPV-testing and Qvintip were the most sensitive for detecting moderate and severe dysplasia, whilst cytology and LBC failed to detect the vast majority of these lesions (Table 1).

Conclusions: In summary, hr-HPV DNA-based screening test has more sensitivity than cytology and liquid-based cytology (85.7 vs 35.7 % respectively) for the detection of CIN2+ and cervical cancer, so it offers the best prospect for cervical screening. Self-sampling HPV testing similar to those observed with the clinician- HPV-testing and can be an alternative test to cervical cancer prevention programs.

Disclosure of Interest: None Declared

O81

UTERUS-CONSERVING TREATMENT FOR EARLY STAGE ENDOMETRIAL CANCER; HYSTEROSCOPIC RESECTION JUST AFTER BILATERAL TUBAL LIGATION FOLLOWED BY INSERTION OF A PROGESTERONE-RELEASING INTRAUTERINE DEVICE

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Problem Statement: There are no consensus guidelines on conservative treatment of early stage endometrial cancer. The aim of study is to present

conservative surgical treatment of women with early endometrial cancer who desire to have fertility in the two cases. Hysteroscopic resection could be the choice for conservative surgical management of early endometrial cancer to preserve fertility.

Methods: A 32-year-old nulligravid woman had stage IA endometrial cancer which was a 1.5 cm sized lesion confined to the left fundal side of the uterus. The other 35-year-old nulligravid woman had a 2 cm sized lesion suspicious for deep myometrial involvement suggesting stage IB endometrial cancer. The women underwent hysteroscopic resection with safe resection margin just after laparoscopic tubal ligation followed by insertion of a progesterone-releasing intrauterine device. When performing hysteroscopic resection, the inflation of media for uterine distention may lead to transtubal reflux of cancer cells into the peritoneal cavity. Laparoscopic tubal ligation can prevent peritoneal spread of cancer cells.

Results: Both patients have no evidence of recurrence for 18 months of follow-up.

Conclusions: In conclusion, hysteroscopic resection combined with bilateral tubal ligation followed by insertion of a progesterone-releasing intrauterine device can be the good option for conservative treatment of early endometrial cancer.

Disclosure of Interest: None Declared

O82

CLINICAL PERFORMANCE OF DIAFERT® TO DETERMINE GRANULOCYTE COLONY STIMULATING FACTOR CONCENTRATION IN FOLLICULAR FLUID AS A PREDICTOR OF IMPLANTATION DURING IN VITRO FERTILIZATION

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Problem Statement: In daily practice, in vitro fertilization (IVF) laboratories are confronted with the choice of which embryo(s) to transfer. The use of a noninvasive predictor of the implantation potential of embryos may improve this process. Previous studies have established that the concentration of granulocyte colony stimulating factor (G-CSF) in individual follicular fluid (FF) collected during oocyte harvest correlates with the birth potential of the corresponding embryo. This study assesses the clinical performance of Diafert, an ultrasensitive G-CSF immunoassay, to determine FF G-CSF concentration as a predictor of implantation during IVF.

Methods: In this prospective, noninterventive, observational study (Prospec 1), women 18-36 years of age with good response to ovarian stimulation undergoing a first and/or second IVF attempt and eligible for Day (D3) or D5 single embryo transfer (SET) were included. FF was individually collected and analyzed for G-CSF concentration using the Diafert immunoassay kit. Embryo morphology was evaluated using established criteria. Implantation was confirmed by visualization, using transvaginal ultrasound, of the number of gestational sacs containing a fetus with cardiac activity at 12 weeks of gestation (10 weeks after SET). As this was a noninterventive, diagnostic study, no safety data were collected.

Results: Among 465 subjects enrolled, 396 SETs were performed (288 D3 and 33 D5 fresh; 64 D3 and 11 D5 frozen). Based on receiver operating characteristic (ROC) curve analysis, G-CSF thresholds were identified (17.5 and 48.0 pg/mL). Implantation probabilities were calculated for all morphology categories and for optimal morphology A (Table). To address variation arising from differences in oocyte retrieval procedures across sites, these analyses were repeated for a single center and a similar pattern to the overall data set was observed, with more pronounced differences (Table). The cumulative proportion of successful implantations tended to increase with increasing G-CSF concentration. A trend was noted in which median G-CSF concentrations were numerically higher for successful than for failed

implantations in every condition (D3 and D5, fresh and frozen; not significant).

Table. Implantation Success Rates by G-CSF for D3 Fresh SETs

All Sites (Primary Endpoint)	Implantations/SETs		Improvement in		
	Probability of Implantation (CI), %*		Probability of Implantation		
G-CSF, pg/mL	All	≤17.5	>48.0	>48.0 vs All	>48.0 vs ≤17.5
All Morphology Categories	79/288 27.5 (23.3-31.9)	4/27 15.3 (6.4-28.6)	29/90 32.3 (24.6-40.7)	17%	111%
Morphology A	63/210 30.0 (25.0-35.4)	4/21 19.6 (8.3-35.7)	22/64 34.5 (25.3-44.5)	15%	76%
Single Site (Exploratory Endpoint)					
G-CSF, pg/mL	All	≤17.3	>48.7	>48.7 vs All	>48.7 vs ≤17.3
All Morphology Categories	26/114 22.9 (16.9-29.7)	2/20 10.7 (2.9-25.0)	8/23 35.0 (20.4-51.9)	53%	227%
Morphology A	26/102 25.6 (19.0-33.0)	2/18 11.9 (3.3-27.5)	8/22 36.6 (21.4-53.8)	43%	208%

*estimated by the Bayesian beta-binomial model
CI indicates confidence interval; G-CSF, granulocyte colony stimulating factor; SET, single embryo transfer

Conclusions: In this study, the Diafert diagnostic kit was utilized successfully to confirm the predictive value of FF G-CSF concentration for implantation success during IVF.

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PERFORMANCE VERIFICATION OF THE DIAFERT® GRANULOCYTE COLONY-STIMULATING FACTOR IMMUNOASSAY

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Problem Statement: In vitro fertilization (IVF) remains limited by relatively low success rates and high multiple birth rates. Assessing embryo competence via G-CSF quantitation has been identified as a noninvasive method to assist in embryo selection for IVF transfer. This study verifies the technical performance of Diafert, a highly sensitive enzyme-linked immunosorbent assay (ELISA) that quantifies levels of follicular fluid (FF) G-CSF to assist in embryo selection for IVF.

Methods: Two lots of Diafert diagnostic kits were tested for: precision, sensitivity, linearity, high/low dilutions, lot-lot comparison, specificity, parallelism, interference, spike-recovery, and high-dose hook. Calibration samples were prepared from recombinant *Escherichia coli*-derived human G-CSF (Tevagrastim) and control samples from recombinant human G-CSF from Chinese Hamster Ovary (CHO) cells. All tests were performed in duplicate and in compliance with Clinical and Laboratory Standards Institute guidelines.

Results: Both lots met all acceptance criteria with the exception of limits of detection and the minimum spike-recovery value from lot 2 (Table); however, the observed results for these two parameters remained compatible with the intended use. The two lots were consistent (r=0.99) with a regression slope within normal variation (0.9–1.1). The assays showed good precision, sensitivity, and specificity. No high-dose effect was shown up to 11,000 g/mL of G-CSF. The lower and upper limits of the reportable range were defined as 6.1 pg/mL and 500 pg/mL based on linearity and limits of quantitation, respectively.



P01

THE PREVALENCE OF PRESCRIPTION TYPE MEDICINE, OVER-THE-COUNTER MEDICINE AND PSYCHOACTIVE SUBSTANCES IN DANISH PREGNANT WOMEN

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Problem Statement: The potential teratogenicity of pharmacological compounds are well-known since the thalidomide tragedy. Prenatal exposure to medicine – especially in early pregnancy – can have harmful effects on the fetal growth and development. The intake of in particular psycho pharmaceutical compounds has increased in recent years, and international reports find that up to 80% of all pregnant women declare using some form of medication during their pregnancy. Therefore, knowledge about the extent of drug use in early pregnancy is important for an improved risk assessment through epidemiological and molecular studies. The aim of this study was to investigate the prevalence of prescription type medicine, over-the-counter medicine and psychoactive substances in the blood of first-trimester-pregnant Danish women unaware of the screening. **Methods:** Cross-sectional study of pregnant women from the region around the Danish city Randers. A total of 436 frozen serum samples were screened for the presence of prescription type medicine, over-the-counter-medicine and psychoactive drugs using an ultra-performance liquid chromatography with high-resolution time-of-flight mass spectrometry (UPLC-HR TOF-MS) method. This method identifies approximately 500 substances, comprising toxic compounds, illegal and legal drugs and some of their metabolites. The samples were originally obtained during prenatal diagnostics at the 8th to -12th week of pregnancy and all samples were randomly selected and anonymized prior to the study. **Results:** The analysis shows the presence of “legal” drugs (prescription type medicine and over the counter drugs) in 18.3% of the samples, Acetaminophen (8.9%) was the most frequently used drug, followed by metformin (1.8%), cetirizine (1.4%) and ibuprofen (1.4%). Antidepressants were found in 3.0% of the women with citalopram (0.9%) as the most frequent. Illicit drugs were found in 0.9% of the samples and nicotine/cotinine (indicator of smoking) in 9.9% of the samples. Surprisingly, caffeine was identified in 76.4% of the samples. **Conclusions:** Our findings show that the use of especially caffeine-containing foods, other psychoactive substances and acetaminophen are quite common among Danish pregnant women, highlighting the need for further studies into the combined effects of such substances on early fetal development and long-term postnatal health.

An increased focus on both legal and illicit drug use in early pregnancy can prevent a potential harmful effect on the fetal growth and development.

Disclosure of Interest: None Declared

P02

NEURAL TUBE DEFECT WITH FIRST TRIMESTER VARICELLA ZOSTER INFECTION

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Problem Statement: The incidence of congenital varicella syndrome is unknown, although it has been reported as high as 9%. Congenital varicella syndrome is characterized by cutaneous scarring in a dermatome

distribution and/or hypoplasia of an extremity. Additional manifestations may include low birth weight, microcephaly, localized muscular atrophy, ocular anomalies, and neurological abnormalities. The risk of congenital varicella syndrome is estimated to be 0.4% when maternal infection occurs from conception through the 12th week of gestation and 2% when infection occurs between the 13th and 20th week of gestation. **Methods:** A.O. Was delivered by elective Caesarian section at 39th week of gestation to 19 years old mother who experienced varicella infection in the 4th gestational week. His weight was 2.9 i. e normal for gestational age. His general condition was good. On physical examination he had sac of meningocele on the bottom of his back. He displayed marked hypoplasia of the upper gastrocnemius muscles of both limbs, his feet were fixed in equinovarus position. Both hypo plastic feet were showing hypo motility and filled with large hemorrhagic bullae. The necrotic bullae healed leaving hyper pigmented scars behind. At the 2nd week of close monitor he was discharged. The patient was first baby of his primiparus mother she had her first US scan for dating at the 14th week of gestation and she had her VZV attack 10 weeks earlier. At the time of birth CSF was found xanthochrome with a protein content of 1.6 g/d and with normal cell count. Toxoplasmosis, CMV and rubella infection were excluded by serology investigation. VDRL was also found negative. VZV specific IgG not detected but VZV specific IgM were detected in the first sample. Virus isolation was not attended. The EEG showed slightly lowered activity although it was still within the normal range. The Xray examination showed hypoplasia of the bones of both legs. MRI spine revealed open 4th and 5th abdominal vertebrae with bulging meninges. No other structural abnormalities were seen. **Results:** The typical features of congenital varicella syndrome were all present in my patient. Hypo pigmented, scarred skin defects has been reported in many cases, my patient presented such defects as large, necrotic, hemorrhagic bullae healed with scars hypoplasia of extremities with muscular atrophied club feet. Major difference was the presence of neural tube defect as meningocele which is not constant feature in congenital varicella syndrome. There are no reported cases of such events in early infection of VZV in early pregnancy. I couldn't find any severe cerebral or ocular defects in the patient. Also no intrauterine atrophy or low birth wight as seen in most reported cases. The patient still alive and healthy complaining of paraplegia and autonomic disturbances. Now of the congenital varicella cases were diagnosed by virus isolation however the newer seriological techniques give strong evidence that the syndrome is caused by VZV. In congenital varicella cases that the finding of the VZV specific IgM antibodies is still controversial. On the other hand, neural tube defects have been reported in in women with hypothermia as late as 8th week of pregnancy. **Conclusions:** there are no reported cases of neither early pregnancy VZV infection nor neural tube defects in congenital varicella syndrome. further studies and more specified tests should be done as well as more prospective studies for congenital varicella syndrome.

Disclosure of Interest: None Declared

P03

HUMAN PAPILOMA VIRUS: IMPACT ON MALE FERTILITY IN MEN

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Problem Statement: Infertility is a common condition with important psychologic, economic, demographic, and medical implications. The fertility rate in a couple is influenced by several factors. These include: the age of the female partner, age of the male partner, exposure to sexually transmitted diseases and to environmental and medical toxins, coexistent disease states, and the specific disorders described below. Male factor is responsible the 23 percent of infertility in couple. The prevalence of male infertility in the United States is 12 percent. Epidemiology studies suggest that fertility rates are lower in men over age 40 years, but results from assisted reproduction technologies have not confirmed this observation. In



about 40 percent of cases of male infertility, the cause is unknown, but genetic factors may explain many of these cases in the future. While many men with male infertility have oligozoospermia (decrease in number of sperm cells in the ejaculate compared with reference ranges) or azoospermia (no sperm cells in the ejaculate), some infertile men have normal sperm counts. Over 80 percent of men with infertility have low sperm concentrations associated with a decrease in sperm motility (asthenozoospermia) and spermatozoa with normal morphology. Others may have a decrease in sperm motility and abnormal sperm morphology (teratozoospermia). Recent data in fertile men in Europe and the United States show marked differences in sperm concentration between different countries and different regions of the same country. The role of environmental pollutants or toxins remains unclear. One of the important factors in male infertility is Sexually transmitted infections (STIs). STIs are common and preventable causes of morbidity and serious complications, which can lead to infertility in male and female. Human papillomavirus infection is the most commonly diagnosed sexually transmitted disease in the United States. HPV infection has been etiologically linked with condyloma acuminatum, squamous intraepithelial lesions, and anogenital malignancy, including cervical, vaginal, vulval, penile, and anal carcinoma. The aim of this review study is determine the association between HPV infection and male infertility. Methods: This review article is prepared by evaluated more than 40 paper published in websites such as: Pubmed, Google Scholar, Science Direct, SID, Iran medex, etc., during 2009 until 2016. Results: The impact of sexually transmitted diseases on male fertility is strongly dependent on the local prevalence of the STDs. In Western countries STD-infections are of minor relevance. In other regions, i.e. Africa or South East Asia, the situation appears to be different. Acute urethritis could not be associated with male infertility. The relevance of viral infections HPV for male infertility is not resolved. Any STD increases the chances of transmission of the human immunodeficiency virus. The HIV infection is associated with infectious semen and the risk of virus transmission. Semen quality deteriorates with the progression of immunodeficiency. Conclusions: Special counselling of serodiscordant couples is needed. Therefore, some STDs specially HPV should be treated early and adequately to prevent late sequelae for both men and women. All viruses considered in this article have a potentially negative effect on male reproductive function and dangerous infections can be transmitted to partners and newborns.

Disclosure of Interest: None Declared

P04 THE RELATIONSHIP BETWEEN HERPES-VIRAL INFECTIONS AND MALE REPRODUCTIVE HEALTH

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Problem Statement: Infertility is a common condition with important psychologic, economic, demographic, and medical implications. The fertility rate in a couple is influenced by several factors. These include: the age of the female partner, age of the male partner, exposure to sexually transmitted diseases and to environmental and medical toxins, coexistent disease states, and the specific disorders described below. Male factor is responsible the 23 percent of infertility in couple. The prevalence of male infertility in the United States is 12 percent. Epidemiology studies suggest that fertility rates are lower in men over age 40 years, but results from assisted reproduction technologies have not confirmed this observation. In about 40 percent of cases of male infertility, the cause is unknown, but genetic factors may explain many of these cases in the future. Sexually transmitted pathogens are associated with a wide range of anomalies and diseases, including recurrent genital herpes, urethritis, syphilis, proctitis, genital ulcers, perihepatitis, unexplained infertility, infant prematurity, low birth weight, and neonatal death or malformations.

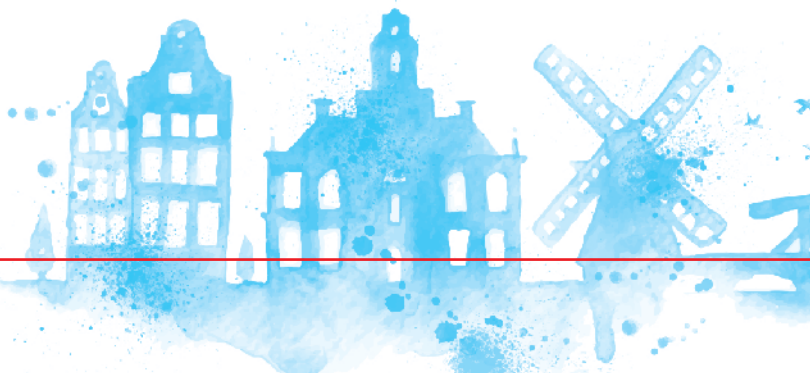
Genital herpes simplex virus (HSV) infections are a major global public health problem. HSV is a common sexually transmitted virus infection that is found worldwide. Most of these genital infections are caused by herpes simplex virus-2, but herpes simplex virus-1 also produces a clinically similar disease. The aim of this review study is determine the association between herpes viral infection in men and male infertility. Methods: This review article is prepared by evaluated more than 40 paper published in websites such as: Pubmed, Google Scholar, Science Direct, Uptodate, SID, Iran medex, etc., during 2008 until 2016. Results: A relationship between the herpes-viral infections and male reproductive health is of importance to both theoretical and practical medicine. The review contains the data on the frequency of HSV identification in sperm, the effect of the viruses on structure and function of male germ cells, potential vertical transmission of the HSV with male gametes, and experimental models of study the effects of herpes viruses on spermatogenesis. The result of these data it can be concluded that: 1) identification of HSV in sperm is associated with reduced fertility; 2) HSV has a negative effect on spermatogenesis, which manifests itself in a decreased proliferative activity of spermatogonia, meiosis block and enhanced apoptosis of germ cells; 3) HSV can be found intracellular in male gametes; and 4) the analysis of the markers of widespread HSV, should be included in examination of men attending infertility clinics. Conclusions: Special counselling of serodiscordant couples is needed. Therefore, some STDs specially HSV should be treated early and adequately to prevent late sequelae for both men and women. All viruses considered in this article have a potentially negative effect on male reproductive function and dangerous infections can be transmitted to partners and newborns. In light of this evidence, we suggest performing targeted sperm washing procedures for each sperm infection and to strongly consider screening male patients seeking fertility for HSV, both to avoid viral transmission and to improve assisted or even spontaneous fertility outcome

Disclosure of Interest: None Declared

P05 CORRELATION OF LAPAROSCOPIC FINDINGS WITH HYSTEROSALPINGOGRAPHIC DIAGNOSIS OF BILATERAL INCOMPLETE DISTAL TUBAL OCCLUSION IN PATIENTS WITH INFERTILITY AT ZARIA, NORTHWEST NIGERIA

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Problem Statement: Tubal infertility is common in subsaharan Africa and hysterosalpingography is the most accessible assessment method. This study compared correlation of hysterosalpingographic diagnosis of bilateral incomplete distal tubal occlusion (BIDTO) with laparoscopic findings of tubal occlusion. Methods: A descriptive study carried out in a tertiary university teaching hospital. Infertility patients with hysterosalpingographic diagnosis of BIDTO evidenced by loculated restrictive spill of contrast had diagnostic laparoscopy and dye hydrotubation for confirmation of tubal occlusion. Results: Seventy patients with hysterosalpingographic features of BIDTO were subjected to diagnostic laparoscopy, 67(95.7%) had laparoscopic evidence of peri-tubal adhesions and 3(4.3%) had free fallopian tubes with no peri tubal adhesions. Of the 67 patients with peri-tubal adhesions, 59(88.1%) showed no evidence of dye spillage signifying tubal occlusion while the remaining 8(11.9%) had evidence of tubal patency from dye spillage. The 3 patients that had no feature of peri-tubal adhesions, all (100%) had dye spill/tubal patency. Out of the 59 patients with laparoscopic findings of peri-tubal adhesions with no dye spillage, 33(55.9%) had significant quantity of peritoneal fluid, 13(22%) had peri-hepatic adhesions and 5(8.5%) had endometriotic deposit in the pelvis. The 11 patients with tubal patency had no features of pelvic inflammatory disease or endometriosis. Conclusions: There was significant correlation of BIDTO diagnosed on hysterosalpingography with the findings of peritubal adhesions and tubal occlusion at diagnostic laparoscopy. Hysterosalpingographic finding of loculated restricted spill of contrast as



seen mostly in cases of BIDTO does not translate to patency of the fallopian tube at laparoscopy. Hysterosalpingography may be viewed as an appropriate option in the diagnosis of BIDTO in resource constrained settings with low accessibility to endoscopic procedure for confirmation.

Disclosure of Interest: None Declared

P06

OVARIAN DRILLING BY MINI-LAPAROTOMY ROUTE - A COST EFFECTIVE TREATMENT APPROACH FOR CLOMIPHENE CITRATE RESISTANT POLYCYSTIC OVARY SYNDROME IN LOW RESOURCE SETTING

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Problem Statement: Ovulatory dysfunction due to Polycystic ovary syndrome (PCOS) is on the rise in the developing countries due to lifestyle changes simulating the Western world. Operative laparoscopic procedures are rare in most developing countries. This study determined the treatment outcomes of patients that had ovarian drilling through mini-laparotomy access.

Methods: A prospective longitudinal study done at a university teaching hospital and a private specialist hospital. A total of 11 patients with infertility and clomiphene citrate resistant PCOS underwent ovarian drilling by mini-laparotomy access. Main outcome measures are return to normal menstrual cycle, pregnancy, miscarriage and live birth rates. Duration of hospital stay and complication rate. **Results:** Of the 11 patients, 9 (81.8%) had return to normal menstrual cycle within 3 months of the procedure. Five (45.5%) pregnancies were recorded; 2(40%) got pregnant in the following cycle after the procedure while the remaining 3(60%) became pregnant within 2 to 4 months following the procedure. One (20%) miscarriage and 4(80%) term live births by caesarean section was recorded in the 5 pregnancies. Hospital stay was less than 24 hours after the procedure in 10(90.9%) of the 11 patients and one (9.1%) procedural complication due to bladder injury was recorded with extended hospital stay. **Conclusions:** Early return to normal menstrual cycle, favourable pregnancy rate and pregnancy outcomes were recorded in this study. This procedure is a cost effective alternative approach to laparoscopic ovarian drilling valuable in low resource setting of the developing world due to significantly low accessibility (availability and affordability) to laparoscopic surgery.

KEYWORDS: Polycystic ovary syndrome; Clomiphene resistant; Ovarian drilling; Infertility; Mini-laparotomy.

Disclosure of Interest: None Declared

P07

BLOOD LOSS DURING DELIVERY BY CAESAREAN SECTION COMPARED WITH VAGINAL BIRTH

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Problem Statement: Excessive bleeding after delivery is one of the top five causes of maternal mortality in developed and developing countries. The aim of this study was to validate estimation of blood loss after vaginal delivery and elective cesarean section, and to investigate if post partum hemoglobin reflects blood loss. We conducted a prospective cohort study to compare blood loss during cesarean section and normal delivery. **Methods:** We have studied a cohort of 119 women who were delivered in our clinic. 82 of them have had normal delivery, whereas 37 were delivered by cesarean section. For assessment of blood loss is measured hemoglobin level after hospitalization in the clinic and 24 hours after the birth, whether normal birth, or by cesarean section. As the obstetric procedure was not to be studied, but rather the assessment of blood loss, both primiparas and multiparas were included. All cesareans were performed under spinal

anesthesia. **Results:** For the comparison of estimated and measured blood loss, results from 37 women delivered by cesarean section and 82 women delivered vaginally were analysed. By parity there were 18 primiparas out of 19 in group delivered by cesarean section, and 52 primiparas out of 30 in group of women delivered vaginally. The decline of hemoglobin (difference between hemoglobin analysed at admittance to the delivery ward and hemoglobin 24 hours post partum) was: 21 (25.6%) women delivered vaginally before delivery had hemoglobin level of less than 9.9, and 37 (45.2%), after delivery ($p=0.01$). In the cesarean group 5 (13.5%) of women had hemoglobin level less than 9.9, and 20 (54%) after delivery ($p=0.0006$). There was no statistical difference by age in both groups. **Conclusions:** Conclusion: Women delivered by caesarean section have had significantly greater blood loss compared with normal deliveries. However, estimation of blood loss in association with either vaginal delivery or cesarean section is imprecise and attention should be paid to this fact in the clinical situation. Vigilance in monitoring blood loss after delivery is mandatory.

Disclosure of Interest: None Declared

P08

COMPLEMENTARY THERAPIES USED IN LABOUR PAIN MANAGEMENT

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Problem Statement: Labour pain is among the most intense and hardest pains to manage, and like any other pain, it needs to be taken under control in the fastest way possible. Pain that has not been taken into control results in problems for the mother, as well as for the fetus. Labour pain is known to have negative effects on the mother, on the fetus, and on the newborn. Like other acute pains, these effects influence the respiratory, cardiovascular, and neuroendocrine limbic systems. Literature suggests that the procedures for controlling labour pain should be simple, reliable, and have features that protect the fetal homeostasis. The procedures for managing birth pain should decrease the pain, as well as increase the satisfaction of the mother's labour experience. Complementary therapies used for managing pain support these features. In addition, both women and health care personnel prefer these therapies over medical therapies due to some advantages. Some of these complementary therapies can be listed as music, hypnosis, yoga, homeopathy, chiropractic, acupuncture, TENS, reflexology, hydrotherapy, acupressure, intradermal sterile water injection, therapeutic touch and reiki, phytotherapy, and aromatherapy.

The reasons for choosing complementary therapies are;

Complementary therapies are not invasive, and are easy and safe to apply. They enable the mother and the care provider to participate in the procedure.

They do not have any negative effects on the mother or on the fetus.

They do not cause side effects or allergic risks.

They decrease the labour pain and thus anxiety.

They enable the mother to have positive experiences during the labour.

They increase uterine blood flow.

They decrease muscle tension.

They slow down the labour process.

They support the mother-child bond.

They create intimacy between the couples.

Methods: Literature was reviewed for the research.

Results: It is exceptionally important for women to finish the process of labour as successfully as possible. Complementary therapies aim to support medical therapies. They are used as a tool to respond to the physical and psychological needs of the mother, to help the mother cope with labour pain, and to enable the process of labour to finish without complications by engaging the mother in the process as well. **Conclusions:** The midwives and the nurses should be able to recognize the complementary therapies, as well as their effects and limits, and assist the mother in performing these therapies in an effective way.

P09

THE EFFECTS AND RESULTS OF INFERTILITY ON SEXUAL LIFE

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Problem Statement: All married couples hope to have children as a result of a healthy sexual life. Having children is expected, and is seen as an inevitable result of being married. Infertility is a condition where couples who are in a reproductive age are not able to get pregnant in a minimum of one year, even though having sexual intercourse without protection. Infertility on one hand, and the applied approaches of examination and treatment in order to help reproduction on the other hand, both strain the individual's, and the couple's coping skills as well as the sources of social support by draining physical and emotional energy, resulting in depression and anxiety, damaging the couple's relationship, and causing sexual dysfunction.

Infertility has an effect on couple's sexual activity. Especially having intercourse by following the fertile period of the menstrual cycle affects the naturalness of the relationship, and makes the couple feel like their sexual life is being monitored and experience therefore pressure.

Methods: Literature was reviewed for the research

Results: Egelioglu et al. (2014) found in their research that 112 women who had been diagnosed with primer infertility had low levels of both relationship and sexual satisfaction. Literature suggests that compared to men, infertile women have higher levels of depression, anxiety, and sexual dysfunction. This can be explained by the high number of medical tests performed, and the psychological changes that the hormones cause on women. In a study by Winkelman et al. (2016), women under 40 years old who were having infertility treatment were found to have higher risks of sexual dysfunction. Among infertile couples, the most common problems that men experience are depression, erectile dysfunction, and problems with intercourse. In a study where 175 Indian couples participated; men were found to have premature ejaculation, erectile dysfunction, low levels of libido, and were unable to have orgasms, whereas women were observed having dyspareunia, low levels of libido, and were unable to have orgasms. **Conclusions:** Infertility, which is seen more and more often in the world and in Turkey, effects the lives of individuals in many ways, including sexual functions. Nurses who have an important place in multidisciplinary team should counsel individuals in assessing sexual health, and in identifying and caring of the problem.

Disclosure of Interest: None Declared

P10

INNOVATIVE METHOD FOR OVARIAN HIGH-GRADE SEROUS CARCINOMA PREDICTION WITH SECRETORY CELLS CHANGES ASSESSMENT IN FALLOPIAN TUBE

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Problem Statement: Currently available diagnostic screening methods for high-grade serous ovarian carcinoma (HG-SC) do not have the required sensitivity and specificity, following by late diagnosis in the case of sporadic tumors and salpingoovarioectomy in BRCA-mutations carriers. Thus, the development of methods for early HG-SC detection is urgently required to improve prognosis of these patients. The goal of this investigation is to study secretory cell expansion (SCE), secretory cells outgrowth (SCOUT) and patients' age as the factors for HG-SC prediction. **Methods:** We recruited 287 patients with benign extraovarian pathology (n = 70), serous ovarian cystadenoma/cystadenofibroma (n = 75), borderline serous ovarian tumors (n = 73) and HG-SC (n = 69). Totally 287 fallopian tubes were investigated morphologically (3-4 pieces of fimbrial part), immunohistochemically (PAX 2

and bcl 2) and statistically (Kruskal -Wallis and Mann-Whitney tests, Pearson coefficient and the method of discriminant analysis). Results: SCE and SCOUT are characterized with PAX 2 expression decrease and bcl 2 expression increase. Diagnosis of SCE and SCOUT immunohistochemically and morphologically does not differ statistically (p>0.05). An increase of SCE and SCOUT number with age was observed for all the studied gynecological pathologies (p <0.001), although the number of SCE in all groups was higher than the number of SCOUT (p <0.001) and the correlation between age and the amount was stronger for SCE than for the SCOUT (Pearson coefficient 0.86 and 0.35 respectively). When comparing the groups of patients with different pathologies we found that the number of SCE and SCOUT in patients with HG-SC was significantly higher than in the other groups (p <0.001). A predictive formula "HG-SC = 0.22*SCE + 0.055 *SCOUT - 0.068 * age + 0.72" was developed. If the value of the function HG-SC is over 1,663 women are at high risk of HG-SC, when a value of a function is at least 1,663 women are belonging to the low-risk group. We recommend the age threshold equal to 47 years to avoid false negative results.

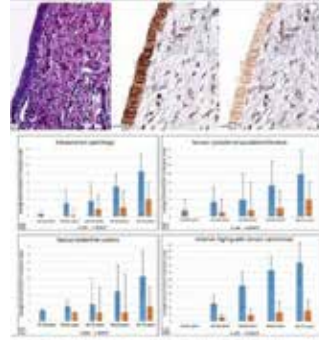


Figure 1. Secretory cells expansion (SCE) and secretory cells outgrowth (SCOUT) A-C: fallopian tube epithelium morphology (A - haematoxylin and eosin stain, B - bcl-2 expression, C - PAX 2 expression, x 400). D-D: number of SCE and SCOUT in patients.

Conclusions: As a result of our investigation we suppose that age can be an important independent risk factor for HG-SC. As an isolated marker SCE has greater efficiency than SCOUT. However, the greatest efficiency rating has joint SCE, SCOUT and the age of patient's assessment. The total percentage of correctly classified HG-SC by the proposed formula of initial observations (diagnostic efficiency) was 98.2%, sensitivity was 92.8%, specificity was 100.0%.

Disclosure of Interest: None Declared

P11

STRUCTURE OF ACUTE RESPIRATORY INFECTIONS OF PREGNANT WOMEN

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Problem Statement: The incidence of acute viral respiratory diseases is much greater than the incidence of all other known infectious human diseases. In the period of gestation of ARI observed in 12-19% of pregnant women. Pregnant women, in connection with the development of physiological immunosuppression, are at increased risk, with a possible protracted course of the disease, persistence of respiratory viruses, the emergence of bacterial complications. The purpose of the study: the study of the manifestations of acute respiratory infections in pregnant women, opportunities for diagnosis, etiological diagnosis verification. **Methods:** We examined 68 pregnant women who were hospitalized in a maternity complex №9 Tashkent with acute respiratory pathology in 2013-2014. The survey was conducted according to the clinical protocols for the provision of hospital care to infectious patients.

Results: the average age observed in pregnant patients was 24.5±0,62 years. Stages of pregnancy: first trimester – from 29,4% of women, the second – 50%, the third -20.6 per cent. At 63.2% of hospitalized women the pregnancy was the first, of 23.5% -the second, 5,9% – the third, at 5.9% -the

fourth and 1- the sixth. With a diagnosis of acute respiratory viral infection (ARVI) was sent 60,2% patient, ORI – 30,8%, influenza A- 1.5%, adenovirus infection - 3.0%, acute tracheitis – 1,5%, lacunar tonsillitis - 1.5%. At 72.1% of pregnant women carried out research of mucus from the nasopharynx to the antigens of pathogens SARS. With due account of the results of the survey diagnoses were as follows: adenovirus infection – in 23.5% of patients, flu A– 11.8%, influenza B – 5.9%, influenza A (H1N1 SWIN) – 2,9%, parainfluenza – 5,9%, RS (respiratory initially)-infection – 11,8%, ARI mixed - 8,8. 67 patients the disease was in the moderate form, of 1 case – in a grave. Complications such as focal pneumonia was observed of 5 women diagnosed with ARI mixed. Accompanying pathology was detected of 27.9% of pregnant women. The duration of hospital stay made up 5.92±0.46 day. Conclusions: The diagnosis of ARI among pregnant women is quite complicated as in the prehospital and hospital environment. Etiological verification of diagnosis has allowed to establish the etiology of viral respiratory infections in 81,6% of patients. The combination of PC-infection with adenovirus infection, influenza b, and parainfluenza considerably complicated course of the disease.

Disclosure of Interest: None Declared

P12

THERE IS A PLACE FOR FORCEPS APPLICATION AFTER A FAILED ATTEMPT TO DELIVER BY VACUUM

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Problem Statement: Instrumental vaginal delivery is an essential obstetric skill that needs continuing performance evaluation, such that overall cesarean delivery rates may be reduced. As a step towards continuing service improvement, we undertook a retrospective audit over a 5-year period of failed vacuum deliveries in Hamad Women's Hospital. Methods: The Medical Records Department provided summative annual data. We accessed the Hospital's electronic database and hard-copy archives to extract information on birthweight, volume of obstetric hemorrhage, fetal and maternal complications and the documented presence of a senior obstetrician. SPSS program was used for analysis of data. Results: The average annual delivery rate and instrumental vaginal delivery rate during the study period were: 15922 and 8.52 % respectively. There were 126 unsuccessful vacuum deliveries, which required either a low-cavity forceps application [44 (35%) with 41 successful and 3 failed forceps], or a cesarean delivery [82 (65%)]. Following Cesarean section, maternal complications: extension of uterine incisions (30.5%) bladder/ureteric injuries (2 women), were more common, while fetal complications (5 cephalhematoma and 3 scalp injuries) were more common with forceps. Overall, the complications were few and there was no difference in mean blood loss. Senior Obstetrician presence occurred in all cases where sequential procedures were undertaken. There were no immediate direct major maternal or neonatal adverse outcomes. Conclusions: With a comparative fetal birthweight, forceps delivery was associated with fewer complications than cesarean. It seems reasonable to aim to reduce the number of second stage cesareans when vacuum delivery fails. Annual skills update workshops, encouragement of self-audit and reflective practice, may empower obstetricians to selectively perform a forceps delivery when a vacuum delivery fails.

Disclosure of Interest: None Declared

P13

CONSERVATIVE MANAGEMENT OF MORBIDLY ADHERENT PLACENTA: A CASE REPORT AND REVIEW OF LITERATURE

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Problem Statement: The incidence of morbidly adherent placenta, has risen dramatically. When diagnosed antenatally, planned hysterectomy at the time of caesarean delivery is usually the standard recommended treatment for known placenta accreta. Recently, with advances in maternity services and imaging techniques, there has been gradual shift towards conservative management for retained placenta with the main aim to reduce pelvic injury, retain reproductive potential and achieve haemostasis. Methods: In this review we explore our case report, discuss the challenges of conservative management and the associated clinical implications for both clinicians and patients. Results: We describe the case of a 37 years old patient primip who presented to our department with a history of spontaneous rupture of membranes at 19 weeks. She unfortunately suffered from miscarriage soon after but had to be transferred to theatre for a manual removal of placenta. Multiple attempts to enter the uterine cavity and reach the placenta failed and a Magnetic Resonance Imaging was ordered to assess the uterine cavity. A total of 4 fibroids were identified distorting the endometrial cavity- the largest measured 10cm. A multidisciplinary team, involving obstetrician, radiologists and microbiologists, was set up and a conservative approach with regular departmental visits and two-weekly ultrasound scans was organised. The patient was monitored for a total of 10 weeks and successful resorption of the placenta was noted at each scan.

Conclusions: Conservative management of retained placenta can be a time consuming process that can only be achieved with a strong multidisciplinary team in place. When opting for a conservative approach, the individualised risk of intraabdominal infection, uterus damage and associated complications such as fistula formation need to be thoroughly explored and patient involvement and expectations throughout the entire process is vital.

Disclosure of Interest: None Declared

P14

MOTOR NEURONE DISEASE IN PREGNANCY: A CASE REPORT

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Problem Statement: BACKGROUND Amyotrophic Lateral Sclerosis (ALS), is especially rare in Obstetrics with only 6 case reports having appeared in the medical literature since 1977. Consequently, the management of an obstetrics patient suffering motor neurone disease (MND), including ALS, can be particularly challenging for both physician and patient. Little is known about the risks of ALS in pregnancy but with its progressive and degenerative nature, a combination of upper and lower motor neurone deficits can be expected. Even though ALS is not particularly associated with poorer neonatal outcomes, maternal disease does not regress and may in fact worsen throughout the pregnancy due to increased respiratory and weight bearing demands.

Methods: CASE: We describe the case of a previously healthy 41 years old who presented to us complaining of slurred speech and generalised weakness in her fingers at 25 weeks' gestation. Results: A complete neurological assessment further revealed evidence of tongue atrophy and fasciculation, and mild bilateral lower limb spastic hypertonia. The diagnosis of Motor Neurone Disease was made via Nerve Conduction Studies and a multidisciplinary approach was adopted for the ongoing management of this patient. Respiratory efforts became increasingly laborious for our patient and an elective caesareans section was performed at 38 weeks' gestation.

The operation was uneventful with no neonatal concerns. Conclusions: Pregnancy in women with ALS is rare and is generally considered a potentially dangerous event. Complications of this disease mainly affect the respiratory system and labour management should be tailored to the patient's need and severity of the disease. MND does not tend to involve the uterine sensory and motor nerves and therefore pregnancy and the delivery may be normal, but respiratory function should be carefully monitored. Generally, ALS does not have harmful consequences on fetal development but careful assessment of disease in the mother is vital.

Disclosure of Interest: None Declared

P15

A RARE CASE OF ECTOPIC PREGNANCY: WHEN THE SURGEON MAKES THE DIAGNOSIS

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Problem Statement: Ectopic pregnancy can be defined as a pregnancy that is not implanted in the uterus, occurring most frequently in the Fallopian tubes. Interstitial pregnancy, where implantation occurs in the transition between the last part of the fallopian tube and the cavity of the uterus, is one of the less common types of tubal ectopic pregnancy. Transvaginal Ultrasound, performed by a trained specialist, is an important exam for a timely diagnosis and treatment of an extra-uterine pregnancy. Treatment may include medical or surgical approaches, according to various clinical criteria.

Methods: We report a case of a young multiparous female that presented at our Emergency Department complaining of tenderness in the lower right quadrant of the abdomen. She was 13 weeks pregnant and, on bimanual examination, a 10 cm mass was detected, next to an enlarged uterus. Patient had no signs of acute abdomen or vaginal bleeding. On transvaginal ultrasound a gestational sac with a live fetus compatible with 13 weeks of gestation was identified, next to an empty uterus and an uncomplicated abdominal pregnancy, implanted in the broad ligament, was suspected. **Results:** The patient was prepared for an exploratory laparotomy and during the procedure the surgical team discovered an interstitial pregnancy. A cornual wedge resection and salpingectomy was then performed, with preservation of the homolateral ovary. The post-operative period was uneventful and the patient recovered well. On medical release, a subcutaneous contraceptive implant was inserted, considering the risk of a future pregnancy. **Conclusions:** According to different published series, there are many cases of missed interstitial pregnancy diagnosis, this is either due to the fact that ultrasound examination was not performed during an early stage or that the pregnancy was mistaken for other types of ectopic pregnancy. The choice between medical and surgical treatment depends on different factors, which include, amongst others, the gestational age at diagnosis. The surgical approach can be determined by the skill of the surgeon and the desire of the patient to preserve fertility.

Disclosure of Interest: None Declared

P16

A SPECIAL CASE OF SPINA BIFIDA APPERTA: ULTRASOUND MAKES IT EASIER

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Problem Statement: Neural tube defects (NTD) are the second most common congenital malformation worldwide. The closure of the caudal pore of the neural tube should occur by the 27th day after conception. When an error occurs during this period, spina bifida aperta becomes

apparent. Folic acid supplementation is one of the most important factors for the prevention of these defects. The diagnosis can be made by ultrasound during the first and, more accurately, the second trimester exam. Although the defect is seen at the level of the spine, the study of the cranium is very helpful for the diagnosis and also, on establishing the prognosis. The prognosis depends on the size and level where the primary defect occurs. **Methods:** We report a case of a patient, who started a folic acid supplement (5mg/day) at 5 weeks and 3 days of gestational age, when she tested positive for pregnancy. No malformations were found during the first trimester ultrasound. The second trimester ultrasound revealed a dorso-lumbar open spina bifida. **Results:** Besides the spinal malformation, we found various cranial malformations associated, designated by Chiari II and IV malformations, which can be identified on the ultrasound as the "lemon sign" (concavity of both frontal bones), "banana sign" (convexity of the cerebellum) and cerebellar hypoplasia. Attending the dimension of the defects, and considering the prognosis, the couple decided for medical termination of pregnancy.

Image:



Conclusions: This is a special type of NTD attending the extension of the lesion. Although NTD screening can be offered (by measuring maternal serum alpha fetoprotein), the diagnosis is usually made by ultrasound. The Chiari II malformation consists in the downward displacement of the cerebellar structures through the foramen magnum, and Chiari IV malformation consists on the consequent cerebellar hypoplasia. These associated defects can be seen during ultrasound performed between 18th and 20th week of gestational age, as the sensitivity and specificity of the exam is higher during the second trimester. The larger the primary defect, the easier it is to establish an ultrasound diagnosis. In Portugal, in accordance to Health Ministry recommendations, folic acid supplementation should be initiated before stopping the contraceptive method, so as to guarantee an adequate level at the time of neural tube closure and development.

Disclosure of Interest: None Declared

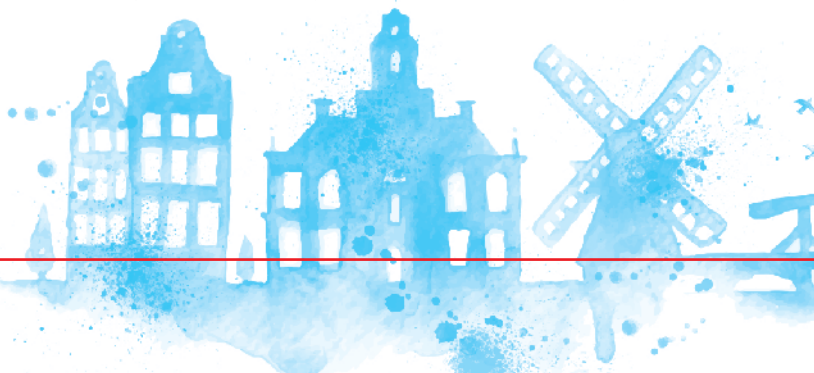
P17

PREVENTION OF PRETERM BIRTH IN MULTIPLE PREGNANCY BY USING ARABIN OBSTETRIC PESSARY

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Problem Statement: Multiple pregnancy (MP) is a leading cause of premature birth (PB). Lately, the widespread introduction of assisted reproductive technologies has led to a significant increase in the rate of multiple pregnancy and to a change in the ratio of spontaneous and induced MP. Prevention of PB in MP remains a challenge for obstetricians and there is no consensus on prevention and treatment strategies. To maintain MP, complex measures are necessary, all aimed at reducing the tone of the uterus and preservation of the cervix. Often, the only reliable predictor of threatening PB in multiple pregnancy is untimely cervical ripening. It is a



proved fact -the shorter the cervical length, the higher the risk of PB. We aimed to evaluate the efficacy of Arabin obstetric pessary in twin pregnancies at untimely cervical ripening. Methods: We studied 50 women with twin pregnancies at gestational age of 18 to 32 weeks with untimely maturation of the cervix, who were implanted Arabin pessary. Only pregnant women with cervical length ≤ 38 mm ($<25\%$) were included. Half of the participants had cervical shortening on the bases of threatened interruption of pregnancy (complaints of irregular uterine tension), and others had a short cervix with no symptom of PB. All patients have had undergone transvaginal ultrasound cervimetry, when the cervical length, diameter of the cervical canal and the internal os was measured. These data were confirmed with vaginal examination, and evaluation of the structural changes of the cervix according to the Shteinberg scale. Before installing the pessary, vaginal microbiological examination was performed. Comprehensive prevention included bed rest, tocolytic therapy, progesterone-based medications and physiotherapy. Every 2 weeks after installing the pessary, patients independently checked the pH-balance of the vaginal environment; when $\text{pH} < 4,5$, sanitation was conducted. Pessary was prematurely removed in case of premature rupture of membranes or in the development of labor. In the absence of indications for early removal, the pessary has been recovered at 37-38 weeks of gestation. Results: In 50 women with twin pregnancies, 90% of labors were spontaneous, and only 10% were induced early due to indications to save the fetus. In 26 (52%) patients, birth occurred after 37 weeks of gestation, and in 24 pregnant women (48%) with twin pregnancy, the birth was premature. Interestingly, there was no PB <28 weeks of gestation; 16% of births occurred ≤ 32 weeks, and 32% occurred between 33 and 36 6/7 weeks of gestation. PB in 8 (33.3%) of pregnant women began with premature rupture of membranes, in 2 (8.3%) with early contractions and discharge of amniotic water, in 14 (58.3%) with the start of regular contractions. On average, with the installation of the pessary, pregnancy could be prolonged with $10,4 \pm 0,7$ weeks; for term delivery - $14,2 \pm 0,3$, and for PB $8,1 \pm 0,5$ weeks. A direct correlation between the length of the cervix and eventually prolonged length of pregnancy due to pessary implantation has been noted, as well as between clinic presentation of threatening PB (along with a short cervix) and pessary installation efficiency (extended gestation period in MP). Conclusions: The use of Arabin obstetric pessary in twin pregnancies allows to prolong pregnancy, reduce the incidence of preterm birth, and improve perinatal outcome.

Disclosure of Interest: None Declared

P18 CONTINUED VERSUS DISCONTINUED OXYTOCIN STIMULATION. PROTOCOL OF AN RCT

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Problem Statement: Previous studies on induced labour suggest that, continued stimulation with Syntocinon® in the active phase of labour increases the risk of fetal distress and caesarean delivery whereas discontinued stimulation with Syntocinon® increases the risk of caesarean delivery due to lack of progression. No double-blind trial with a study population large enough to show differences in maternal and neonatal outcomes has ever been conducted. The purpose of the study is to investigate how the caesarean delivery rate is affected if Syntocinon® is discontinued at the onset of active phase of labour. **Methods:** International double-blind randomised controlled multicentre trial including 1200 women stimulated with Syntocinon® during the latent phase of labour. **Setting:** 4 Danish Centres: Aarhus University Hospital, Randers Regional Hospital, Aalborg University Hospital, and Kolding Hospital (recruiting) 3 Dutch Centres: AMC, Tergooi Hospital, and AMPHIA Hospital (inclusion expected late 2016) **Intervention:** When the active phase of labour is established (defined as 6 cm dilated orificium), the women will be randomised to either:

Continued Syntocinon®
 or
 Discontinued Syntocinon® (saline infusion)

Primary outcome
 Caesarean delivery
Secondary outcomes
 Postpartum haemorrhage
 Duration of labour
 Instrumental delivery
 Neonatal morbidity
 Birth experience
 Breastfeeding

Results: Results are expected in 2018. **Conclusions:** This is the first double-blind RCT on discontinuation or continuation of oxytocin stimulation, when the active phase of labour is established. The trial will have a major impact on both national and international clinical practice concerning induction of labour with Syntocinon®.

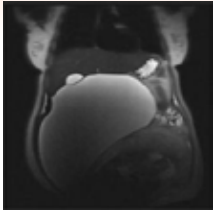
Disclosure of Interest: None Declared

P19 ADNEXAL MASS PRESENTED BY INCREASED ABDOMINAL VOLUME IN A WOMAN IN THE THIRD TRIMESTER OF PREGNANCY - CASE REPORT

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Problem Statement: The majority of the adnexal masses are simple cysts. Most of them (up to 90%) will spontaneously regress prior to the second trimester. The incidence of adnexal masses in pregnancy is unknown. A study found an incidence of almost 25% where routine ovarian visualization was implemented in a nuchal translucency scan at 11-14 weeks' gestation. The diagnosis is most accurately made by ultrasound. Magnetic resonance imaging (MRI) should be considered as a useful adjunct when ultrasound is inconclusive or insufficient to guide management of adnexal masses discovered in pregnancy. Most tumor markers may be elevated in normal pregnancy and are generally not helpful in distinguishing between a benign or malignant ovarian mass in pregnancy. **Methods:** Presentation of a case report of a pregnant woman in the third trimester with a large adnexal mass suspected by increased abdominal volume. **Results:** A 31 years-old pregnant woman was referred to our hospital by her family physician due to recent increased abdominal volume and suspicion of polyhydramnios at 34weeks' gestation. The patient was otherwise healthy and without complications in the pregnancy.

Enlarged abdomen, venous collateral circulation and bilateral leg edema stand out from clinical examination. The patient had no cardiovascular, respiratory or urinary tract symptoms. An ultrasound was performed which revealed liquid in large proportions inside the abdominal cavity suggesting ascites. The fetus was in breech position, with growth appropriate for gestational age, amniotic fluid index 22cm and posterior placenta. Multiple fetal movements were seen during the ultrasound scan. MRI revealed a large cyst (18x25cm) without septations in right upper quadrant of abdominal region. The cyst has no relation with renal or hepatic excretory systems (mild bilateral hydronephrosis). **Impression:** mesothelioma versus ovary cyst. An elective cesarean section was performed at 35weeks' gestation. A large cyst in the right ovary was detected with the need for a right oophorectomy. Histopathologic analysis confirmed a benign ovarian cyst.



Conclusions: Adnexal masses may go undetected until an advanced gestational age and may manifest in many different ways. Discussion regarding routine ultrasound visualization of the ovaries in pregnancy could be beneficial.

Disclosure of Interest: None Declared

P20

INDICATIONS FOR CESAREAN DELIVERY IN WOMEN ≥ 35 YEARS OF AGE

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Problem Statement: The occurrence of births at older maternal ages is increasing. Women ≥ 35 years of age are more likely than younger women to deliver by cesarean. This study aimed to ascertain the indications for cesarean delivery in older women. **Methods:** A retrospective observational study was conducted between January 2015 and December 2015 at the Hospital de São Bernardo in Setúbal, Portugal. Data was collected from 149 women ≥ 35 years of age that underwent cesarean delivery. Maternal and neonatal records were reviewed. **Results:** A total of 149 cesarean deliveries were analyzed. Almost half of the sample (43.6%) were women with a previous cesarean delivery and 34.9% were nulliparous. A previous vaginal delivery occurred in 21.5% of the sample (27 eutocic, 4 vacuum and 1 forceps delivery). The most common indications for cesarean delivery included, in order of frequency, fetal malpresentation (28 – 18.8%), labor dystocia (25 – 16.8%), abnormal or indeterminate (formerly, nonreassuring) fetal heart rate tracing (23 – 15.4%), Cephalo-pelvic disproportion (15 – 10.1%) and ≥ 2 previous cesarean deliveries (15 – 10.1). Cesarean delivery on maternal request is not an option at our hospital. Abruptio placenta was the indication for cesarean delivery in 5 cases, all of them occurred in multiparous women. **Conclusions:** The most common indications reported for cesarean delivery in older women is in agreement with other studies. There was a high rate of women without a previous vaginal delivery. The rate of labor dystocia was important. Multiparity was present in all cases of cesarean due to abruptio placentae. The almost linear increase in the relationship between maternal age and uterine dysfunction is a continuous effect throughout the childbearing years.

Disclosure of Interest: None Declared

P21

MYASTHENIA GRAVIS IN PREGNANCY – EXPERIENCE OF A PORTUGUESE CENTER

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Problem Statement: Myasthenia Gravis (MG) is an autoimmune disorder characterized by muscle weakness and fatigue. MG is not associated with infertility, but it exposes pregnant women to an increased risk of maternal and fetal complications. During pregnancy, about 33% of patients face clinical worsening, especially in the first trimester and during postpartum. The risk of preterm birth, low neonate birthweight or hypertensive disorders apparently are not increased in MG pregnant women. The incidence of cesarean delivery seems to be increased in these patients. The main objective of this study is to evaluate the clinical course during pregnancy and neonatal outcomes of a cohort of Portuguese patients with MG. **Methods:**

Retrospective study of all pregnant women with MG followed in a Portuguese University Hospital in the last 8 years. Myasthenia Gravis Foundation of America post Intervention status classification was used to describe the disease severity at the first obstetric visit, before labour and at post-partum. Clinical improvement or deterioration was defined taking into account the exacerbation or development of new symptoms and changes in the medication. Clinical status was characterized by Osserman's classification. The pregestational studied factors included obstetric history, length of time between diagnosis and conception and associated pathologies. The gestational studied factors included maternal age, presence of hypertensive gestational disorder, clinical course of MG and medication used during pregnancy. The perinatal outcomes assessed were gestational age at delivery, neonate birthweight, admission to neonatal intensive care unit and presence of neonatal MG. Statistical analysis was performed using the SPSS (v23.0) ®. Two-sided P values < 0.05 were used to indicate statistical significance. **Results:** 25 patients with 30 pregnancies were included. Mean maternal age was 32,4 years. Miscarriage rate was 6,7%, with delivery of 28 newborns. In the first obstetric appointment, and considering the 30 pregnancies individually, 30,0% patients were in remission, 6,7% in Osserman's stage I and 63,3% in Osserman's stage II. 30% were diagnosed in less than two years before pregnancy. One patient was diagnosed during gestation. 12% of our patients had other autoimmune disorders and Hashimoto's thyroiditis was the most frequent association. 43,3% experienced MG clinical deterioration during pregnancy and 46,4% at postpartum. 90% were medicated with pyridostigmine, 43,3% with corticosteroids and 40% needed intravenous immunoglobulin. Azathioprine was used in 2 pregnancies. There were no maternal or neonatal deaths. Mean gestational time at delivery was 38,2 weeks. The average newborn birthweight was 2919g. No cases of neonatal asphyxia were diagnosed with all newborns having an Apgar Index above 7 at the 5th minute. No cases of fetal growth restriction, preeclampsia, preterm delivery or fetal demise were observed. Global cesarean rate was 64.3%. Two newborns developed transient neonatal myasthenia. We report one case of myasthenic crisis requiring ventilation support during the postpartum period. **Conclusions:** In conclusion, the current literature about pregnant patients with MG is still limited. A high rate of clinical worsening of MG status in the mother was observed in this retrospective study, which highlights the importance of a multidisciplinary approach.

Disclosure of Interest: None Declared

P22

EARLY PREGNANCY RESULTS WITH FROZEN OOCYTES; OPTIMISM FOR WOMEN WITH POF

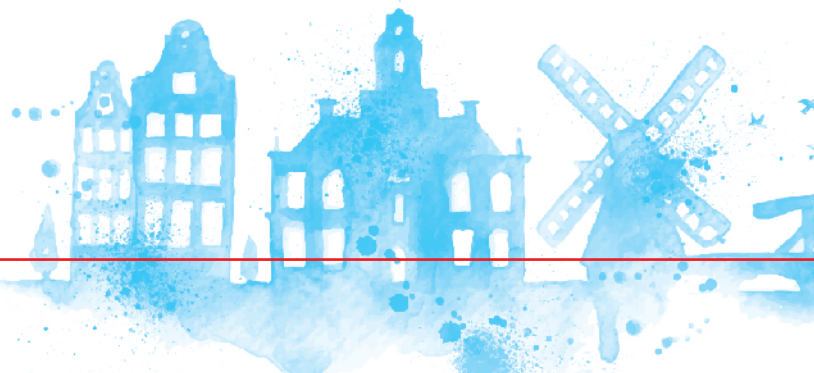
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Problem Statement: Oocyte freezing has been a controversial subject due to poor pregnancy outcome results. This is partly as a result of poor oocyte survival rates and clinical protocols used. This study demonstrates that with improved cryopreservation methods involving vitrification, a better oocyte survival rate is achieved leading to better quality embryos. Furthermore, progress in clinical protocols in preparation for embryo transfer as a result of a fertilised oocyte has improved the pregnancy rate.

The original pilot study is reported here.

Methods: 61 women were recruited from previous fresh oocyte collection cycles. All the women apart from one had IVF/ICSI. All women had 1 of the 3 eggs that were collected on the collection cycle being used, but resulted in a failure to get pregnant. Current law in Malta does not allow the freezing of embryos and therefore all excess MII oocytes were vitrified using kitycto medium and the cryo kop method (Coho et el 2008). An HRT cycle was used in preparing these women after they had been on one to two months of an oral contraceptive (17 estradiol 30µms and 75mgs levonogestrel) and down regulated for 2 weeks. The HRT cycle consisted in 17β Estradiol 2 mgs, three times a day, rising to a maximum of 4 mgs three times a day from day 12 of



the cycle onwards. Serum oestradiol levels were measured on Day 11, and 13 and ultrasound endometrial thickness on day 11, 13 and when necessary, day 15. On the day of oocyte thawing 40 mgs of progesterone pessaries were given twice a day and 1ml progesterone 100mgs was started. Embryo transfer was carried out three days after fertilisation of oocytes with fresh sperm from the partner. In a small number of cases; sperm was obtained at PESA or TESA. The duration of this study was 12 months, i.e. the 12 months the unit was operating.

Results: Out of 61 cycles that were prepared, failure to transfer an embryo occurred in only one cycle. This was in a 35-year-old patient, who out of the three oocytes thawed, two were discarded because of poor quality and the one oocyte remaining failed to fertilise after insertion. The 60 women remaining had one to three embryos transferred. 25 women had biochemical / clinical pregnancies (40.98%) of which 19 are either delivered or still ongoing.

In 70 % of the ongoing pregnancies only 2 oocytes were rejected, whilst in 30% three oocytes were injected (local law does not permit more.)

There was no correlation between successful outcome and patients age (range 23 to 42 years old). Conclusions: This small study indicates that it is possible to obtain satisfactory pregnancy rates in what is a difficult population, having had failed fresh IVF/ICSI cycles previously and for various other reasons. With Future development there is considerable hope and room for improvement. There are grounds for optimism from our population and other larger groups.

Disclosure of Interest: None Declared

P23

THE EFFECT OF TRANSDERMAL TESTOSTERONE PRETREATMENT ON CONTROLLED OVARIAN STIMULATION AND IVF OUTCOME IN PATIENTS WITH BAD EMBRYO QUALITY IN PREVIOUS CYCLES AS THE LAST ATTEMPT TO ACHIEVE A PREGNANCY WITH OWN OOCYTES

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Problem Statement: A variety of stimulation protocols with different alternatives have been used for the management of low responders, e.g., androgen treatments as testosterone, that may influence the responsiveness of ovaries to gonadotropins and amplify the effects of FSH on the ovary. Low responder was defined as a patient with <3 oocytes retrieved despite the use of a high gonadotropin dose. We considered all patient with a higher number of oocytes as a normo-responder. We wanted to try some alternative for the patients that couldn't achieve a pregnancy even they had a normal response but with low embryo quality and they didn't want to be included in our oocyte donation programme. Methods: Patients that performed two IVF previous cycles with an acceptable number of oocytes, bad embryo quality and no pregnancy, were stimulated with the protocol we use for low responders with testosterone supplementation, that consists in receiving 0.05 mg/day of triptoreline from the mid-luteal phase of the previous cycle until the end of the stimulation. Testosterone therapy is administrated the 5 days preceding gonadotrophin treatment and was carried out transdermal way using a daily single patch with a 2.4 mg/day nominal delivery rate of testosterone. They started gonadotrophin stimulation with 225 or 300 of hMG i.m. administered on an individual basis according to the ovarian response.

Results: From 2012 to 2016 we have indicated this stimulation protocol in the 14 patients with no indication of low responders, average of 38 years old, 7,6 oocytes per patient, 2,1 good or moderate quality transferred embryos per patient, 9 pregnancies achieved (2 of them double and 3 miscarriages), that means 64% pregnancy rate, 22% multiple pregnancy rate and 33% of miscarriage. Conclusions: 1. Although the stimulation treatments with testosterone supplementation have been used to improve the poor ovarian response in low responder patients, our results suggest that a subgroup of patients with a normal response could be benefited with a protocol using agonist analogues of the GnRH from the previous menstrual

cycle and transdermal testosterone supplementation on the early days of the current cycle before starting the gonadotrophin stimulation. 2. Some meta-analysis concluded that there was insufficient evidence to support the use of androgen supplementation or modulation to improve live birth outcome or to reduce the cycle cancellation rates in poor ovarian responders undergoing IVF/ICSI treatment, but nevertheless, our results suggest that in our group of patients, we obtained higher number of good quality embryos than in the previous IVF cycles on the same patients and finally, we could get a pregnancy and a live healthy baby.

3. Although our results are encouraging for patients who have already performed two previous cycles without obtaining good quality embryos or a pregnancy before the alternative of egg donation, it is required a good prospective study design and more patients to confirm these findings.

Disclosure of Interest: None Declared

P24

SAFETY IS A FEELING AND A CULTURE - A QUESTIONNAIRE BASED SURVEY FROM A NORTH LONDON DISTRICT GENERAL HOSPITAL

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Problem Statement: According to a study by Davis. R. E. et al. approximately 10% of patients suffer from adverse events during their period of care as an inpatient¹. Patients can enhance their quality of care by taking a central role within the healthcare team¹. In this study, we explored patients' ease of interaction with different members of the healthcare team, if they play an active role in their overall medical care and their willingness to challenge members of staff if they have any concerns related to the safety or quality of their care; with a final comparison of these factors with demographic details. Methods: A modified validated questionnaire¹ was delivered via an unbiased third party to obstetric and gynaecology clinic, post-surgical and ward patients. The questionnaire measured patients' readiness to ask members of the medical team questions relating to their standard and safety of care¹, using both visual analogue and Likert type scale. Demographic details were also obtained for each candidate including age, ethnicity, country of birth, level at which the English language was spoken, education and employment. The data collected was analysed using non-parametric tests¹. Results: 150 obstetric and gynaecology patients from a North London district general teaching hospital completed the questionnaires. Of the cohort size, 20% were tertiary educated. Reassuring results from the study included a) 75% of patients would enquire about their treatment plan and alternatives to suggested surgical procedures; b) 80% of patients would alert staff to prescription errors; and c) 90% of the sample population would bring their prescription list to hospital. However disconcerting results obtained from the study included a) only half of all patients asked would bring a summary of their medical history to hospital; b) 50% of patients believe they would be a bother to doctors or nurses if they were to raise issues regarding concerns about safety; c) only 20% would familiarise themselves with the hospital where they were due to receive their treatment; d) approximately 20% of patients did not feel they had any responsibility for their quality of care; e) a mere 15% of patients would take part in the WHO checklist; and f) only 10% of patients felt empowered to challenge medical staff about adherence to infection control policies, including hand-washing. Demographic analysis revealed patients who are tertiary educated, of British nationality and fluent in English are more likely to take an active role in patient safety. Conclusions: Gone are the days of the paternalistic approach to healthcare, with patient autonomy being at the forefront of medicine. However, in saying this, and despite patient safety campaigns such as 'Please Ask Campaign' by The National Patient Safety Agency¹ there is still a discrepancy in the confidence of challenging healthcare members regarding concerns about patient safety and an

apparent reluctance of some population groups to actively involve themselves within the healthcare team. 1Davis. R.E., Koutantji. M., and Vincent. C. A. How willing are patients to question healthcare staff on issues related to the quality and safety of their healthcare? An exploratory study. *BMJ Quality and Safety*, 2008, 17, 90-96.
Disclosure of Interest: None Declared

P25

MIDWIVES' AND NURSES' STATE OF INTERNALIZATION AND PRACTISE OF OCCUPATIONAL ROLES WITHIN THE SCOPE OF AUTONOMY

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Problem Statement: As a result of scientific studies in medicine and reflection of technology on occupational practices, the number of occupational roles increased in care-focused professions. Application of such roles independently increases the effectiveness of midwifery-nursing in the field of health. One of the criteria for being a profession is to take independent decisions regarding occupational practices. Autonomy is considered a major component of professionalism and accepted to be a main factor that enables midwifery and nursing gain a professional status. Autonomy is defined as the state of independency and self-management that enables a field of interest to realize its values while completing the occupational tasks and making decisions.

The place and importance of autonomy for midwifery and nursing practices are not acknowledged sufficiently by health professionals or among midwives and nurses. The literature in this field is almost non-existent in Turkey. **Objective:** This study aims to identify midwives' and nurses' state of internalization and practice of occupational roles within the scope of autonomy.

Key Words: Midwifery/Nursing Role, Autonomy, Professionalism

Methods: This study was conducted with the participation of 361 people that work in 1 university hospital, 2 public hospitals and 1 private hospital. The data form consisted of 7 items for demographic information and 13 items for independent roles (likert type). The data were analyzed with SPSS 13,5.

Results: 96.4% of the participants were females and average age for all participants was 30.96 ± 7.05 , 49% were working at university hospital, 39.6% were working at public hospitals and 11.7% were working at private hospital. 88.8% of the nurses in the study were working as clinical nurses, while 12.2% had managerial positions. Analyses of the 13 independent roles based on the importance attached to them revealed that the highest average was 8.41 ± 2.06 for the treater role and the lowest average was 7.36 ± 2.572 for the managerial role. Gender, age and place of work did not have statistically significant relations with independent role of nurses and the importance attached to these roles ($p > 0.005$). **Conclusions:** Autonomy is accepted to be a main factor that enables midwifery and nursing gain a professional status. One of the criteria for being a profession is to take independent decisions regarding occupational practices. Education level of midwifery and nursing increased and more scientific studies are conducted with masters and doctorate degrees. These developments increase the level of autonomy and professionalism. Maintaining the trend for the increase in the number of autonomous roles and the level of autonomy is important to make midwifery-nursing more effective-efficient professions and for quality-function of the care provided for ill/healthy people.

Disclosure of Interest: None Declared

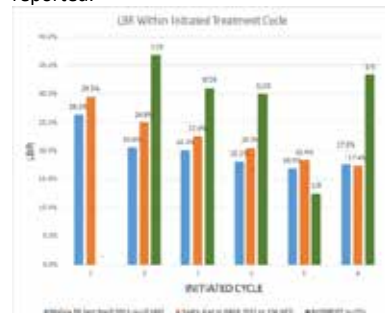
P26

LIVE BIRTH RATES FOLLOWING A SINGLE CYCLE OF THE AUGMENT TREATMENT

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Problem Statement: The AUGMENTS (Autologous Germline Mitochondrial Energy Transfer) Treatment has recently been introduced but the live birth rate (LBR) associated with the AUGMENT treatment has not been previously reported. **Methods:** To evaluate the LBR of the AUGMENT treatment, a retrospective cohort study was undertaken following ethics committee approval. The LBRs within initiated cycles were evaluated among patients who underwent a single AUGMENT treatment (AUG) in two centers in Canada and the UAE. The analysis included poor prognosis patients with no prior live births who experienced 1-5 prior failed IVF cycles and who underwent AUG that either failed or resulted in embryo transfer by mid-August 2015. Specifically, an AUG cycle was considered initiated and evaluable if an ovarian stimulation cycle resulted in an AUG attempt that either failed to produce a viable embryo or resulted in a fresh or frozen embryo transfer. The LBR within an initiated AUG cycle was calculated as the ratio of the number of pregnancies resulting in a live birth after 24 weeks' gestation to the number of evaluable AUG cycles initiated for that given cycle. Physician reported, maternal and neonatal serious adverse events (SAEs) were similarly evaluated. **Results:** Seventy-five patients met the study criteria, averaged 36 years of age, averaged 2.5 previous failed IVF cycles and had no prior live births. Following a single IVF cycle with AUG, 23 live births were observed. (LBR: 23/75; 30.7%). The within-cycle LBRs for AUG was $\geq 30\%$ for each initiated cycle except the 5th overall initiated cycle (12.5%). No maternal or neonatal AUG-related serious adverse events were reported.



Conclusions: For patients with no prior live births and up to five prior failed IVF cycles, the single cycle LBR associated with the AUGMENT treatment was mostly at least 30% irrespective of the number of previously failed IVF cycles. Although the data is limited and no direct comparisons can be made, the AUGMENT treatment, when taken together with the peer reviewed literature, shows promise as an adjunct to IVF.

Disclosure of Interest: D. Nayot: None Declared, M. Fakih: None Declared, G. Cohn Shareholder of: OvaScience, Employee of: OvaScience

P27

THE EPIDEMIOLOGY AND RISK FACTORS OF THOSE WHO RECEIVED SURGERY AFTER C SECTIONS IN 3 YEAR FOLLOW UP

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Problem Statement: Postoperative infections, which are seen in important rates after caesarean sections, increase hospital stays durations, patient mortality, and morbidity rates. In order to decrease postoperative surgical infections, risk factors should be determined well, antibiotic prophylaxis should be applied appropriately, and other technical precautions should be taken.



In the context of the importance of surgical area infections, this study was performed in order to determine surgical area infections detected in a 3-year interval in hospital and their relationship with risk factors. Methods: Our study was conducted in the postnatal service of a private branch training and research hospital. The sample of our study consisted of 94 cases who underwent caesarean section and developed surgical area infection after the operation. The number of caesarean sections performed in the department in 3 years (2013-2014-2015) was 11851. The statistical evaluation of the 94 cases which developed surgical area infection after operation within 3 years were performed. In the evaluation phase of the study, the SPSS program was used.

Results: When the personal and obstetric characteristics of the patients who were diagnosed with surgical area infection within 3 years in the postnatal service were examined, 55% were found to be over 27 years of age, 69.1% were found to be primary caesarean sections, 36.5% were found to have a gravid number of 2-3, and 62.8% were found to be monitored pregnant women.

When the findings related to the c section operations of our cases were examined, 62.3% were found to undergo the operation in the first day they were admitted to the hospital, 71.3% were found to be operated as emergency procedures, 53.1% were found to have operation durations between 25 and 35 minutes, and 65% were found to have stayed at the hospital for an additional 2 days, making a 2-day hospital stay the most common. It was further determined that 55.3% of the participants presented with surgical area infections within 3-10 days, with the factor behind the surgical area infection being undetermined in 53.2% of the cases and 28% of the cases having gram negative factors in those infections. When the treatment processes for the surgical area infections were evaluated, 70.2% of the patients were found to be readmitted for antibiotics treatments, and 1st group cephalosporin antibiotics were found to be the most preferred. Conclusions: The 3-year post c section surgical area infection rate was found to be 0.79% as a result of the study, and the present rate was determined to be a low rate according to Centers for Disease Control (CDC) and National Hospital Infections Survey Network (UHESA) criteria, with regular trainings, a successful infection control program, and a regular survey system being effective in the low surgical area infection rates.

Disclosure of Interest: None Declared

P28

STRUCTURAL MODIFICATION OF PENTOXIFYLLINE TO IMPROVE THE SPERM FUNCTION

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Problem Statement: Even though pentoxifylline (PTF) is used as a potent sperm motility enhancer in assisted reproductive treatment due to its adverse effect on fertilization and embryonic development its application in clinical set up has raised concern among the infertility specialists. The present investigation is on modifying the structure of pentoxifylline to lower its adverse effects on oocyte and embryos without compromising with its efficacy on enhancing the motility in spermatozoa. Methods: Synthesis of the modified PTF was performed by adding 6 methoxy naphthaldehyde to methyl keto group of PTF under alkaline condition. The stable chemically modified PTF (mPTF) was purified by recrystallization process. The purity and structure was identified by using IR and Mass spectra and subjected to biological analysis. The human spermatozoa from the normozoospermic ejaculates were processed with EBSS media containing PTF and mPTF. The sperm motility and survival was assessed at various time intervals. Results: The effect of mPTF on motility pattern of the human spermatozoa was assessed at various time intervals. Both pentoxifylline and mPTF increased the progressive motility in comparison to control at early intervals, even though the increase was statistically not significant. At 0.25mM concentration, the percentage of motile spermatozoa was similar to that

of PTF above which it started decreasing. However, at 24 intervals, the motility dropped in all the groups which was more predominant in control and PTF groups. In mPTF group at 0.25 mM significantly higher percentage of motile spermatozoa was observed even at this interval ($P < 0.01$). In addition, the mPTF had slower acrosome reaction rate compared to PTF. Prolonged incubation of processed spermatozoa upto 24h did not result in any increase in chromatin instability compared to control or PTF group. This suggests that mPTF increases the motility and also improves the survival under in vitro conditions which is better than PTF. Conclusions: In conclusion, the structural modification of PTF is possible and can enhance the sperm motility and survival compared to the parent compound.

Disclosure of Interest: None Declared

P29

LABOR INDUCTION IN PREGNANCIES COMPLICATED WITH DIFFERENT TYPES OF DIABETES MELLITUS

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Problem Statement: pregnancies complicated with Diabetes Mellitus (DM) have high rates of Cesarean Section (SC). Cervical preparation for these patients helps to provide labor induction (LI) and vaginal delivery to decrease CS frequency.

Methods: a retrospective cohort comparative study (from January 1st 2010 to June 30th 2016) included the 243 deliveries. The cases were divided into 4 groups: 1st – 65/243 (26.7%) DM type I; 2nd – 32/243 (13.2%) DM type II; 3rd - 108/243 (44.4%) insulin-dependent gestational DM; 4th – 38/243 (15.7%) uncomplicated cases of spontaneous vaginal labor. Including criteria: age ≤ 40 , gestation age ≥ 38 weeks, compensation of DM, prelabor risk factors score < 35 , well-being of feto-placental complex, cephalic presentation, cervix ripeness ≥ 4 in Bishop Score (BS). Mifepristone (MF) (400 mg, oral, twice in 24 hours) was used in the cases of cervix ripeness 4-5 BS; intracervical Foley catheter (FC) was used in the cases of cervix ripeness 6-7 BS for labor preinduction. Amniotomia was performed for LI in the cases of cervix ripeness ≥ 8 BS. Results: mean gestational age at LI was $39,0 \pm 1,6$ weeks; average cervix ripeness before LI was 8.4 ± 0.3 BS. Induction-to-delivery interval was less than 36 hours in 228/243 (93.8%) cases. Abnormalities of labor activity were registered in 9/65 (13.8%) in the 1st, 8/32 (25.0%) in the 2nd, 9/108 (8.3%) in the 3rd vs. 2/38 (5.3%) cases in the 4th group ($p < 0.05$). Fetal distress was registered in 9/65 (13.8%) in the 1st, 2/32 (6.7%) in the 2nd, 12/108 (11.1%) in the 3rd vs. 1/38 (2.6%) cases in the 4th group ($p < 0.05$). Shoulder distocia was registered in 2/65 (3.1%) cases in the 1st group. CS rate was 11/65 (16.9%) in the 1st, 6/32 (18.8%) in the 2nd, 3/108 (2.8%) in the 3rd vs. 1/38 (2.6%) cases in the 4th group ($p < 0.05$). The labor were complicated with operative vaginal delivery (vacuum-extraction) in 2/65 (3.1%) in the 1st; 2/32 (6.3%) in the 2nd; 1/108 (0.9%) in the 3rd; vs. in 0/108 cases in the 4th group. Macrosomia was registered in 7/65 (10.8%) in the 1st, 6/32 (18.8%) in the 2nd, 26/108 (24.1%) in the 3rd vs. in 3/38 (7.9%) cases in the 4th group ($p < 0.05$). Low birth weight was registered in 6/65 (9.2%) in the 1st, 4/32 (12.5%) in the 2nd, 2/108 (1.9%) in the 3rd vs. in 2/38 (5.3%) cases in the 4th group. Neonatal period was uncomplicated in 33/65 (50.8%) in the 1st, 17/32 (53.1%) in the 2nd, 68/108 (64.0%) in the 3rd vs. in 37/38 (97.4%) cases in the 4th group. Neonatal disorders were also evaluated: hypoglycemia was registered in 17/65 (26.2%) in the 1st, 6/32 (18.8%) in the 2nd, 6/108 (5.6%) in the 3rd vs. in 0/108 cases in the 4th group ($p < 0.05$). Grade I of cerebral ischemia was registered in 15/65 (23.1%) in the 1st, 8/32 (25.0%) in the 2nd, 30/108 (27.8%) in the 3rd vs. in 1/38 (2.6%) cases in the 4th group ($p < 0.05$); neonatal intensive care unit was not needed. Conclusions: MF and FC application is effective for cervix preparation to perform vaginal delivery in pregnancies complicated with DM. We managed to decrease CS rate by observing special conditions (a possibility of specialized obstetric and

neonatal care unit, monitoring of glycemia and fetal well-being, epidural analgesia, refusal of oxytocin administration).

Disclosure of Interest: None Declared

P30

EVALUATION OF CLINICAL CHARACTERISTICS OF ENDOMETRIAL POLYPS IN PATIENTS WITH INFERTILITY

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Problem Statement: It is well known that endometrial polyps can negatively impact female fertility. The study aim was to investigate the clinical characteristics of endometrial polyps in women with and without infertility. **Methods:** Study included all patients of reproductive age who had a hysteroscopy due to endometrial polyps during one-year period (1st January – 31st December 2014.) at the Clinic of Obstetrics and Gynecology, Clinical Center of Serbia. All patients were divided into two groups: with and without infertility problems. Preoperatively, detailed medical history was taken from all patients (age, BMI, parity, comorbidities such as hypertension, diabetes etc, hormone therapy, symptoms/signs, polyp recurrence) and ultrasound scan was performed with assessment of polyp's largest diameter. During hysteroscopy, localization of polyps (anterior, posterior or lateral walls, fundus or isthmus) was registered. All removed polyps were sent for histopathological evaluation. Obtained data regarding patients and endometrial polyps were compared and analyzed between two groups. **Results:** Study involved 139 patients (average 38.63 years of age), out of which 42 (30.2%) had infertility problems. As expected, infertility patients had fewer pregnancies achieved than women from control group. On the other hand, there were no significant differences regarding patient's age ($p=0.327$), BMI ($p=0.547$), presence of comorbidities ($p=0.192$), hormone therapy use ($p=0.226$), symptoms/signs linked with polyp ($p=0.689$), localization ($p=0.914$) or diameters of polyps ($p=0.084$), polyp recurrence ($p=0.066$) and histopathological types of polyps ($p=0.942$) between women with and without infertility problems. **Conclusions:** Clinical characteristics of endometrial polyps were found to be comparable in women with and without infertility problems.

Disclosure of Interest: None Declared

P31

OVARIAN CARCINOMA DURING PREGNANCY – PATIENT CHARACTERISTICS AND OUTCOMES

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Problem Statement: Ovarian cancer is the second most frequent gynecological cancer complicating pregnancy. The study aim was to assess clinical characteristics, treatment outcomes and prognosis of pregnant women with ovarian carcinomas. **Methods:** Study involved all pregnant women with ovarian carcinomas during pregnancy treated in Clinic for Obstetrics and Gynecology Clinical center of Serbia from 2010 to 2014. Diagnosis was based on US examination, tumor markers and biopsy. The pregnancy course (fetal condition and malformations) and outcome (maternal and fetal survival and the pregnancy duration) were evaluated.

Patients were followed-up for one year after delivery. Parameters that could influence the condition of mothers and children (trimester of diagnosis, tumor grade, treatment type and time, type of birth) were investigated. **Results:** We registered eight women with ovarian carcinomas during pregnancy, aged in average 29.75 years. Tumors were diagnosed in all trimesters ($p = 0.882$) and they were of all grades ($p = 0.739$). Three tumors increased during pregnancy while others did not change ($p = 0.480$). Three patients were treated only with surgery while others besides surgery received adjuvant therapy after pregnancy. Surgery was done during pregnancy in seven women without adverse consequences ($p = 0.044$). Majority of children were in good state throughout pregnancy ($p = 0.034$), but were delivered by Caesarean Section before term (30.38 gestational week in average). All women survived pregnancy, but two died seven and ten months after delivery. Three women were in good condition 12 months after delivery while three were still on therapy ($p = 0.480$). Three children died after birth, while others were in good condition 12 months after delivery. Good condition of mothers 12 months after delivery correlated with tumor grade ($p = 0.015$) and the time that therapy started ($p = 0.037$). Children's outcome was influenced by their birth weight ($p = 0.024$) and gestational week at delivery ($p = 0.007$). **Conclusions:** Preferable outcome for both mothers and children can be obtained with early diagnosis and adequate therapy of ovarian carcinomas in pregnancy.

Disclosure of Interest: None Declared

P32

SAFETY OF CAESAREAN MYOMECTOMY IN PATIENTS WITH SINGLE ANTERIOR WALL AND LOWER UTERINE SEGMENT FIBROIDS

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Problem Statement: Caesarean myomectomy (CM) is considered a procedure with significant morbidity, a part for patients with fibroids on anterior uterine wall and in the lower uterine segment (LUS) incision site. This investigation aims to evaluate the safety of CM in patients with single anterior wall and LUS fibroids.

Methods: Patients submitted to CM with single anterior wall or LUS fibroids were included in the study. For each patient we recorded: age, parity, neonatal body weight, gestational week of delivery, Caesarean Section (CS) type (emergency or elective), fibroid type (subserous or intramural) and size, volume and number of intraoperative transfusions, pre- and post-operative hemoglobin and hematocrit levels, presence of major complications and duration of hospitalization. All data were compared and statistically analyzed. **Results:** Fifty-three patients of 34.28 ± 4.36 years, 36 women had a CM (study group), while in 17, fibroids were left untouched during CS (control group). Delivery age was largely at term (39.08 ± 1.41 gestational weeks) and CS was elective in 64.2% of cases, with no significant differences in sociodemographic and clinical findings. The average size of fibroids was 55.44 ± 36.11 mm in the study, and 47.25 ± 11.24 in the control group ($p=0.873$). Investigated groups exhibited significant difference regarding type of fibroids ($p=0.003$). Out of 36 CM cases, 30 (83.3%) had subserous or pedunculated fibroids while 6 (16.7%) had intramural fibroids. Most of the fibroids in the control group were intramural (58.8%). Average duration of surgery was 62.5 ± 16.1 minutes in study and 53.82 ± 13.05 control group, respectively ($p=0.058$). Intraoperative hemorrhage was significantly more frequent in the study group ($p=0.045$). Nevertheless, neither number nor the volume of intraoperative transfusions were significantly different, although women in the study group had significantly lower postoperative



hemoglobin and hematocrit levels ($p=0.000$ each). None of the major CM complications described in the literature was recorded. Moreover, there was no difference among groups regarding duration of hospital stay, which lasted on average 5.25 ± 1.66 days in the study and 5.12 ± 2.57 in the control group. Conclusions: Caesarean myomectomy in patients with single anterior wall and/or lower uterine segment fibroids does not cause any significant increase in perioperative morbidity and therefore can be considered as opportune procedure in such cases.

Disclosure of Interest: None Declared

P33 KISSPEPTINS AND THEIR EFFECT ON REPRODUCTIVE HORMONES – A REVIEW OF LITERATURE

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Problem Statement: Human reproduction is regulated by the interaction of hormones from the hypothalamus, anterior pituitary and the gonads which form so-called gonadotrophic axis where GnRH has the central role. There are many signals that contribute to the neuroendocrine regulation of this axis. Some of them, like kisspeptins, have been in the focus of numerous researches recently. First reports about kisspeptins have been recorded in the oncology literature where anti-metastasis activity of kisspeptins has been proven in various tumors. It has been shown that kisspeptins have an important role in the puberty onset and fertility through their impact on the pubertal activation of the GnRH system, the control of gonadotropin secretion and the preovulatory surge of gonadotropins. These findings have been a crucial evidence of the kisspeptins role in the regulation of normal fertility with their potential utilization in the treatment of reproductive disorders. **Methods:** This paper presents a review of literature with the current information about kisspeptins and their role in the regulation of reproduction as well as their use in the treatment of infertility. Only papers published in the last 10 years (between 2006 and 2016) were included in this review. **Results:** The potential role of kisspeptins in reproduction has been emphasized in the literature only in the last decade. These studies have described the roles of GPR54 and its ligands in the control of reproductive function. Numerous studies have shown that GnRH neurons are stimulated by kisspeptins with the GnRH release and further LH and FSH release. Kisspeptin-10 stimulates gonadotropin release both in men and women during the preovulatory phase of menstrual cycle but it does not have an impact on LH and FSH release during the follicular phase among women. This suggests that the main place of kisspeptin stimulatory actions are the GnRH neurons, not the pituitary. 'Inactivating' mutations in kisspeptin or its receptor have been recorded among patients with hypogonadotropic hypogonadism and delayed puberty. Contrary, patients with 'activating' mutations will undergo precocious puberty. That is why kisspeptin has a vital role in the neural circuitry and in the modulation of the steroidal feedback effect at the hypothalamus and stimulates the preovulatory LH surge in females. Kisspeptins may be used to induce final oocyte maturation in IVF cycles. This new trigger concept may offer a completely new, natural pharmacological option for ovulation induction. Kisspeptins can safely trigger oocyte maturation in women undergoing IVF treatment at high risk of developing OHSS. **Conclusions:** Recent studies about kisspeptins and their effect on the reproductive hormone release have promoted our understanding of the hypothalamic control of the reproductive hormone axis. Kisspeptin may be in the focus of interest in terms of applied medicine as a target for the development of improved therapeutic alternatives for the manipulation of the reproductive system. In terms of clinical medicine, kisspeptins and GPR54 can be a potential disease-causing factors among humans. All things considered, it seems that kisspeptins are a new domain of research in neuroendocrinology with a great potential in treatment of infertility and reproductive endocrine disorder. Moreover, the role of

kisspeptin in the aspect of detection and treatment of specific cancers is yet to be discovered.

Disclosure of Interest: None Declared

P34 PERIODONTAL DISEASE AND PREECLAMPSIA: IS THERE AN ASSOCIATION?

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Problem Statement: Currently there are still controversial results about associations between periodontal disease and adverse perinatal outcomes (preterm birth, preeclampsia, fetal growth restriction, perinatal death), although a number of studies have carried out in this field. The aim of this study was to investigate if there is an association between Preeclampsia (PE) and Periodontal Disease (PD) or not. **Methods:** A prospective case control study was carried out on 32 pregnant women with preeclampsia and 54 without preeclampsia. All patients were evaluated in terms of Gestational Age (GA) at screening, presence of tobacco use, presence of obesity, history of preterm birth, presence of chronic hypertension and Diabetes. The number of teeth and restorations on all tooth surfaces, and clinical periodontal parameters were evaluated. According to the physical examination, Plaque Index (PI), Gingival Index (GI) and Probing Depth results, patients were divided in to three groups as Periodontitis, Gingivitis (G) and Healthy (H). **Results:** There is no significant differences between the two groups in terms of investigated demographic parameters which also shown in Table 1. The two group were similar in respect of GA at screening, maternal age, gravidy and parity. All parameters evaluated in the patients were significantly worse in patients with PE. In other words, PE Group has significantly more Plaque ($p=0.027$), significantly more common gingival inflammation ($p=0.004$) and significantly deep probing depth ($p=0.008$) when compared with the control group. On the basis of these results, 15 (46.8 %) patients were got diagnosis with Periodontitis in PE group and 13 (24 %) patients were got diagnosis with Periodontitis in control group and thus Periodontitis were detected significantly common in PE group ($p=0.035$). Although gingivitis is determined more frequent in PE when compared with control group (11 vs 9), the difference was not statistically significant ($p=0.054$). The remaining patients were considered healthy based on oral screening results. Patients with healthy oral hygiene were significantly common in control group ($p<0.001$).

Table:

	Pregnancy with Preeclampsia (n:32)	Pregnancy without Preeclampsia (n:54)	P value
GA at screening (Weeks)	29.78	30.08	0.55
Obese (BMI >30)	6 (18.7 %)	10 (18.5 %)	1.03
Current Tobacco use	8 (25 %)	8 (14.8 %)	0.263
Maternal Age	29.78	30.08	0.593
Gravidy	1.97	2.26	0.193
Parity	0.84	1.11	0.129
Oral Screening Parameters	Mean (Min-Max)	Mean (Min-Max)	
Plaque Index	1.55 (0-3)	1.15 (0-3)	0.027*
Gingival Index	1.70 (0-3)	1.19 (0-3)	0.004*
Probing Depth	2.57 (1-7mm)	2.07 (1-7mm)	0.008*
Oral Hygiene Status			
Periodontitis	15 (46.8 %)	13 (24 %)	0.035*
Gingivitis	11 (34.3 %)	9 (16.6 %)	0.054
Healthy	6 (18.7 %)	32 (59.2 %)	<0.001*

* Statistically Significant

Conclusions: According to our results, pregnant women who already have preeclampsia have significantly more common periodontitis compared with the control group. The higher incidence of periodontal disease parameters in preeclampsia group suggests that presence of periodontal disease may play a role as an etiologic factor in developing preeclampsia.

P35

INCIDENCE, ASSOCIATED FACTORS AND INFLUENCE OF GESTATIONAL DIABETES ON PERINATAL OUTCOME BEFORE AND AFTER IMPLEMENTATION OF NEW WHO GUIDELINES

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Problem Statement: Gestational diabetes (GD) significantly contributes to perinatal mortality and morbidity and has an increasing prevalence worldwide. Ever since publication of the HAPO study in 2010, worldwide guidelines for diagnosis and management of GD are based on the recommendation of the International Association of the Diabetes in Pregnancy Study Group (IADPSG). Before that period, the majority of guidelines for GD diagnosis and management were based on the 1999 WHO criteria. The aim of this study was to determine the incidence, associated factors and influence of GD on perinatal outcome before and after implementation of new WHO guidelines.

Methods: This is a cross sectional study performed using data from medical birth certificates collected in 2010 and 2014 in Croatia. The first group delivered in 2010 was selected as representative of pregnant women diagnosed and managed for GD using the 1999 WHO criteria where cut off values after intake of the 75g OGTT were: fasting glucose value 6.1 mmol/L and 2 hours glucose value 7.8 mmol/L. For comparison group we opted for year 2014 when all perinatal units in Croatia changed their guidelines to those defined by the IADPSG, where cut off values of the 75g OGTT are: fasting value 5.1 mmol/L, 1-hour value 10.0 mmol/L and 2-hour value of 8.5 mmol/L. Associated factors include age, height, weight before and at the end of pregnancy of pregnant women, while perinatal outcome was assessed by onset of labor, mode of delivery and Apgar score. All statistical analyses, including logistic regression (LR) analysis, were performed using STATISTICA ver. 12.0.

Results: The study included 81.748 deliveries and 83.198 newborns. Prevalence of GD increased from 2.2% in 2010 to 4.7% in 2014. GD was shown to be a significant predictor of low Apgar score, labor induction and caesarean section in 2010, while in 2014 GD was predictive for labor induction and caesarean section, but not for low Apgar score. Age was predictive for labor induction only in 2014 and for caesarean section in both years, while BMI before pregnancy was predictive for all observed perinatal outcomes in both years. MVLR models for all three assessed perinatal outcomes are presented in table 1.

Table 1 Multivariate LR models for low Apgar score, induction of labor and caesarean section as an outcome

Low Apgar score				
Year	Risk factors	Odds ratio	95% CI	P
2010	GD	1.656	1.068-2.720	0.047
	Age	1.008	0.999-1.028	0.119
	BMI before pregnancy	1.050	1.026-1.073	<0.001
2014	GD	1.246	0.800-1.939	0.330
	Age	0.991	0.971-1.011	0.337
	BMI before pregnancy	1.038	1.015-1.062	0.001
Induction of labor				
Year	Risk factors	Odds ratio	95% CI	P
2010	GD	2.068	1.761-2.427	<0.001
	Age	0.994	0.988-1.000	0.007
	BMI before pregnancy	1.043	1.035-1.050	<0.001
2014	GD	1.715	1.515-1.940	<0.001
	Age	1.008	1.002-1.014	0.008
	BMI before pregnancy	1.039	1.031-1.046	<0.001
Caesarea section				
Year	Risk factors	Odds ratio	95% CI	P
2010	GD	1.567	1.360-1.806	<0.001
	Age	1.040	1.035-1.045	<0.001
	BMI before pregnancy	1.049	1.043-1.055	<0.001
2014	GD	1.458	1.310-1.622	<0.001
	Age	1.040	1.035-1.045	<0.001
	BMI before pregnancy	1.045	1.039-1.051	<0.001

Conclusions: Prevalence of GD in Croatia has more than doubled from year 2010 to 2014, which is trend observed worldwide. Despite implementation of new diagnostic criteria and management guidelines, GD remains burdened with increased risk of labor induction and caesarean section, but no longer with low Apgar score. This may be influenced by several parameters, but more precise and stricter diagnostic guidelines as well as management adjusted to these guidelines may be responsible for this observation. Further studies on management and outcome of pregnancies burdened with GD are warranted to entirely understand the significance and impact of new diagnostic guidelines of GD. The study also showed that BMI remains an important predictor for all three perinatal outcomes. Thus, it is important to raise public awareness of appropriate weight management before and during pregnancy in order to improve antenatal care and perinatal outcomes.

Disclosure of Interest: None Declared

P36

THE EFFECTS OF POSTPARTUM DEPRESSION ON BREASTFEEDING

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Problem Statement: Mild or heavy depression in postpartum period is the most common mental disorder. 70-85 percentages of the postpartum women have mental disorders at the postpartum period. The depression during the postpartum period affects negatively the baby-mother relationship, the baby care and parenting role. This study was performed to determine the effect of breastfeeding on depression experienced by women in the postpartum period.

Methods: The population of the study was composed of women admitted to the maternity department of Maternity Hospital in Konya/TURKEY and the sample was composed of 324 voluntary literate women at the age of 18 and over. The data were collected with face-to-face interviews via the sociodemographic questionnaire created by the researchers, the Edinburgh Postnatal Depression (EPDS) and the Breastfeeding Self-Efficacy Scale (BSES). Results: The mean range of women's BSES score was 53.50±10.14 (min=19, max=70), and the EPDS score was 8.77±5.40 (min=0, max=27). Women's BSES scores were determined to be statistically significantly different as to the problems at birth and domestic violence (p<0.05). Women's EPDS scores were determined to be statistically significantly different as to wanted pregnancy, taking prenatal care, problems at birth and domestic violence (p<0.05). **Conclusions:** According to our findings, there was a negative correlation between EPDS and BSES scores. Women's breastfeeding success was determined to be at intermediate level, while a quarter of women were depressed. There was also a negative correlation between breastfeeding and depression.

Disclosure of Interest: None Declared

P37

ANTENATAL INSULIN TREATMENT IN GESTATIONAL DIABETES MELLITUS: ASSOCIATED FACTORS AND PERINATAL OUTCOME

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Problem Statement: Gestational diabetes mellitus (GDM) is a glucose metabolism disorder detected during pregnancy that is closely associated with maternal and fetal complications. In Portugal, the diagnosis of GDM is established with a fasting glucose level (FGL) ≥92mg/dL in the first trimester or with an altered 75g Oral Glucose Tolerance Test (OGTT) performed between 24th-28th weeks. Whenever fasting glucose level is ≥92mg/dL or ≥180mg/dL at 60' or ≥153 at 120' a diagnosis of GDM is made. In Women



who do not achieve desired glucose levels with diet and exercise therapy only (DETO), insulin should be started. Target glucose levels are <90mg/dL at fasting and <120mg/dL one hour postprandial. All pregnant women with GDM undergo a reclassification test six weeks postpartum and it is considered abnormal when glucose levels after a 75g OGTT are ≥ 110 mg/dL at fasting or ≥ 140 mg/dL two hours postprandial. We perform this study to identify factors associated with antenatal insulin treatment (AIT) during GDM and to access perinatal outcome. Methods: Data from a total of 487 women diagnosed with GDM that delivered in our hospital between 2012 and 2014 were retrospectively collected. The pregestational studied factors included family history of diabetes mellitus among first-degree relatives, BMI before gestation and history of GDM or macrosomia in former pregnancies. The gestational studied factors included maternal age, gestational trimester of diagnosis, fasting plasma glucose levels and OGTT values at diagnosis. The perinatal outcomes assessed were neonatal birthweight, neonatal morbidity (admission to neonatal intensive care unit, presence of neonatal respiratory distress syndrome) and positive postpartum reclassification status. Statistical analysis was performed using SPSS (v23.0)®. A statistical significant association was considered with a p value <0.05. Results: During the studied period, the prevalence of GDM was 6,7%. The antenatal insulin treatment rate in the studied group was 69%. Older maternal age and higher fasting plasma glucose levels at the OGTT performed between 24th-28th weeks were significantly associated to AIT. Neither the pregestational factors studied, the gestational trimester of diagnosis nor the fasting plasma glucose levels in the first trimester were associated with the need for AIT. AIT is significantly associated to cesarean delivery and to positive postpartum reclassification status. There were no significant differences in neonate birthweight and neonatal morbidity in the AIT group compared with DETO group. Conclusions: Despite its retrospective design and small sample size, this study shows that maternal age and fasting plasma glucose levels at 24th-28th weeks are significantly associated with AIT as well as cesarean delivery and an abnormal postpartum reclassification. On the other hand, no pregestational factors seem to be related to AIT.

Disclosure of Interest: None Declared

P38 PREDICTORS OF FETAL MACROSOMIA IN GESTATIONAL DIABETES MELLITUS AND PERINATAL OUTCOME

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Problem Statement: Gestational diabetes mellitus (GDM) is a glucose intolerance with onset or first recognition during pregnancy and may affect perinatal outcome. The most important perinatal concern is excessive fetal growth. Maternal hyperglycemia prompts fetal hyperinsulinemia particularly during the second half of gestation which in turn stimulates excessive somatic growth. Macrosomia is defined variably by different authors. We consider macrosomia if birthweight exceeds 4000g in cases of gestational diabetes. The fetus from diabetic mothers have excessive fat deposition on the shoulders and trunk which predisposes them to shoulder dystocia or cesarean delivery. National consensus recommends induction of labour between 39th-40th weeks in GDM and consider the possibility to perform a cesarean with a fetal weight estimative > 4000g in term. The aim of this study was to identify factors associated with fetal macrosomia in pregnant woman with GDM. Methods: Data from a total of 487 women diagnosed with GDM that delivery in our hospital during the years of 2012 and 2014 were retrospectively collected. The pregestational studied factors included family history of diabetes mellitus among first-degree relatives, body mass index (BMI) before gestation and history of GDM or macrosomia in former pregnancies. The gestational studied factors included maternal age, gestational trimester of diagnosis, HbA1C levels, fasting plasma glucose levels and OGTT values at diagnosis. The perinatal outcomes assessed were

the cesarean rate and neonatal morbidity such as admission to neonatal intensive care unit, neonatal hypoglycemia or the presence of neonatal respiratory distress syndrome. Statistical analysis was performed using SPSS (v23.0)®. A statistical significant association was considered with a p value <0.05. Results: The prevalence of GDM was 6,7% in our population during the studied period. The prevalence of macrosomia was 3,3%. There was a significant association between macrosomia and macrosomia in former pregnancies, weight gain in pregnancy, advanced gestational age at delivery and the presence of hidramnios. BMI before gestation, maternal age, HbA1C levels and the gestational trimester of diagnosis were not significantly correlated to macrosomia. Macrosomia is significantly associated to cesarean delivery but not to neonatal morbidity such as hypoglycemia, neonatal respiratory distress syndrome and admission to neonatal intensive care unit compared with non macrosomic newborns. Conclusions: In conclusion, despite its retrospective design and small sample size, our study results suggest that macrosomic history and maternal weight gain are significantly associated with macrosomia. Early induction of labour in GDM can prevent macrosomia as it is associated to advanced gestational age.

Disclosure of Interest: None Declared

P39 PREGNANCY AND MULTIPLE SCLEROSIS - A RETROSPECTIVE STUDY IN A PORTUGUESE TERTIARY CENTER

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Problem Statement: Multiple sclerosis (MS) is most often diagnosed in women in their childbearing period. Thus, it became a major concern the influence of this disease in pregnancy and reproductive issues. **OBJECTIVE:** Analyze the obstetrical data concerning a group of women with the diagnosis of MS in the pre-conceptual period and during pregnancy. **Methods:** Retrospective study, including 111 women with MS followed at University Hospital Center of Coimbra from 1st of January 1993 until 31st of December 2014. Several parameters were analyzed, such as relapses prior and during pregnancy as well as in post-partum, complications during pregnancy, parity and type of delivery, characteristics of the newborns. It used Microsoft Office Excel and IBM SPSS Statistics 20 for statistical data analysis. Results: In this time frame, 81.1% of women were nulliparous, with a mean age at conception of 31.9 (± 4.1 SD) years. The mean age at MS diagnosis was 25.6 (± 5.8 SD) years, with a mean time from MS diagnosis to early pregnancy of 6.6 (± 6.6 SD) years. 41.4% of women had relapses in the year prior pregnancy, 17.1% during pregnancy and 39.8% during the first year in postpartum period. The women who performed labor analgesia (n=73), 83.6% was epidural analgesia. It was found that 14.4% of women had complications during pregnancy, with fetal growth restriction being the most frequent. The mean gestational age of delivery was 38.9 (± 1.7 SD) weeks and the most common type of delivery was vaginal (56.7%). The percentage of preterm deliveries was 5.4%. Among newborns 48 (59.3%) were male. The mean birth weight was 3124.7g (± 435.2 SD) of which 6.2% of newborn were underweight (birth weight <2500g). 6.4% of newborns had asphyxia at birth.

Conclusions: The majority of our patients with MS were nulliparous, with 14.4% having complications during pregnancy. The relapse rate decreases during pregnancy and increases in the post-partum period. The most common type of delivery was vaginal, with a low percentage of preterm deliveries, low weight and asphyxia at birth.

Disclosure of Interest: None Declared

P40

SCREENING FOR PRETERM DELIVERY USING VAGINAL PH AND ULTRASOUND CERVICAL LENGTH MEASUREMENT IN POPULATION WITH SIGNS AND SYMPTOMS OF THREATENED PRETERM DELIVERY

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Problem Statement: Despite intensive research and numerous advances achieved in obstetrics, preterm delivery (PTD) and its short and long term consequences still remains the leading cause of increased perinatal mortality and morbidity. Threatened PTD is the most common diagnosis that leads to hospitalization during pregnancy and it requires a delicate judgment regarding the appropriate management. We wanted to assess diagnostic accuracy of vaginal pH and cervical length measurement in population of pregnant women with signs and symptoms of threatened preterm delivery regarding the prediction of delivery before 34 weeks. **Methods:** Prospective cohort study of 100 pregnant women with signs and symptoms of threatened PTD between 24 and 34 weeks. According to the ROC curve analysis the cut off value for vaginal pH was 5.0 (95th percentile) whereas for shortened CL was length 15 mm (5th percentile). **Results:** The incidence of PTD < 34 weeks was 21 % (21/100). Elevated vaginal pH (> 5.0) was found in 24% whereas shortened CL (< 15 mm) was found in 11 %. Elevated vaginal pH had two times higher likelihood ratio (LR) in comparison to the shortened CL regarding the prediction of PTD < 34 weeks (LR 4.7 95% CI [1.6-13.3] versus 2.4 95% CI [1.1-5.3]). **Conclusions:** Elevated vaginal pH has better accuracy in comparison with shortened CL regarding the prediction of PTD < 34 weeks in pregnant woman with signs and symptoms of threatened PTD.

Disclosure of Interest: None Declared

P41

ROLE OF DHEA (DEHYDROEPIANDROSTERONE) SUPPLEMENTATION IN EXPECTED POOR RESPONDERS

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Problem Statement: Optimal stimulation protocol and use of adjuvants in poor responders has been a dilemma. DHEA-Dehydroepiandrosterone supplementation for poor responders has been shown to improve ovarian response and IVF treatment outcome. This study aims to the effect of DHEA supplementation in expected poor responders on ovarian response, embryo quality and pregnancy outcome.

Methods: A prospective case control study- conducted on 87 women aged less than 40 years with poor ovarian reserve based on serum AMH <1.1ng/ml, undergoing IVF with antagonist protocol. Women with history of DHEA intake in past or oophorectomy were excluded. Women were divided into two groups, Group A (57)- who received DHEA supplement 75 mg sustained release preparation once a day for three months and Group B (60) who did not receive DHEA before undergoing stimulation. Ovarian response (estradiol levels on day of hCG trigger, oocytes retrieved), pregnancy rates, embryo number and quality were compared between the two groups. Results were analysed using SPSS. Qualitative data were compared by chi square test and student t test with significant values p< 0.05. **Results:** Mean number of oocytes retrieved were similar in both the groups 5.09 Vs. 4.73 (p = 0.56) with comparable terminal estradiol levels (Group A 608.6; Group B 584.6, p = 0.62). Pregnancy rates and clinical pregnancy rate were similar (Group A 27.75% Vs. 21.15%, p = 0.406, Group A 23.52% Vs. Group B 13.42% p = 0.29, respectively). However, embryo quality was significantly improved in Group A (p = 0.04).

	Group A (DHEA Supplemented) N= 57	Group B (DHEA Not Supplemented) N= 60	p value
Number of oocytes retrieved	5.09	4.73	0.56
Terminal Estradiol levels	608.6	584.6	0.62
Embryo Quality			
Top Quality Embryo	65	41	0.041
Pregnancy Rate	27.75%	21.15%	0.406
Clinical Pregnancy Rate	23.52%	13.42%	0.29
Cycles Cancelled/ Loss to follow up/ Embryo transfer not done	8	7	

Conclusions: DHEA supplementation in poor responders may improve the embryo quality but pregnancy rate and ovarian response is similar.

Disclosure of Interest: None Declared

P42

RETROSPECTIVE ANALYSIS OF SIMULTANEOUS TRANSFER OF EMBRYOS NON-CONGRUOUS FOR GRADE IN FRESH IVF TRANSFERS CYCLES

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Problem Statement: The advent of time-lapse, pre-implantation genetic screening and metabolomics has not been able to replace or provide alternatives to the paradigm of embryo selection. The morphological analysis of embryo quality is however, still relevant. There is a school of thought of embryo cross talk and group culture being a key to improve embryo quality. The cross talk suggests that a healthy embryo through growth factors during culture and later in utero can be a stimulus for improved quality of another embryo cultured with it. However, it can also suggest that a poor quality embryo could also be detrimental to a good embryo. **Methods:** A retrospective analysis of fresh embryo transfers from January 2014 to December 2015 was performed at the center. Only 1-2 grade A and B embryos as per the consensus classification were transferred. Group embryo culture was done. The groups were classified for comparison as group I: grade -A embryo, group II: grade B embryo, group III: grade A+B embryos. The difference in clinical pregnancy rate amongst groups was analyzed by the χ^2 test and correlational analysis. **Results:** A total of 445 embryo transfers were performed in the given period. There were 307, 63 and 75 fresh embryo transfers in Group-I, II and III. The mean age was comparable across all three groups. The mean endometrial thickness was also similar with no significant difference across groups. The pregnancy rate in Group-I was 40.7% (CI: 35.2-46.2), group II: 22.2%(11.9-32.7) and group III: 29.3%(19-39.6). There was a significant correlation between the grade of embryo and pregnancy rate in the correlation analysis amongst groups. There was significant difference between pregnancy rate between Group-I and II but no difference was seen between group -I & III and group II & III. **Conclusions:** The difference in clinical pregnancy is significant between group I and II however, the outcome of the transfer in group-III approaches equivalence to group I. The present study therefore provides evidence against a possible detrimental effect of transferring or culturing embryos non congruous for grade simultaneously. This maybe a proof of concept for a larger prospective study in future that can provide further answers to the dilemma.

Disclosure of Interest: None Declared

P43

BEHAVIORAL TESTS SUITABLE FOR INFANTILE RAT MODELS OF HYPERTHERMIC NEONATAL HYPOXIC ISCHEMIC ENCEPHALOPATHY

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Problem Statement: Neonatal hypoxic ischemic encephalopathy (HIE) is a serious problem in perinatal medicine. Especially hyperthermia during hypoxia worsens the severity of HIE. Although rodent neonatal HIE models have been widely used in studies of HIE, behavioral assessment during infancy of HIE models have been rarely reported. The aim of this study was to clarify infantile behaviors of HIE models. **Methods:** **Animals.** Thirteen 6-day-old rats were used in this study. The left carotid artery was exposed under inhalation anesthesia, sutured at two points, and cut in six of the rats. After a 1-hr rest, the operated rats (H group) were exposed to 8% oxygen at an ambient temperature (Ta) of 40 degrees. The sham group (S group) without the arterial ligation was also established using seven 6-day-old rats. **Behavioral tests.** The righting reflex test (RRT) evaluates the development of neuromuscular coordinated motions. A neonatal rat was placed on its back, and the turning interval until lying on its belly was measured using 3-day-old rats, three times a day for four consecutive days. The incline plate test (IPT) evaluates neuromuscular coordinated motions, equilibrium senses, and muscular power. An inclined sandy wooden plate (40 x 45 x 1 cm) was placed on the experimental table. A 7-day-old rat was positioned with head downward at the center of the plate, and its behavior was observed for seven consecutive days. We classified the behavior into four categories as follows: 1) "falling down", 2) "turning with head upward, and staying", 3) "turning with head upward, and moving upward", and 4) "turning to right or left, and moving". The cliff reflex test (CRT) evaluates consciousness of danger and muscular power. A 10-day-old rat was placed at the edge of a 20-cm high circular platform (10 cm in diameter) with the upper half of its body leaning over the edge. We measured the time from placing the rat at the edge to it retreating from the edge for six consecutive days. **Anatomy.** We removed rat brains after 10% formalin perfusion under deep anesthesia, and measured the maximal right (intact, BWR) and left (injured, BWL) widths of cerebral hemispheres, and calculated the brain reduction width index (BRI), defined as (BWR – BWL) / BWR (%). **Results:** RRT. The averaged turning intervals in the H group were 2.4 (sec, mean), 3.5, 2.2 and 1.8 for four consecutive measurement days whereas those in the S group were 2.6, 4.2, 2.8, and 2.0 for the same measurement days. There were no significant differences between the groups. IPT. All the rats in the H group showed the behavioral pattern of 2) on the first day of measurement, although rats in the S group showed behavioral patterns of 1), 2) and 3). There were no differences of behavioral patterns between the groups on the other days of measurements. CRT. There were no significant differences in escape time between the groups during all the measurement periods. **Anatomy.** The BRI of the H and S groups were 1.5 ± 2.5 and 0.4 ± 0.2 (mean \pm SE), respectively, and the difference was significant. **Conclusions:** RRT and CRT revealed no behavioral differences between the H and S groups although there was significant difference in brain size. The 7-day-old rats in the H group showed "turning with head upward, and staying" behavior alone in the IPT. Infantile behavior might indicate the severity of neonatal HIE brain damages.

Disclosure of Interest: None Declared

P44 **FACTORS ASSOCIATED WITH GENDER OF IN-VITRO FERTILIZATION OFFSPRING IN TAIWAN**

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Problem Statement: The secondary gender ratio (male/female) in Taiwan of assisted reproductive technology-conceived live births during the past decade was around 1.08 to 1.19. Whether the increased risk is due to the factors related in-vitro fertilization (IVF) procedures or not needs to be evaluated.

This study evaluates association between in-vitro fertilization (IVF) related factors and gender of IVF-conceived singletons in Taiwan. **Methods:** In order to elucidate the role of IVF related procedures, a register study was conducted. The population included 46,846 ART cycles performed during 1998 to 2004 and reported to the registry. The study population was limited to 41,479 cycles of in vitro fertilization-conceived singleton and live births in

the registry of assisted reproductive technology, released by the Bureau of the Health Promotion, Taiwan. χ^2 test for proportions was employed to compare the gender distribution on parental demographic characteristics, infertility related factors and procedure-related factors under stratifications of numbers of gestational sacs, oocytes retrievals and embryo implantation combined with gestational weeks. Odds ratios (ORs) for female live birth adjusted for potential confounding factors were estimated using logistic regression. **Results:** Significant differences between gender distribution was observed in bivariate analysis for stratus of paternal age, maternal age, parents' age gap, number(s) of embryo reduction, types of micromanipulations, gradings of ovary hyperstimulation syndrome and cause of infertility. Maternal age greater than or equal to 35 year-olds was associated with 60% higher risk of more female singletons compared with those maternal age less than 30 year-olds [odds ratio (OR) = 1.54, 95% confidence interval (CI), 1.02-2.33], in the stratum of term live births with gestational sacs greater than and equal to 2. Embryo reduction number greater than or equal to 1 was associated with less risk of female singletons compared with none embryo reduction [OR = 0.37, 95% CI, 0.16-0.85], in the stratum of preterm live births with number of oocytes retrieval greater than and equal to 13. Types of micromanipulations is ICSI and assisted hatching was associated with high risk of female singletons compared with no micromanipulations [OR = 1.93, 95% CI, 1.12-3.33], in the stratum of preterm live births with embryo implantation combined with gestational weeks greater than and equal to 3. **Conclusions:** Our findings suggest that parental characteristics of social demographic (Paternal age, maternal age, in vitro fertilization procedure-related factors (number of embryo reduction and types of micromanipulation), and parental infertility factor (OHSS and cause of infertility) will be associated with gender of IVF singleton live births. Further studies to investigate relevant mechanisms are required.

Disclosure of Interest: None Declared

P45 **ANTERIOR TRANSOBTURATOR POLYPROPYLENE MESH (ATOM) FOR THE TREATMENT OF CYSTOCELE AND UTERINE PROLAPSE: 4-POINT METHOD WITH OTHER CORRECTION SURGERY VERSUS 6-POINT METHOD**

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Problem Statement: To assess and compare the effectiveness and safety of 4-point ATOM with other correction surgery and 6-point ATOM for treating cystocele and uterine prolapse. **Methods:** This retrospective cohort study was conducted with 117 women who previously received the surgery, ATOM due to 2nd degree or above cystocele and 2nd degree or above uterine prolapse at Korea University Medical center between February, 2006 and May, 2015. 96 women received it by the method of 4-point ATOM with other correction surgery, and 21 women received it by 6-point ATOM. In previous case, 4-point ATOM with other correction surgery for apical prolapse was preceded; however, 6-point ATOM currently becomes the new method of apical and anterior prolapse. We made a comparative study between 4-point ATOM with other correction surgery and 6-point ATOM. **Results:** There was no recurrence in the 6-point ATOM group while 4 cases recrudesced in the 4-point ATOM with other correction surgery group (4.1%). Some complications were observed in the both groups (4-point ATOM with other correction surgery group vs. 6-point ATOM group): Stress Urinary Incontinence (SUI) (14.0% vs. 4.8%), Foley catheter reinsertion (8.3% vs. 4.7%). Among the four relapsed patients after the 4-point ATOM with other correction surgery, three experienced SUI and none of them reported Foley catheter reinsertion. **Conclusions:** As a new surgical technique of ATOM, the 6-point ATOM seem promising because of lower recurrence rate than the 4-point ATOM with other correction surgery for apex. Further studies are warranted to evaluate the effects of the 6-point ATOM with larger sample sizes.

P46

CHANGE IN ENDOCRINE PROFILE OF WOMEN WITH POLYCYSTIC OVARY SYNDROME AFTER ONE-YEAR ORAL CONTRACEPTIVE TREATMENT

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Problem Statement: OC treatment for 1 year could change endocrine profile rather than insulin resistance profile, proportion of androgen excess in women with PCOS, and body fat distribution. **Methods:** Sixty-two of women with PCOS diagnosed using Rotterdam criteria were recruited and checked endocrine profile as the followings; BMI, basal and postprandial 2 hour (PP2) insulin, basal and PP2 glucose, HOMA-IR, estradiol, FSH, LH, AMH, Testosterone, SHBG, free androgen index (FAI), DHEAs, 17- α -OHP, TSH, prolactin. Also twenty-three of the sixty-two participants underwent body composition analysis and checked fat(kg), fat(%), fat distribution. The profiles were rechecked after one-year OC treatment and changes were analyzed using Paired t-test and McNemar test, Wilcoxon Signed ranks test where appropriate. **Results:** After 1-year OC treatment, SHBG was increased (65.5 nmol/L vs. 155.5 nmol/L, $P<0.001$) and testosterone (1.1 ng/mL vs. 0.8 ng/mL, $P<0.001$), 17- α -OHP (2.3 ng/mL vs. 1.3 ng/mL, $P=0.009$), and AMH (13.5 ng/mL vs. 10.4 ng/mL, $P=0.004$) were decreased. FAI (11.4 vs. 4.9, $P<0.001$), fat distribution ($Z=-1.992$, $p=0.046$) decreased after OC treatment. HOMA-IR was similar before and after OC treatment (3.1 vs. 3.0, $P>0.05$). Before and after 1-year OC treatment, proportion of women with abnormal HOMA-IR (>2) was similar (54.1% vs. 70.3%, $P>0.05$), and proportion of women with abnormal FAI (>4) was decreased (73.8% and 28.6% ($P<0.001$)). **Conclusions:** OC treatment for 1 year could change endocrine profile rather than insulin resistance profile, proportion of androgen excess in women with PCOS, and body fat distribution.

Disclosure of Interest: None Declared

P47

ADMINISTRATION OF EXCESS DOSE OF STEROID DRUGS FOR PREVENTING INFANTILE RESPIRATORY DISTRESS SYNDROME AFFECTS LEARNING AND MOTOR SKILLS AFTER GROWTH IN RAT MODELS

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Problem Statement: Infantile respiratory distress syndrome (RDS) often develops in premature infants due to inadequate production of surfactants of lungs. Therefore, maternal administration of steroid drugs, dexamethasone (Dex) or betamethasone (BET), to avoid RDS has been routinely performed in obstetrical practice. Although the effects on fetal lung surfactants production by maternal steroid administrations disappear within a week, repeated administration of the steroid drugs has been contra-indicated since the excess dose administration of the steroid drug has been suspected to cause side effects on the neonatal brain and to delay development. However, such side effects of maternal steroid administrations on fetal brains have been seldom reported. In this study, we administered excess dose of dexamethasone or betamethasone to neonatal rats, and evaluated intellect and motor abilities by behavioral tests to clarify the neuronal side effects. **Methods:** Animals. We administered intraperitoneally 0.5mg/kg (body weight), 2.5mg/kg of dexamethasone or betamethasone dissolved in saline. We administered the solutions (0.01mL/ body weight (g)) to neonatal rats ($n=41$) once on the 4, 5, and 6th days after birth and established four groups; Dex0.5 group (dexamethasone 0.5 mg/kg, $n=9$), Dex2.5 group (dexamethasone 2.5 mg/kg, $n=9$), Bet0.5 group (betamethasone 0.5 mg/kg, $n=7$) and Bet2.5 group (betamethasone 2.5 mg/kg, $n=7$). We also established a control group by administering the same amount of only saline ($n=9$). In the suspension test, a 3-week-old rat was suspended by the fore legs on a horizontal bar (3mm in diameter, 23cm high), and the traction time (upper limit 60 min) until falling down was

measured, three times a day. The average of the three trials was calculated. We performed the test for five consecutive days. In step-down type passive avoidance test, we placed a 6-day-old rat on the insulated platform on a metal grid floor, and we gave a safe and electrical shock to the rat when it stepped on the metal floor. We repeated the procedure until the rat remained on the insulator platform. On the next five consecutive days, we placed a rat of each group on the platform, and measured retention time until stepping on the floor once a day. We stopped the measurement when the rat remained on the insulator for 10 min. **Results:** Suspension test. The suspension time of the control ($1,111 \pm 484$ sec, mean \pm SE) was the longest among all the groups, whereas that of Bet2.5 group (263 ± 58 sec) was the shortest. Step-down passive avoidance test. The retention time of the control group (79 ± 41 sec) was the longest among the groups. However, the retention time was negatively correlated with the doses of dexamethasone and betamethasone. **Conclusions:** Motor skill and learning ability became impaired by the administration of the steroid drugs, regardless of dexamethasone or Bet. In addition, learning ability became inferior by excess doses of the steroid drugs. Our results suggest that the repeated administration of betamethasone or dexamethasone may be also contraindicated in clinical practice.

Disclosure of Interest: None Declared

P48

MOTOR ABILITY AND ANATOMICAL ASSESSMENT OF NEONATAL HYPOXIC ISCHEMIC ENCEPHALOPATHY RAT MODELS WITH LOW OXYGEN LOAD AT HIGH OR NORMAL AMBIENT TEMPERATURE

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Problem Statement: When the fetus is exposed to hypoxic and ischemic conditions at the time of delivery, it might develop neonatal hypoxic ischemic encephalopathy (HIE). In addition, when the ambient temperature is hyperthermic, such as between 38 and 42 $^{\circ}$ C, cell death of brain neurons may occur. However, motor ability of the adults after neonatal HIE has not been fully understood. The aim of this study was to clarify adult motor ability using animal models of HIE. **Methods:** Animals. Neonatal six-day-old Wistar rats were anesthetized with inspired isoflurane. The left common carotid artery was exposed, ligated, and cut. After arousal from the anesthesia, the rats were exposed to 8% oxygen at an ambient temperature of 36 $^{\circ}$ C (normal temperature HIE group, $n=6$) or 40 $^{\circ}$ C (high temperature HIE group, $n=6$) for 15 minutes. We also established control groups to the HIE groups. We performed similar operations without the arterial ligation under anesthesia. After the recover from the anesthesia we exposed rats to 8% oxygen at an ambient temperature of 36 $^{\circ}$ C (normal temperature sham group, $n=3$) or 40 $^{\circ}$ C (high temperature sham group, $n=4$) for 15 minutes. In the motor ability test, we performed the suspension test and rotor rod test using 4-week-old and 6-week-old rats of all groups. We suspended a rat by the fore legs on the suspension bar (3 mm in diameter, 23 cm high), and measured the suspension time (upper limit, 60 sec) until falling down, for five consecutive days. We did the measurement twice a day, and obtained the average of two trials. In the Rotarod test, we put a 7-week-old rat on the rotating rod at a constant speed, and measured the time from the start of the rod rotation until falling with the upper limit of 3 min twice a day, and obtained the average of the trials. The rotating speeds of the rod were 5, 5, 7, and 9 rpm for the first, second, third and fourth days of measurements, respectively. **Anatomy.** After the measurements were completed, the rat brains were removed under the deep anesthesia and formalin-fixed perfusion. We measured the left (LHW) and right (RHW) cerebral hemisphere widths, and determined the rate of decrease of the injured brain, RWH - LWH. **Results:** Suspension test. The suspension times of the HIE groups were shorter than those of the sham groups. However, there was no significant difference in the suspension times of between the normal temperature HIE group (25.3 ± 11.1 sec, mean \pm SE) and the high temperature HIE group (41.3 ± 8.6 sec). Rotarod test. Similar results to those



of the suspension test were obtained in the Rotarod test. Anatomy. There was no significant difference in the rate of decrease in the injured brain between the HIE group and the sham group. In addition, there was no significant difference in the decreased lengths of the injured brain between the normal temperature HIE group (0.9 ± 2.0 mm) and the high temperature HIE group (1.4 ± 2.9 mm). Conclusions: Adult rat models after neonatal HIE developed inferior motor ability compared with the controls. However, the environment temperatures at the neonatal HIE insults did not affect the adult motor ability.

Disclosure of Interest: None Declared

P49

RECURRENCE RATE OF PRETERM DELIVERY: A RETROSPECTIVE STUDY

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Problem Statement: We evaluated the outcome of deliveries in subsequent pregnancy, in women delivered during 14-36 gestational week's. **Methods:** We retrospectively studied the case of 102 women with a prior preterm birth (14-36 gestation week's), who had another delivery during 2013-2015 at our hospital. All cases involved singleton pregnancies. **Results:** Of the 102 women, 95 previously had prior preterm birth, six had two times, one had three times.

In the 95 women with one previous preterm birth, the deliveries had occurred at 14-21 gestational weeks in 11 women (10.80%), at 22-27 weeks in seven women (6.86%), at 28-32 weeks in 26 women (25.49%), and at 33-36 weeks in 51(50.0%). In the 102 women, the subsequent gestational deliveries occurred at 14-21/ 22-27/ 28-32/ 33-36 / 37-41 gestational weeks' gestation in two (1.96%), three (2.94%), 10 (9.80%), 14 (13.73%), and 73 (71.57%), respectively.

In 62 women with a prior spontaneous preterm birth due to preterm premature rupture of membranes (pPROM), chorioamnionitis (CAM), or short cervix, these conditions recurred in 24 subsequent deliveries, with a recurrence rate of 38.7%. Of 11 women with a prior spontaneous preterm birth before 28 weeks, two (18.18%) had subsequent deliveries before 28 weeks. The prior non-spontaneous preterm deliveries were induced for complications, including pregnancy-induced hypertension (PIH) five, fetal growth restriction (FGR) seven, fetal anomaly two, abruptio placentae six, placenta previa six, HELLP syndromes three, non-reassuring fetal status four, intrauterine fetal death seven, and maternal complication one. In two women with PIH and two with FGR, the conditions had recurred. In all other cases, the subsequent deliveries were at full term. Compared with the term length in the prior preterm delivery, the term in subsequent deliveries in the 102 women longer in 85 women, the same as previous term in seven women, and shorter in 10. In the 62 women with previous spontaneous preterm birth, the term was longer in 48 women, the same as previous term was five women, and shorter in nine women. **Conclusions:** Women who previously had a preterm birth were at a high risk of preterm birth in the next pregnancy. At the highest risk were, women whose prior spontaneous preterm births were due to pPROM, CAM, or a short cervix. Women with a prior spontaneous preterm birth had a higher rate of recurrence than those who had preterm induction for complications.

Disclosure of Interest: None Declared

P50

COMPARISON OF HUMAN CHORIONIC OXYTOCIN AND GONADOTROPIN EFFICIENCY IN INDUCTION OF OVULATION AND PREGNANCY IN WOMEN WITH POLYCYSTIC OVARY SYNDROME ADMITTED AT AKBARABADI HOSPITAL FROM 2013 TO 2016

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Problem Statement: Polycystic Ovary Syndrome (PCOS) is the most common endocrine disorder and cause of anovulation and infertility among women. The present study was conducted to compare human chorionic oxytocin and gonadotropin efficiency in induction of ovulation and pregnancy in women with polycystic ovary syndrome. **Methods:** In a prospective study, 150 infertile patients' resistant to clomiphene citrate and admitted at Akbarabadi hospital in Tehran between 2013 and 2016, were randomly divide into three groups and received 5 units of oxytocin, 10000 units of HCG or a combination of both drugs. The size and number of follicles imaged by Transvaginal ultrasonography determined the progress of treatment. The level of progesterone serum concentration was measured to confirm pregnancy. The rate of ovulation and fertility was compared in the three participant groups. **Results:** 122 patients completed the study. There was no significant difference between the groups neither in terms of ovulation rate nor with regard to the number of follicles ($p>0.05$), and there was also no significant side effect in any group. **Conclusions:** Findings of this study provided good insights into physiological roles of oxytocin in human follicular development and oocyte maturation.

Disclosure of Interest: None Declared

P51

A CASE REPORT OF 9 YEARS DELAYED FORMATION OF TUBO-OVARIAN ABSCESS AFTER TOTAL ABDOMINAL HYSTERECTOMY

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Problem Statement: Tubo-ovarian abscess is diagnosed when pelvic mass is found in pelvic inflammatory disease patients. But tubo-ovarian abscess is not the first cause for patients who have undergone hysterectomy.

Methods: A 56-year-old woman admitted to our clinic with lower abdominal pain and fever. She had undergone total abdominal hysterectomy and left salpingo-oophorectomy 9 years ago but she was believed to have tubo-ovarian abscess in her right adnexa. After the surgery, tubo-ovarian abscess was confirmed by pathologic report and the culture revealed Klebsiella pneumoniae growth. **Results:** After admission, intravenous Ceftriaxone 2g, Metronidazole 500mg, Isepamicin 200mg were administered for 3 days. Fever was slowly declining, only rising to a peak of 38°C. However, despite of empirical antibiotics, fever kept relapsing one to two times a day. Abdominal pain was slightly relieved but occurred again 6-8 hours after analgesics injection. Pelvic examination showed signs of improvement but symptoms still existed. Laboratory test showed normal limit of complete blood cell count continually, and C-reactive protein decreased slightly but stayed high (9.82mg/dL). Without significant advances even with the 3 days of intravenous antibiotics, she underwent exploratory laparotomy. The surgery was performed by the same gynecologist who did total abdominal hysterectomy and left salpingo-oophorectomy 9 years ago. Mild peritoneal adhesion was shown and the vaginal stump site was clear. 6cm of right adnexal mass was adhered to colonic serosa and posterior bladder wall. The mass had irregular contour with multiple nodules on the surface, which were typical findings in tubo-ovarian abscess (Fig 3). Right salpingo-oophorectomy and adhesiolysis were done. Culture was obtained to isolate the microorganism. General surgeon was asked to explore other abdominal organs. Appendectomy was done for differential diagnosis despite of grossly normal appendix. Same antibiotics were maintained postoperatively. During the hospitalized period, she was stayed afebrile and did not experience any complication. Laboratory tests were improved showing normal complete blood cell count and C-reactive protein decreased to 2.51mg/dL. The final pathologic analysis reported acute salpingitis with pyosalpinx and paratubal abscess of right adnexa and normal appendix. Klebsiella pneumoniae was isolated from the culture of right adnexal mass. She was discharged 6 days after the surgery.

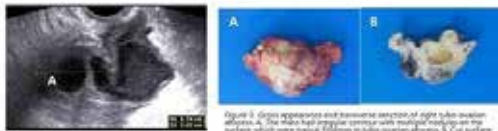


Figure 1. Transvaginal ultrasonography of tubo-ovarian abscess. A. 5.7x3.6cm septated tubular cystic mass on the right adnexa.

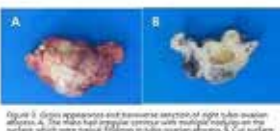


Figure 2. Computed tomography of right tubo-ovarian abscess. A. 5.3cm sized clustered cystic lesion (arrow) around the right side pelvic cavity. B. The which was not seen at 2006 year.

Conclusions: We should consider tubo-ovarian abscess as one of differential diagnosis when lower abdominal pain is accompanied with pelvic mass regardless of prior hysterectomy. And it is important that preoperative administration of proper antibiotics based on the possibility of *K. pneumoniae* as an infection source

Disclosure of Interest: None Declared

P52

DEXAMETHASONE VERSUS BETAMETHASONE: COMPARISON OF ANTENATAL CORTICOSTEROIDS ON NEONATAL OUTCOME IN PRETERM NEWBORN

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Problem Statement: The aim of this study was to assess effectiveness of antenatal steroids and to compare the outcomes of the effects of dexamethasone and betamethasone in reducing perinatal complications among preterm infants. **Methods:** A retrospective cohort analysis of premature single infants born at a gestational age between 24 weeks and 33 weeks 6 days in our perinatal center from January 2006 through February 2015. 199 premature infants were included; who received full dose of steroid and none, fully used dexamethasone and betamethasone, and non use of steroid and insufficient dose of steroid use. We excluded premature infants with clinical chorioamnionitis, fetal structural and chromosomal abnormalities, prior antenatal steroid exposure, and steroid use for other indications. **Results:** Antenatal corticosteroid therapy reduced the use of mechanical ventilation, the need for supplementary oxygen, and the need for exogenous surfactant in neonates born. Corticosteroid treatment seemed to benefit the respiratory distress syndrome (RDS; $p=0.001$). There were less cases of ROP with corticosteroid treatment ($p<0.05$). There was no statistically significant difference between the dexamethasone group and the betamethasone group. Comparison between the insufficient dose group and the non use group showed no statistical significance either. **Conclusions:** Antenatal corticosteroids were effective in reducing major complications among the premature newborns in the population studied. We found that two major kinds of antenatal corticosteroids have similar outcomes. Comparison between the insufficient dose group and the non use group showed no statistical significance. Therefore, their use and treatment duration should be sufficient enough to provide the full dose of steroid. Our data demonstrate that dexamethasone and betamethasone are equally acceptable.

Disclosure of Interest: None Declared

P53

CHANGES IN BONE MINERAL DENSITY OF USERS OF THE LEVONORGESTREL-RELEASING INTRAUTERINE SYSTEM

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Problem Statement: The aim of this study was to evaluate changes in bone mineral density (BMD) in patients using a levonorgestrel-releasing intrauterine system (LNG-IUS) or a TCu380A intrauterine device (IUD) after 2 years. **Methods:** The medical records of all patients who underwent LNG-IUS (n=38) or TCu380A IUD (n=26) insertion were reviewed. The patients were 40 to 45 years old at the time of insertion, had undergone a BMD examination of the femur and lumbar spine before the loop insertion, and had also received a follow-up BMD examination 2 years later. Patients were excluded if risk factors known to affect BMD were noted in their medical records. The 2 groups of patients were compared with regard to age, parity, body-mass index (BMI), and levels of osteocalcin and pyridinoline. Changes in BMI, osteocalcin, and pyridinoline after 2 years were also compared. **Results:** The LNG-IUS and TCu380A IUD groups showed no differences in mean age, mean parity, mean BMI, preinsertion or postinsertion BMD values of the femur or lumbar spine, changes after 2 years in the BMD of the femur or lumbar spine, or changes after 2 years in osteocalcin or pyridinoline level ($P>0.05$).

Table 1. Characteristics of study groups

Variable	LNG-IUS (n=38)	TCu380A IUD (n=26)	P value
Age (years)	42.82 ± 1.68	42.25 ± 1.45	0.992
Parity	1.86 ± 1.18	1.81 ± 0.98	0.607
Body mass index (BMI; kg/m ²)	21.82 ± 2.00	21.13 ± 1.11	0.242

Values are given as mean ± SD.

Table 2. Variations in the BMD of the lumbar spine and total bone

Variable	LNG-IUS (n=38)		TCu380A IUD (n=26)		P value
	Mean ± SD (95% CI)	Mean ± SD (95% CI)	Mean ± SD (95% CI)	Mean ± SD (95% CI)	
Lumbar spine BMD-L3 of baseline	1.17 ± 0.06	1.11 ± 0.12	0.338		
Total lumbar of baseline	0.98 ± 0.11	0.92 ± 0.13	0.034		
Lumbar spine BMD-L3 after 2 years	1.12 ± 0.05	1.07 ± 0.12	0.073		
Total lumbar after 2 years	0.93 ± 0.06	0.88 ± 0.09	0.071		
Difference in the lumbar spine	-0.06 ± 0.04	-0.04 ± 0.04	0.295		
Difference in the total bone	-0.04 ± 0.07	-0.02 ± 0.04	0.973		

Values are given as mean ± SD.

Table 3. Osteocalcin and pyridinoline levels

Variable	LNG-IUS (n=38)		TCu380A IUD (n=26)		P value
	Mean ± SD (95% CI)	Mean ± SD (95% CI)	Mean ± SD (95% CI)	Mean ± SD (95% CI)	
Osteocalcin at baseline	3.00 ± 1.67	3.08 ± 1.22	0.822		
Pyridinoline at baseline	3.81 ± 1.89	3.51 ± 1.27	0.941		
Osteocalcin after 24 months	3.57 ± 2.28	3.79 ± 0.84	0.713		
Pyridinoline after 24 months	4.00 ± 0.26	3.18 ± 0.70	0.126		
Difference in osteocalcin	2.57 ± 0.19	2.79 ± 0.16	0.062		
Difference in pyridinoline	0.83 ± 0.74	0.68 ± 0.02	0.129		

Values are given as mean ± SD.

Conclusions: Women using the LNG-IUS for 2 years have changes in BMD and osteocalcin and pyridinoline levels similar to those of TCu380A IUD users. The use of the LNG-IUS for 2 years may have no adverse effect on BMD.

Disclosure of Interest: None Declared

P54

STRESS-INDUCED ACTIVATION OF OVARIAN HEAT SHOCK PROTEIN 90 IN A RAT MODEL OF POLYCYSTIC OVARY SYNDROME

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Problem Statement: Polycystic ovarian syndrome is the most common endocrine disorder affecting infertile women of reproductive age. To evaluate the activation of heat shock protein 90 (Hsp 90) during the formation of stress-induced polycystic ovaries. **Methods:** Female Sprague-Dawley rats (180- 200 g) were subjected to one of two stress-inducing conditions; animals were either treated with adrenocorticotrophic hormone daily for 18 days or were exposed to daily cold stress for three weeks. Non-treated rats sampled during proestrus or diestrus served as controls. Blood samples were collected from the left ventricles of anesthetized rats and



concentrations of follicle-stimulating hormone, luteinizing hormone, estradiol, testosterone and corticosterone were measured in all rats. The expression of messenger RNA for androgen receptor, estrogen receptor- α and - β , nerve growth factor receptor, and glucocorticoid receptor, and protein expression for Hsp 90 was also assessed in the rat ovaries.

Results: Stress increased glucocorticoid receptor and androgen receptor expression, and decreased estrogen expression. Nerve growth factor receptor expression was greater in treated than diestrous rats and less in treated than proestrous rats. Ovarian Hsp 90 protein expression was increased in rats treated with adrenocorticotrophic hormone or cold stress. Serum follicle-stimulating hormone levels were reduced and testosterone and corticosterone levels increased by stress, whilst luteinizing hormone and estradiol levels were similar to levels in diestrous and proestrus control rats respectively.

Conclusions: The results indicate that stress, via the activation of ovarian Hsp 90 and changes in steroid hormone receptor expression and serum reproductive hormone levels, may be involved in the induction of polycystic ovaries in rats.

Disclosure of Interest: None Declared

P55

TRIPLET PREGNANCY: IS THE PERINATAL OUTCOMES RELATED TO THE MODE OF CONCEPTION?

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Problem Statement: Many triplets are conceived as a consequence of assisted reproductive technology (ART). Concerns have been raised that triplet pregnancies conceived by ART are more complicated than those conceived spontaneously. Our objective is to evaluate the frequency of triplet pregnancies (TP), to identify the main contributing factors of the term of delivery and of the perinatal outcomes. Methods: All triplet pregnancies between September 2015 and August 2016 that reached at least 20 weeks' gestation and that were managed at the department of gynecology and obstetrics of the Farhat Hached Hospital, Sousse, Tunisia were identified. Time of delivery in addition to maternal and neonatal outcomes were compared between ART conceived and spontaneously conceived triplets. Results: In the study period, 25 sets of triplets managed in our institution met the eligibility criteria. Fourteen triplet sets were conceived by ART and 11 were conceived spontaneously. There was no difference between ART and spontaneous conceptions resulting in trichorionic triamniotic (TCTA) triplets ($p = .58$). There were no differences between ART and spontaneously conceived triplets for any of the maternal or neonatal complications studied. There were no differences between the different chorionicities of the triplets for the gestational age of delivery.

Conclusions: In conclusion, maternal and fetal outcomes for triplets conceived by ART were similar to those of triplets conceived spontaneously.

Disclosure of Interest: None Declared

P56

OXIDATIVE STRESS AND ANTIOXIDANT CAPACITY IN THE PRIMARY OVARIAN INSUFFICIENCY

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Problem Statement: Premature ovarian insufficiency (POI) is defined as the cessation of the ovarian function before the age of 40 years. POI etiology may be related to iatrogenic or endogenous factors and in many cases remains unclear. POI increases health risks for approximately 1% of women, including infertility and psychosocial issues, in addition to the long-term

effects of cardiovascular disease and osteoporosis. Recently, oxidative stress and its defense system have been reported to play important roles in the regulation of reproductive function. The objective of this study was to assess the potential predictive factors of oxidative stress levels (derivatives of reactive oxygen metabolites, d-ROMs) and antioxidant potential (biological antioxidant potential, BAP) for etiology with POI.

Methods: 10 women diagnosed with POI, and 10 women recruited as controls were included in this study, between January 2016 and April 2016, in our hospital and a clinic of infertility in Japan. The blood samples were assayed for reactive oxygen metabolites (d-ROMs) and biological antioxidant potential (BAP) by F.R.E.E. (Free Radical Elective Evaluator); the oxidative stress index (OSI) was then calculated ($OSI = d-ROMs/BAP \times 100$). Results: The mean age of the patients in the POI group was 35.3 ± 2.8 years, and 35.9 ± 2.1 years in the control group. There was no difference between two groups in terms of age, body mass index and smoking status. d-ROMs of the POI patients were significantly higher than that of controls (475.7 ± 50.5 U. CARR versus 347.8 ± 28.7 U. CARR, $P < 0.001$). As compared to the control group, OSI was higher in POI group (23.4 ± 2.7 versus 16.8 ± 2.0 , $P < 0.001$). However, BAPs were not significantly different between the POI group and control group ($2040 \pm 144.7 \mu\text{mol/l}$ versus $2082 \pm 165.3 \mu\text{mol/l}$, $p = 0.64$). Conclusions: d-ROM and OSI increased in the POI patients. Our results suggest that d-ROM and OSI may be a useful risk marker for POI.

Disclosure of Interest: None Declared

P57

ETHAMBUTOL INDUCES TESTICULAR DAMAGE AND DECREASES THE SPERM FUNCTIONAL COMPETENCE IN SWISS ALBINO MICE

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Problem Statement: Tuberculosis (TB) is world's greatest infectious disease which is caused by single infectious agent Mycobacterium tuberculosis which commonly effect lungs. Treatment of tuberculosis normally takes longer time than other bacterial infections. The present study reports the effect of ethambutol (EMB) on testicular function. Methods: Prepubertal and adult male Swiss albino mice were treated with 40, 80, 160 mg/kg body weight of EMB, intraperitoneally, every alternate day for 4 weeks. After 2 weeks' gap, mice were sacrificed to collect caudal spermatozoa. The count, motility, head morphology, chromatin maturity, DNA damage were studied in the caudal spermatozoa to understand the effect on sperm functional competence. Testicular tissue was used for histological analysis and testosterone estimation. In addition, the expression pattern for germ cell, Sertoli cell and Leydig cell specific genes were assessed in the testicular tissue. Results: EMB treatment resulted in a dose-dependent decrease in the testicular weight, sperm count and motility while the percentage of sperm with head abnormalities, immature chromatin ($P < 0.001$) and DNA damage increased ($P < 0.01$). In addition, EMB treatment resulted in significant depletion of glutathione ($P < 0.05 - P < 0.01$) and histopathological abnormalities such as large cells, vacuolation of tubules and isolated colonies of spermatogenic cells were observed. Oct4, 17b-Hsd and c-Kit mRNA was marginally elevated in EMB treated testes at the highest dose studied.

Conclusions: In conclusion, the result of the present study indicates that EMB has adverse effect on testicular function and impairs the sperm functional competence.

Disclosure of Interest: None Declared

P58

THE USAGE OF INOSINE PRANOBEX IN TREATMENT OF VIRAL GENITALS INFECTION

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Problem Statement: The rate of viral genital infection is constantly growing up and for the last decade has increased at 168%. The viral genital infection includes virus's herpes simplex 1, and 2 (VHS-1, -2), papilloma viral infections, cytomegalovirus infection, virus of hepatitis B and others. The main transmission way for VHS-2 (genital herpes) is genital. Often occurs an asymptomatic form (to 65-80% in US), predominantly among women. Manifestations may have vulva, vagina, and cervical localization. It is typical the appearance vesicles at once edema and hyperemia in mucosa. The local reaction is accompanied by weakness, headache, and possibly hyperthermia.

Aim of this study was to assess clinical and laboratory changes in VHS-2 with Inosine Pranobex medications. **Methods:** The clinical assessment has performed by means of statistical cards. The traditional routine methods laboratory diagnostics were used: general blood test, urinalysis, biochemical blood test, and PCR-diagnostics. We have performed the assessment of 27 patients in reproductive age from 20 to 43 years (30.4±1.8yy) with genital herpetic infection. For the treatment reason we used per oral forms Inosine Pranobex on 1.0 g three times a day during a 10 days, by consistent 3 courses with 10 day's intermissions. **Results:** We have found out, that clinical symptoms appeared during different periods of time: from few months to 13 years. The duration of disease was up to one year in 11 pts (40.74%), from 1 year to 5 years — in 13 patients (48.15%), and more than 5 years — in 3 (11.11%). The concomitant diseases were cardiovascular pathology (29.63%), on the second place were gastrointestinal diseases (25.93%), and then urinary tracts diseases (11.11%). Among the gynecological lesions on the first place was hysteromyoma (25.93%), on the second — inflammatory genitals diseases (18.52%). In the most cases the symptoms of herpetic infection were typical: eruptions were in 77.78%; pruritus — 48.15%; underneath abdominal pain in 66.67%; dysuria — 51.85%; vulvovaginitis — 55.56%; and the asymptomatic courses — in 22.22%. On the therapy course the leukocytes levels decreased from $7.87 \times 10^9 / \text{l} \pm 0.27$ to $7.2 \times 10^9 / \text{l} \pm 0.33$ ($p < 0,01$). The therapy course has result of completely disappearance of bacteriuria: from 16% to 0% ($p < 0,01$). The C-reactive protein level has significantly decreased: from 8.4 ± 2.5 g/l to $2,6 \pm 0,72$ g/l ($p < 0,01$). Herpetic infection has defined inclination to trombophylic conditions, and it has been shown the fibrinogen before treatment course start was 4.03 ± 0.2 g/l and after that was 3.63 ± 0.23 g/l ($p < 0,01$). And on the subjective appraisal of patients who used Inosine Pranobex, the effectiveness of treatment was high. Some improvements have been noted after 5-7 days from treatment starts, and absence of any clinical symptoms has been found after the 2nd courses. 96.3% of patients were free from any symptoms, that permits to recommend the usage of Inosine Pranobex for treatment in VHS-2 as described above. **Conclusions:** The Inosine Pranobex has high clinical effectiveness (96.3%) in VHS-2 management, that has been confirmed by clinical and laboratory findings.

Disclosure of Interest: None Declared

P59 **VAGINAL BIRTH AFTER CESAREAN – IS IT SAFE? 14 YEARS OF EXPERIENCE**

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Problem Statement: Aim of our retrospective study was to define percentage of successful vaginal births after cesarean delivery (VBAC) and compare this to planned and emergency repeat cesarean delivery. **Methods:** We have retrospectively analyzed all deliveries after one cesarean delivery in our department for the last 14 years (2002 - 2015). We have also analyzed possibility of VBAC after two previous cesarean deliveries. **Results:** During the study period, we have performed 21518 deliveries, out of those 3530 were cesarean deliveries (16.4%) and 1537 women were already after one

previous cesarean delivery (7.1%). Elective repeat cesarean section was done in 825 women (53.7%). The rest, 712 women, had an attempted vaginal delivery (46.3%). In these, a successful vaginal delivery was in 569 cases (80%) and in the remaining 143 women (20%) we were forced to perform emergency repeat cesarean section. There were no significant differences in perinatal mortality or morbidity in newborns or in mothers (uterine rupture, emergency hysterectomy, injury of urinary bladder) between the groups. We have performed detailed analysis of VBAC and selected obstetric indicators for the last six years (2009 - 2015). In this detailed analysis, we have observed these success rates of VBAC: a 91.5% in women with history of at least one previous spontaneous vaginal delivery, 70.1% in women without this history, 82.3% in women with spontaneous start of labor, 58.2% in women with induced labor, 79.6% in newborns < 4000 grams, 64.8% in newborns ≥ 4000 grams and 69.2% in women with history of failure in the mechanisms of labor (dystocia). The most common indication for emergency repeat cesarean section was labor not progressing and fetal hypoxia. Separately, we describe first experience of attempted vaginal delivery in women after two previous cesarean deliveries. **Conclusions:** We have confirmed high success rates of VBAC, which is associated with low risk of complications in mother and fetus. Comparing our data to literature, where we have witnessed an explosion of VBAC with subsequent rapid decline, our VBAC rates are stable during the study period. In the last years we have attempted, albeit in strictly selected population, VBAC after two previous cesarean deliveries.

Disclosure of Interest: None Declared

P60 **TOTAL ABDOMINAL HYSTERECTOMY OF A HYPERRETROFLEXED UTERUS ALLEVIATE THE PARTIAL OBSTRUCTIVE ILEUS AND DEFECCATION PROBLEM: A RARE CASE REPORT**

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Problem Statement: A 48-year-old woman was referred from the Digestive Surgery department in Sanglah General Hospital, Bali, Indonesia, regarding to her chronic constipation problem and she was previously diagnosed with partial obstructive ileus in June 2016. She was unable to defecate for 6 days, and had unbearable pain whenever she was going to pass the gas for the last 6 months. The Digestive Surgery department had performed thorough examination, and also with CT scan. No remarkable findings were found, but we found a retroflexed uterus in the examination with normal size of the uterus. She was planned to do open laparotomy by the digestive surgeon, but we were ready to join the surgery if any pelvic mass or findings were obtained during the surgery. The patient was well-informed by the Digestive surgeon about their plan, but we also informing that the possibility of any operation until hysterectomy.

Methods: Case Report

Results: During the operation, the digestive surgeon found normal peristaltic activity and no mass was found in the gastrointestinal tract. We performed examination and we also did not find any pelvic mass. However, we found a hyper-retroflexed uterus that partially adhered to the rectum. We suspected that this position was the main problem causing the defecation problem toward this patient, since no other mass was found. The uterus was in a normal size, but the position was hyper-retroflexed and pushing the rectum backward. We decided to do total abdominal hysterectomy and bilateral salphyngectomy in this patient. Three days after the surgery, she was able to pass the gas with minimal pain, and the defecation was returned to normal after the fourth day of surgery. She was discharged on the fifth day after the surgery, and she finally relieved from her chronic constipation and prevented from any unnecessary operation from the digestive surgeon.





Conclusions: A 48-year-old woman was referred from the Digestive Surgery department with chronic constipation and previously diagnosed with partial obstructive ileus. However, no pelvic mass and normal peristaltic activity was found during the surgery. Total abdominal hysterectomy and bilateral salphyngectomy was performed as we suspected that the hyper-retroflexed uterus which was pushing the rectum backward, was the main cause of her gastrointestinal complaint. The patient was discharged on the fifth day after the surgery and she was relieved from all of her previous complaint. This rare case report shows that position of the uterus also can cause defecation problem. Since this patient was not going to have any further plan of conceiving, hysterectomy was able to be performed in this patient.

Disclosure of Interest: None Declared

P61 STANDARD PRACTICE AND ALTERNATIVE TREATMENT IN PREGNANCY WITH RED ALLOIMMUNIZATION

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Problem Statement: The hemolytic disease of the fetus and newborn is still of one of the significant causes of perinatal mortality. The rates of the hemolytic disease of the newborn (caused by the Rh-Hr and ABO isoimmunization) were 4,7-4,6 for 1000 born-alive infants with perinatal mortality of 4 cases in 2013-2014 in Belarus. It's well known that severe forms of hyperbilirubinemia with anemia in early neonatal period can affect the process of normal development of the child, or cause invalidization (IQ decrease, sensorineural deafness). Intrauterine red cell transfusion (IUT) is the standard practice of most centers. Additionally, plasmapheresis and intravenous administration of high dose immunoglobulin and IUTs are used in pregnancy with Rh-positive fetus, severe red alloimmunization and anamnesis perinatal mortalities. **Methods:** The aim of discussion is our experience of Rh-immunization of pregnant women for last 16 years. **Results:** On the first step of our study we had found that inclusion of medium-volume plasmapheresis (with extraction of up to 50 % of the circulating plasma) into the treatment of Rh-immunized pregnant women with a high risk of the fetal hemolytic disease allows to prolong pregnancy over 34 weeks in 73,7±8,2 % of the cases. We used intravenous high dose immunoglobulins (IVI) after plasmapheresis because of rebound-effect. But it didn't work when fetal anemia had developed. On the second step of our study we used IUT's and we combined treatment of plasmapheresis + IVI before 20 weeks of gestation with IUT after. Moreover, we used this combination in cases with different kind of antibodies (anti-D, anti-c, anti-C, Kell). **Conclusions:** The problem of hemolytic disease of the fetus and newborn, caused by different erythrocyte antigens needs an individual approach to management.

Disclosure of Interest: None Declared

P62 LAPAROSCOPIC EVALUATION OF PELVIC PAIN RELATED TO ENDOMETRIOSIS AFTER MENOPAUSE

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Problem Statement: Usually, endometriosis is considered as an estrogen dependent disease occurring almost exclusively in fertile women. Postmenopausal endometriosis without hormonal therapy is rare but can occur indicating the complex pathogenesis of endometriosis. The purpose of this study is to investigate the present occurrence and significance of postmenopausal endometriosis in both a clinical and histological point of view. **Methods:** Design: Retrospective review of postmenopausal endometriosis patients diagnosed by laparoscopy. **Patients:** 36 cases of postmenopausal endometriosis, underwent laparoscopic operation, confirmed by histology, not receiving previous hormonal therapy. **Results:** The incidence of postmenopausal endometriosis was 2.9% (36/645) in patients with endometriosis. The mean age was 55.8±6.2 years. The mean menopausal period was 80.6±53.5 months. The common preoperative symptoms were lower abdominal pain (38.9%, 22/36) and lower back pain (33.3%, 12/36). The mean BMI was 24.4±2.7 kg/m².

The mean preoperative CA 125 level was 33.8±50.3 U/mL. Postmenopausal endometriosis was primarily located in the peritoneums (63.9%, 23/36), followed by ovary (19.4%, 7/36). There was one case of vaginal endometriosis. In almost cases, surgical excision and ablation of endometriotic lesions with laparoscopic hysterectomy and bilateral salpingo-oophorectomy were done (86.1%, 31/36). Two cases were coexistent with ovarian cancer (clear cell and serous adenoca). There was no recurrence of endometriosis after primary treatment. **Conclusions:** Although rare, postmenopausal endometriosis without previous hormonal therapy can occur and be the cause of disturbing symptoms. Peripheral conversion to estrogen with obesity is not suggested as a main predisposing factor of postmenopausal endometriosis in our study. In contrast to other reports, peritoneum was more common site than ovary. Therefore, gynecologists should be aware of the possibility of postmenopausal endometriosis in symptomatic patients without ovarian mass.

Disclosure of Interest: None Declared

P63 THE EFFECT OF ULTRASOUND-GUIDED HIGH-INTENSITY FOCUSED ULTRASOUND TREATMENT ON UTERINE FIBROID AND ADENOMYOSIS

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Problem Statement: To assess the outcomes after ultrasound-guided high-intensity focused ultrasound (HIFU) ablation in treatment of patients with uterine fibroid or adenomyosis at St. Peter's hospital, Seoul, Republic of Korea

Methods: From January 2015 to August 2015, 591 patients which 147 suffered from uterine fibroid and 444 suffered from adenomyosis were treated as inpatients by US-guided HIFU ablation. An acoustic power of 400 W/cm² were delivered with 150 m second interval at the target point. This process was repeated on a point by point basis. After one slice was treated, the target was shifted 4 mm laterally. If patient were complaining of pain, the procedures were stopped for a while. The patients were followed for 3 to 6 months to observe long-term therapeutic effects. **Results:** Table 1 describes the patient baseline characteristics and Table 2 describe the size change after HIFU ablation. Right after HIFU ablation, a nonperfused ablation area with clear margins was observed on contrast-enhanced MR (Fig. 1). Our results showed that the volumes began to decrease after HIFU ablation and the regression was obvious 3 and 6 months after treatment (Fig. 2). The average volume shrinkage at 3 and 6 months was 37.60% and 42.36%, respectively. During HIFU ablation, most patients complained of a

mild burning sensation in the abdominal skin, requiring no termination of treatment. There were no deaths, life-threatening events and severe complications. In many patients, expulsion of necrotic ablated tissue from the vagina was observed and vaginal discharge was alleviated. The expulsion and discharge disappeared after 2~4 menstrual cycles. In our study, 2 patients were pregnant after HIFU. They had no complication during pregnancy and continued till full term delivery.

Table 1 Baseline characteristics of patients

	Uterine fibroid	Adenomyosis
Total	147	444
Mean age	43.5	43.5
Menstruation & perimenopause	144	421
Menopause	3	23
Desire for future fertility	40	140
Mean ablation time(sec)	988.1	1052.2

Table 2 The volume change after HIFU

	Uterine fibroid		Adenomyosis	
	No.	Volume(cm ³)	No.	Volume(cm ³)
Pre Tx	-	393.11	-	352.22
3mo	34	243.23	90	217.28
Pre Tx	-	343.64	-	346.84
6mo	17	235.94	33	185.72
		33.85		46.76

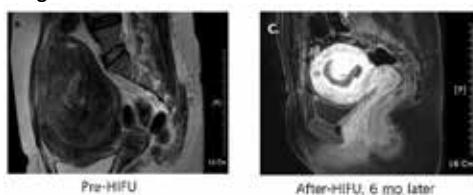
* Mo: months, No.: number, Pre Tx: pre-treatment.



Conclusions: To distinguish the location of needle, making artificial landmark is reasonable method. We made landmark with two laparoscopic forceps. And we found needle at the restricted area by focusing exploration.

Disclosure of Interest: None Declared

Image:



Conclusions: Ultrasound imaging-guided HIFU treatment may be a safe and effective non-invasive alternative in treatment of uterine fibroid or adenomyosis

Disclosure of Interest: None Declared

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HOW TO FIND MISSED NEEDLE DURING LAPAROSCOPIC OPERATION?

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Problem Statement: A 30-year old Korean woman visited OPD due to RLQ intermittent pain for one month. On physical examination there was a palpable tumor at the Rt side and ultrasonography showed 6cm Rt ovarian cyst with solid components. Laparoscopic ovarian cystectomy was done and remained ovary was intracorporeal sutured with #3 vicryl three times. We extracted the thread to find missing needle. We looked for the needle by disassembling the 5mm port. There was not. Where is the needle? It might be jumping out somewhere by the power of extracting threads. Methods: To search the needle we asked the portable X-ray for the simple abdomen. The roentgen showed it remained at RUQ field. (Fig) We failed to find it with direct searching with laparoscopes. We needed to make a sure to find location with landmarker. We put one forcep to separate two plane. and we used second laparoscopic forcep to distinguish plane by cross each instrument. We could define the location collectly under X-ray examination. Results: We found the needle at the subhepatic fossa by focused exploration with laparoscopy. We removed the needle, there was no other injury near the needle fortunately. We repaired the port site and finished operation. The pathologic report was Mucinous cystic teratoma.

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SUCCESSFUL PREGNANCY FOLLOWING PREVENTIVE SALPINGECTOMY AFTER RECURRENT IPSILATERAL INTERSTITIAL PREGNANCY (IP).

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Problem Statement: The uniqueness of ipsilateral recurrence of IP makes it difficult to study the most effective treatment methods, and predict likely outcomes of future pregnancies. In fact, much of the knowledge remains largely observational. Methods: We present an exceptional case of a patient with recurrent ipsilateral IP treated medically, who achieved successful pregnancy following same side preventive salpingectomy. Elective caesarean section (CS) was chosen mode of delivery (MOD) to minimise the risk of uterine rupture.

Results: The patient's past obstetric history included four pregnancies; the first was an early embryonic demise treated surgically, the second resulted in an elective caesarean section (CS) for breech presentation and the remaining two pregnancies were ectopic. Both ectopic gestations were located in the right interstitial part of the fallopian tube and were treated with systemic methotrexate. An ultrasound guided methotrexate injection and surgical management were considered at the time of diagnosis of the recurrent interstitial pregnancy. Both were discouraged in view of the extremely vascular area surrounding the gestation sac, as seen with the colour Doppler imaging. The patient was also unwilling to accept the risk of severe bleeding, necessitating an emergency hysterectomy. Following the resolution of the second interstitial pregnancy, a hysterosalpingogram was arranged and showed a well defined mass of 19x18mm in the right cornu. Contrast pooling likely represented the remnant of the ectopic pregnancy. The left fallopian tube was seen as patent. The patient was counselled regarding long term management options including Essure, a hysteroscopic tubal occlusion or a salpingectomy on the affected site. The patient opted for the latter and a right salpingectomy was performed laparoscopically. Approximately three months later the patient conceived and a viable intrauterine pregnancy was confirmed by an ultrasound scan. The pregnancy progressed uneventfully. In view of previous history of CS and risk of uterine rupture following recurrent interstitial pregnancy an elective CS was performed at term. Healthy baby was born in good condition; the patient made a satisfactory recovery. Conclusions: The interstitial pregnancy is a rare and challenging event. Its management poses therapeutic dilemmas and there is currently no consensus. Treatment should be individualised based on a number of factors, including the following: women's parity,



desire for future pregnancies, size of ectopic gestation, β -hCG levels and haemodynamic stability.

There is very little data regarding future pregnancy rates and outcomes following interstitial pregnancies. A study of 53 cases found pregnancy rates beyond 24 weeks below 20 percent. It is likely that this rate will be further reduced in cases of recurrent ectopic gestation at that location. MOD following interstitial pregnancy is also debatable. Most authors agree that CS is an optimal method in view of risk of uterine rupture. We demonstrated that with the removal of tubal pathology, a primary factor associated with the recurrence of ectopic pregnancy, achievement of the intrauterine pregnancy is possible. We would recommend the consideration of an elective salpingectomy in the case of recurrent interstitial pregnancy where the contralateral fallopian tube is patent and the patient expresses a wish for future pregnancies.

Disclosure of Interest: None Declared

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CERVICAL BIOMARKERS AS PREDICTORS OF SUCCESSFUL LABOR INDUCTION BY FOLEY CATHETER

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Problem Statement: Prediction of successful labor induction is difficult, indicating a need for a biomarker test. The levels of insulin-like growth factor binding protein-1 (IGFBP-1) and phosphorylated IGFBP-1 (pIGFBP-1) in the cervical fluid reflect cervical ripeness. Matrix metalloproteinases (MMPs) and their endogenous tissue inhibitors (TIMPs) are mediators in preterm labor but also appear to play a role in the initiation of labor at term. The mechanism of Foley catheter (FC) is a direct mechanical stretching of the cervix and lower uterine segment, combined with local secretion of endogenous prostaglandins. However, little is known of the effect of FC induction on biochemical mediators in the cervix. **Methods:** We included 35 nulliparous women with uncomplicated singleton pregnancy, intact amniotic membranes, cephalic presentation, and an unripe cervix (Bishop score <6) \geq 40 weeks of gestation scheduled for induction of labor by FC between September 2014 and June 2015. Serial cervical swab samples were collected at FC insertion and expulsion. The concentrations of IGFBP-1, pIGFBP-1, MMP-2, MMP-8, MMP-9, TIMP-1, and TIMP-2 were analyzed. Concentrations of cervical IGFBP-1, pIGFBP-1, and MMP-8 were measured by immunoenzymometric assays using monoclonal antibodies (Medix Biochemica, Espoo, Finland). MMP-2, MMP-9, TIMP-1 and TIMP-2 analyses were carried out by using commercial ELISA kits (Biotrak ELISA Systems; GE Healthcare Life Sciences and Quantikine ELISA Kit; R&D Systems). **Results:** The median IGFBP-1 and pIGFBP-1 concentrations increased (from 1.8 to 23.5 μ g/L and from 5.5 to 75.5 μ g/L; $p=0.008$, $p=0.001$, respectively) from FC insertion to its expulsion. In contrast, MMP-8 and MMP-9 concentrations decreased (from 446.0 to 230.0 μ g/L and from 431.5 to 178.4 μ g/L; $p<0.001$, $p<0.001$), and the TIMP-2 concentrations increased (from 9.3 to 18.9 μ g/L; $p=0.02$). The concentrations of MMP-2 and TIMP-1 did not change significantly. No significant differences in the biomarker concentrations by the mode of delivery or the success of labor induction were observed. **Conclusions:** IGFBP-1, pIGFBP-1, and TIMP-2 concentrations increase, whereas MMP-8 and MMP-9 concentrations decrease in the cervix during FC induced ripening in nulliparous women, and seemed to reflect this event. However, these changes did not predict the outcome of labor induction by FC, and thus appear not suitable for clinical use.

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THE LEADOFF STUDY COMPARING LAPAROSCOPY AND LAPAROTOMY FOR THE CONSERVATIVE SURGICAL TREATMENT OF ADENOMYOSIS

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Problem Statement: Although there has been propensity for uterus-conserving surgery of adenomyosis, there is no study comparing laparoscopy with laparotomy for the management of conservative adenomyomectomy. This is the first study to demonstrate comparative outcome of laparoscopic and laparotomic adenomyomectomy. The aim of this study is to determine the differences of characteristics of adenomyosis between laparoscopic adenomyomectomy and laparotomic adenomyomectomy, and to compare the surgical outcomes.

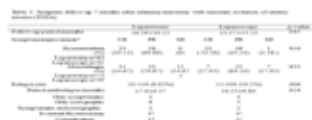
Methods: We analyzed retrospectively 224 cases, 116 cases of laparotomic adenomyomectomy (TA) and 108 cases of laparoscopic adenomyomectomy (SA) performed between July 2011 and October 2015, by a single surgeon (Y.S.K.) which had used transient occlusion of uterine artery (TOUA) technique. We compared laparotomy with laparoscopy according to the (1) characteristics of adenomyosis: type (diffuse or focal), location and maximal size evaluated by transvaginal ultrasonography, (2) outcomes of operation: blood loss, hemoglobin level, combined endometriosis) and (3) follow-up events: symptom improvement, recurrence. **Results:** The mean age of the patients enrolled was older in the laparoscopic group 42.09 (range 27-53) than the laparotomic group 37.49 (range 26-48). The percentage of nulliparous women is high in the TA group (58.62%) than the SA group (12.04%) and multiparous women occupies 87.96% of the SA group. Diffuse adenomyosis account for 99/116 (85.3%) of TA and focal adenomyosis account for 108/108 (100%) of SA. Maximal size of preoperative ultrasonography was 6.48cm (SD 2.15) in the TA cases and 4.34cm (SD 1.04) in the SA cases. Operation time was longer in TA (116.12 minutes; SD 4.0) than SA (75.09 minute; SD 3.9) and estimated blood loss was 222.67mL (SD 231.15) in TA and 155.33mL (SD 116.25) in SA. There was no case of laparoscopy to laparotomy conversion. The major symptoms of the patient were dysmenorrhea, menorrhagia and mixed of both. Symptom improvement was calculated by the decline ratio (%) of the difference between initial symptom and postoperative symptom after 7 months from the date of operation. Complete remission (CR) was defined as 100% of symptom improvement rate, partial remission (PR) as >30% of symptom improvement rate) and stable disease was defined as \leq 30 of symptom improvement rate. Dysmenorrhea was checked by an 11-point numerical scale (0 = no pain, 10 = the pain is as bad as can be). Menorrhagia was evaluated by using the Mansfield-Voda-Jorgensen (MVJ) menstrual bleeding scale. Dysmenorrhea was improved 99.99% (CR 30.12% and PR 69.88%) and 96.92% (CR 52.38% and PR 45.24%) to the patient who received TA and SA. Menorrhagia was relieved 85.34% (CR 14.67% and PR 70.67%) and 82.05% (CR 17.95% and PR 64.10%) in the TA group and SA group. During the follow-up period (mean 16.59 months after TA and mean 13.37 months after SA), 10 (8.62%) patients had been relapsed in the TA group and 11 (10.2%) patients in the SA group. There was no significant difference in the symptom improvement and recurrence rate between the two groups.

Table 1. Pre-operative Characteristics of Patients

Characteristics	Laparotomy (n=116)	Laparoscopy (n=108)	p-value
Age (year, mean±S.D.) (median) (Range)	37.49 ± 4.73 (37) (24-47)	42.69 ± 4.78 (42) (27-53)	<0.001
Parity (mean±S.D.) ^a	0.6 ± 0.80	1.71 ± 0.84	<0.001
	Nulliparity 48 (41.38%)	13 (12.04%)	
	Multiparity 68 (58.62%)	95 (87.96%)	
Major Symptom			0.72
menorrhagia	10 (8.6%)	13 (12.0%)	
dysmenorrhea	16 (13.8%)	16 (14.8%)	
Combined ^b	69 (59.5%)	52 (48.2%)	
others	1 (0.9%)	7 (6.4%)	
Type of adenomyosis			<0.001
diffuse	99 (85.3%)	0 (0%)	
focal	17 (14.7%)	108 (100%)	
Location of adenomyosis			<0.001
anterior	19	32	
posterior	11	40	
fundal	8	16	
whole uterus	18	0	
Maximal size of adenomyosis (cm, mean±S.D.)	6.48 ± 2.15	4.34 ± 1.04	<0.001

Table 2. Comparison of surgical outcomes of adenomyomectomy with transient occlusion of uterine arteries (TOUA)

Characteristic	Laparotomy	Laparoscopy	p-value
Weight of specimen (g) ^{a,b}	108.29 ± 104.33 (n=40)	32.73 ± 18.15 (n=50)	<0.001
Operating time (minute) ^a	116.37 ± 4.0	75.09 ± 3.9	<0.001
Estimated blood loss (ml) ^a	222.67 ± 231.15	135.33 ± 116.25	.006
Combined Endometriosis (%) ^a	37/116 (31.9%)	12/108 (11.1%)	<0.001



Conclusions: When planning conservative surgery of adenomyosis, deliberate preoperative evaluation is required to choose a proper surgical approach (laparoscopy or laparotomy). If a surgeon can select a proper surgical approach, adenomyomectomy is effective to reduce the symptoms of adenomyosis, regardless of the procedure type.

Disclosure of Interest: None Declared

P68 MATERNAL SERUM MMP-2 IN PREGNANCIES COMPLICATED BY IUGR IN THE COURSE OF SEVERE PREECLAMPSIA

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Problem Statement: The aim of this study was to investigate the maternal serum matrix metalloproteinase -2 levels (MMP-2) in pregnant women with pregnancies complicated by intrauterine growth restriction in the course of severe preeclampsia.

Methods: Patients and methods: The study was carried out on 55 patients with IUGR in the course of severe preeclampsia (the PI group) and 55 healthy normotensive pregnant patients with singleton uncomplicated pregnancies, without any renal, cardiac and vascular diseases and with normal laboratory tests and with appropriate-for-gestational-age weight infants as the Control group. Severe preeclampsia was defined as proteinuria more than 5g protein loss in 24-hour urine collection with blood pressure 160/110 mmHg or more on two occasions at least 4 hours in women who were normotensive before 20 weeks of gestation and when hypertension was associated with 1 or more of the following clinical manifestations: the new development of renal abnormalities, hematologic abnormalities, or impaired liver function, or HELLP syndrome or new-onset neurologic symptoms. No women with chronic hypertension or superimposed preeclampsia, were included in the present study. All arterial blood pressure measurements in the Control group were normal and did not exceed 135/85 mmHg. All pregnancies were dated according to last menstrual period and confirmed by first trimester crown-rump length measurement. Intrauterine growth restricted fetuses (IUGR) were diagnosed as the failure of a fetus to reach its full genetic growth potential and as the estimated fetal weight and abdominal circumference under the 10th percentile for a given gestational

age according to reference ranges for Polish population with additionally disturbed placental functions in ultrasonographic examination. The diagnosis was confirmed by the infant's weight at birth. All maternal serum samples were analyzed to assess matrix metalloproteinase 2 (MMP-2) using a sandwich ELISA assay according to the manufacturer's instructions (R&D Systems, Abingdon, UK). The results were expressed as mean ±SD and were statistically analyzed with the computer program "Statistica". Results: Systolic and diastolic BP and MAPII were significantly higher in the preeclamptic pregnant women than in the control group. The mean weight of infants at birth were 1600.86 ± 549.40g in patients with pregnancies complicated by IUGR in the course of preeclampsia, and 3090.94 ± 487.88 g in the healthy controls.

The concentrations of MMP-2 were higher in preeclamptic women with IUGR in comparison with the control subjects. The mean values of the MMP-2 levels in maternal serum were 259.90±91.81ng/mL in the PI group, and 202.53±47.07ng/mL in the healthy controls (p=0.000065). Conclusions: The present study revealed significantly higher levels of MMP-2 in serum of preeclamptic women with pregnancies complicated by IUGR than observed in healthy pregnancies.

Disclosure of Interest: None Declared

P69

A 5-YEAR EXPERIENCE OF ULTRASOUND GUIDED ASPIRATION AND SCLEROSIS WITH ALCOHOL IN RECURRENT ENDOMETRIOMAS AT A SINGLE TERTIARY UNIVERSITY HOSPITAL.

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Problem Statement: To evaluate if ultrasound-guided aspiration and sclerosis with alcohol is effective in patients with recurrent endometriomas. Methods: In this retrospective study, we reviewed medical records of 27 patients with recurrent endometriomas who underwent ultrasound-guided aspiration and sclerotherapy with ethanol between February 2011 and August 2016 at Ajou University Hospital in Korea. Clinical characteristics including patients' age, history of infertility, size of endometrioma, severity of pelvic pain, cyst laterality, serum CA-125 level, post sclerotherapy treatment as well as recurrence rates were evaluated. SPSS statistical software was used. Results: A total of 27 patients with recurrent endometriomas were included in the study. The median age of the patients was 38 years. About 88% of patients experienced surgical treatment for endometrioma before ultrasonography guided aspiration and sclerotherapy procedure. About 48% of endometrioma was found on the left side, 30% was on the right side and 22% of endometrioma was found to be bilateral. Most of patients (52%) experienced mild pelvic pain before the procedure and only 26% of patients reported to have severe pelvic pain. The median volume of cyst aspirated was 90 ml and about 10ml of alcohol was used for sclerosis. Ultrasonography guided aspiration and sclerosis of recurrent endometriomas were followed by medical treatments including Dienogest, oral contraceptives, GnRH agonists, or the combination of both drugs. The recurrence rate was 51.9% and the rest of 40.7% of patients reported no recurrence after this procedure.



Table 1. Patient Characteristics and procedure details

No. of patients	27
Median age (years)	38 (SD 3.25; Range 31-51)
Previous surgery for endometriosis	24 (88.9%)
History of infertility	9 (33.3%)
Mean longest cyst diameter (mm)	30 (SD 16.7; Range 5-95)
Cyst laterality	
Left side	13 (48%)
Right side	8 (29%)
Bilateral	6 (22%)
Symptomatology	
Mild	14 (52%)
Moderate	3 (11%)
Severe	7 (25%)
Median cyst volume aspirated (mL)	90 (SD 100.6; Range 10-450)
Median volume of alcohol instilled (mL)	10 (SD 6.21; Range 0-30)
Treatment after sclerotherapy	
No treatment	2 (7.4%)
Doxogest	4 (14.8%)
OC & GnRHa	6 (22.2%)
Doxogest & OC	2 (7.4%)
OC	9 (33.3%)
GnRHa	3 (11.1%)
CA-125 level	18.3 (SD 11.4; Range 5.1-51)
Recurrence	
Recurrence	14 (51.9%)
No recurrence	11 (40.7%)

SD = Standard deviation, OC = oral contraceptive, GnRHa = Gonadotropin-releasing hormone agonist

Conclusions: Ultrasound-guided aspiration and sclerotherapy with alcohol is a safe and effective treatment for patients with recurrent endometrioma. This treatment technique can be applied to patients with recurrent endometriomas who are unable to undergo surgical treatments.

Disclosure of Interest: None Declared

P70

CASE SERIES OF SUCCESSFUL TREATMENT FOR SYMPTOMATIC POST CESAREAN SECTION SCAR DEFECT WITH HYSTEROSCOPIC COAGULATION

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Problem Statement: To evaluate the effectiveness of hysteroscopic coagulation in treating symptomatic post cesarean section scar defect. **Methods:** This is a retrospective review of four patients who received hysteroscopic coagulation for treating postmenstrual abnormal uterine bleeding associated with post cesarean section scar defects. Among patients with postmenstrual abnormal uterine bleeding, a total of four patients were included in the study. They were diagnosed with post cesarean section scar defects confirmed by a transvaginal ultrasonography. All other causes for abnormal uterine bleedings were excluded. Diagnostic hysteroscopy was first performed, which revealed post cesarean section scar defects on anterior uterine wall along with hyperemic vessels around the defects. Upon finding the defects, monopolar coagulation of the hyperemic vessels on the defect sites were performed. Hysteroscopy was completed with the evidence of no abnormal intrauterine bleeding. Intrauterine device was inserted immediately following the hysteroscopic surgery and oral contraceptive medications were applied at least for one month in three patients.

Results: The average age of the patients was 39.5 years and the average parity was 2.5. Three patients had history of two previous cesarean deliveries and one patient had three previous cesarean sections. Transvaginal ultrasonography was performed in all patients and revealed post cesarean scar defects. Three patients showed no additional uterine pathology and one patient had adenomyosis. The average size of the defect was 9.4 mm wide and 9.13 mm in depth. All patients experienced postmenstrual abnormal uterine bleeding for average of 14 days accompanied by vaginitis or menorrhagia in two patients. There were no complications associated with hysteroscopic coagulation. Postmenstrual abnormal bleeding as well as accompanying symptoms associated with vaginitis and menorrhagia disappeared following hysteroscopic electrocoagulation of the scar defect.

Conclusions: Hysteroscopic coagulation of the cesarean section scar defect is a simple method to successfully treat the symptomatic cesarean section

scar defects. Intrauterine device followed by oral contraceptive can prolong the effect hysteroscopic management of the defect. Hysteroscopic treatment may serve as an alternative method to repair the cesarean section scar defect other than laparoscopic or vaginal approach.

Disclosure of Interest: None Declared

P71

A RARE CASE OF INTRAMURAL MÜLLERIAN ADENOSARCOMA ARISING IN ADENOMYOSIS OF THE UTERUS

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Problem Statement: Müllerian adenomas usually arise in the endometrium and grows as a polypoid mass in post-menopausal women presenting as abnormal vaginal bleeding. Occasionally, they arise in the cervix, vagina, broad and round ligaments, and ovaries and rarely in extragenital sites, usually associated with endometriosis. We experienced a rare case of extraendometrial, intramural adenosarcoma arising from adenomyosis in a 40-year-old woman.

Methods: We studied a case of intramural müllerian adenosarcoma of the uterus in a 40-year-old woman. The patient presented with sudden-onset suprapubic pain and initial low back pain. Imaging findings suggested leiomyoma with cystic degeneration in uterine fundus. **Results:** One ill-defined ovoid tumor measured 7.5 cm in diameter, was located in the uterine fundus with hemorrhagic degeneration and rupture. The tumor was composed of both glandular cells with no atypia and a sarcomatous component evidenced by cell pleomorphism and a high mitotic rate. No evidence of eutopic endometrial origin was identified. The adenosarcoma was only limited in myometrium with no serosal involvement.

Conclusions: Malignant transformation of adenomyosis should be considered in the differential diagnosis of a huge solid and cystic uterine mass in a patient. To avoid overstaging and inappropriate treatment, it is important to recognize that adenosarcoma can, rarely, arise in adenomyosis.

Disclosure of Interest: None Declared

P72

CONGENITAL INTRACRANIAL SPACE OCCUPYING LESION: A CASE REPORT

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Problem Statement: A congenital intracranial space occupying lesion (SOL) is defined as a lesion that is present at birth or possibly first detected in the first few months of life. It is extremely rare, with reported incidence of 0.5 to 1.5% of all cerebral tumours in children. **Methods:** We present a case of congenital intracranial space occupying lesion diagnosed at 33 weeks' gestation.

Results: A 34-year-old woman with 2 previous first trimester miscarriages and antenatal history of gestational diabetes well controlled on diet was referred to Singapore General Hospital at 33 weeks' gestation for a right brain lesion. Her first trimester screening was low risk for trisomy and screening scan done at 20 weeks showed no fetal anomaly. Ultrasound done at 33 weeks' gestation showed a 4 cm lesion in the right posterior brain. Middle cerebral artery pulsatile index (MCA PI) was markedly low. Antiplatelet antibodies were not demonstrated. She was admitted for antenatal steroids. CTG done was reassuring. In view of possible fetal brain infarct, elective caesarean section was performed at 34 weeks' gestation. A baby girl was delivered with good Apgar score. An MRI brain showed a large haemorrhagic right temporo-occipital mass with early hydrocephalus, suspicious of a supratentorial primitive neuroectodermal tumour (PNET). Parents subsequently declined surgery and baby was discharged against advice. On day 11 of life, baby was admitted with vomiting and lethargy. CT

brain showed marked increase in midline shift and baby passed away the same night.

Discussion

Differential diagnoses of congenital intracranial SOL include tumours that are either solid or cystic, brain malformations, haemorrhage or infarct. The most common solid tumours seen are teratomas and gliomas. Congenital primitive neuroectodermal tumour is very rare. Congenital intracranial SOL may result in spontaneous intracranial haemorrhage in-utero, hydrocephalus, macrocephaly, intrauterine growth retardation and stillbirth. Antenatal detection of congenital intracranial SOL is usually incidental during antenatal ultrasound follow up. Diagnosis is usually challenging and may be facilitated with antenatal MRI. Conclusions: An accurate antenatal diagnosis is important to facilitate counselling, making decision on mode and timing of delivery. Congenital SOL with poor fetal prognosis diagnosed in early pregnancy may be offered option of termination of pregnancy. Timely delivery and management in a tertiary centre with Maternal Fetal Medicine, neonatal support and paediatric surgical input are essential to ensure optimal perinatal and neonatal care of a rare condition with guarded prognosis.

Disclosure of Interest: None Declared

P73

DO PATIENTS AND NURSES HAVE DIFFERENT PREFERENCES FOR FSH INJECTION DEVICES: A MAXDIFF ANALYSIS IN SELECTED EUROPEAN MARKETS

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Problem Statement: The European Union (EU) has among the world's lowest average fertility rates with an average of 1.5 children per woman. Given adequate patient adherence and healthcare practitioner (HCP) adoption, injection devices for self-administration of FSH can significantly improve the likelihood of success in Assisted Reproductive Technology (ART) therapy. However, data are limited concerning product-specific features that drive patient and HCP preferences for FSH injection devices. **Methods:** We surveyed 402 patients in the EU5, Netherlands, and Belgium, and 40 IVF nurses in Germany, Italy, France, Spain, and the Czech Republic. All patients were prescribed an FSH treatment in the past, either for an IVF or for an ovulation induction. Preferences of patients and nurses were obtained via an online questionnaire and evaluated using Maximum Differential Scaling (MaxDiff) analysis, which captures the relative importance of selected FSH injection device attributes to determine specific qualities in overall product preference. The 19 tested attributes were determined through examination of currently available FSH injection devices on the market. Respondents' preferences on these attributes were expressed as relative importance scores (IS) normalized to sum to 100. **Results:** Patients and nurses each selected attributes pertinent to their own experiences with the FSH injection device. Each population considered dosing accuracy to be an extremely important feature (IS=8.54 and IS=16.82 respectively). Patients ranked daily injection volume as the most important factor in choosing a device (IS=8.91) followed by a desire for a pen injector (IS=8.66), an injector with a dial-back function (IS=6.78), low incremental dosing (IS=6.22), and ability to use multiple pen cartridges (IS=5.61). Most important to nurses were features related to patient management, including a dial-back function (IS=13.09) and ease of teaching use of the device to patients (IS=12.27). Nurses were less driven by convenience factors, including daily injection volume (IS=3.03), multiple-cartridge use (IS=3.16), and incremental dosing (IS=4.3). **Conclusions:** The importance of our findings is that both shared and discrepant preferences of patients and nurses for features of FSH injection devices reflect their individual perspectives. For both patients and nurses,

an ideal FSH injection device would be a highly accurate pen injector, allow for multiple use, and have a dial-back function. However, while patients value factors that result in minimal impact on daily life (including reduced injection volume to reduce injection-site pain, as well as a reusable device which is easy to use), nurses value ease of teaching, in order to instruct the greatest number of patients while minimizing risk. Our study was an unbranded examination of attributes across all injection devices currently on the market, however, our results showed that both patients and nurses gravitated to features that were all characteristic of the Ovaleap pen, whereas other injectors lacked one or more of these features.

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P74

SAFETY AND EFFICACY OF OVALEAP® (FOLLITROPIN ALFA) USING GnRH ANTAGONIST PROTOCOLS: ANALYSIS OF CYCLES FROM AN OPEN-LABEL FOLLOW-UP PERIOD OF A PHASE 3 STUDY IN ASSISTED REPRODUCTIVE TECHNOLOGY

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Problem Statement: Ovaleap® is a recombinant human follicle-stimulating hormone (r-hFSH) registered in Europe as a biosimilar of Gonal-® (follitropin alfa). Its safety and efficacy have been found comparable to Gonal-® in a phase 3 randomized, controlled study in women undergoing controlled ovarian hyperstimulation for in vitro fertilization using a long agonist protocol. To date no data are available on Ovaleap® use in gonadotropin-releasing hormone (GnRH) antagonist cycles. **Methods:** This report is based on data obtained during an open-label, uncontrolled 2nd cycle following the initial phase 3 study. Patients were infertile women aged 18-37 years who did not become pregnant in the main study (1st cycle) and elected to be treated for the 2nd cycle of IVF using Ovaleap®. The stimulation protocol and dosing of Ovaleap® were at investigator discretion. Data were collected for baseline demographic, stimulation, clinical outcome, and safety parameters. Efficacy and safety of Ovaleap® were assessed in GnRH antagonist (GnRH-ant) and GnRH agonist (GnRH-a) cycles. **Results:** A total of 147 patients (GnRH-ant: n=39 vs GnRH-a: n=104) were included in cycle 2; for 4 patients, the type of protocol was unknown. Apart from a slightly higher (though biologically probably not meaningful) mean age and a lower mean total ovarian volume in the GnRH-ant group (32.9±2.9 vs 31.2±3.2 years and 11.6±5.0 vs 16.9±14.5 cm³, respectively), no major differences were found in baseline characteristics between the two groups. As expected, total dose of Ovaleap® and treatment duration were lower in the GnRH-ant group (1669±640 IU vs 2093±775 IU and 8.7±1.5 vs 10.2±1.7 days, respectively). Total number of follicles >14 mm the day prior to human chorionic gonadotropin (hCG) injection was 6.8±3.8 vs 11.1±5.9 in the GnRH-ant and GnRH-a groups and the mean number of oocytes retrieved was 10.5±5.3 vs 12.6±6.1, respectively. While the biochemical pregnancy rate was lower in the GnRH-ant group (25.6% vs 32.7%), the ongoing pregnancy rate was similar between the groups (23.1% vs 26%). The overall frequency of treatment-emergent adverse events (TEAEs) was low (7.7% and 12.5%, respectively). TEAEs considered possibly related to Ovaleap® were reported in 1 patient (2.6%) in the GnRH-ant group and 3 patients (2.9%) in the GnRH-a group. Only one case of ovarian hyperstimulation syndrome (OHSS) was reported, in the GnRH-a group.

Conclusions: These results suggest that as expected the efficacy and safety profiles of Ovaleap® are similar in IVF cycles using the GnRH-ant or GnRH-a protocols. These data also suggest that the use of Ovaleap® in repeat cycles or given after the first cycle treated by Gonal-® is safe and well tolerated.



Disclosure of Interest: R. Levy-Toledano Employee of: Teva Pharmaceuticals Europe, B. Gertz Employee of: Merckle Biotec GmbH/Teva Group, P. Kovacs: None Declared, A. Mueller Employee of: Merckle Biotec GmbH/Teva Group, M. Mrázek: None Declared

P76

ANALYSES OF PATIENTS WHO OPTED FOR OVARIAN TISSUE CRYOPRESERVATION AND THE OUTCOME IN SINGAPORE GENERAL HOSPITAL

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Problem Statement: With the advances in cancer treatment, survival rate has largely improved and fertility preservation has become a focus especially for young patients. Various options are available for female fertility preservation, ovarian tissue cryopreservation has the advantages of preserve large number of oocytes within primordial follicles, does not require hormonal stimulation when time is short, appropriate for pre-pubertal, and does not involve male partner.

The purpose of this study is to characterize the patient's profile that opted for ovarian tissue cryopreservation, and to determine the outcome after ovarian cryopreservation. Methods: This is a retrospective review on patient who underwent ovarian tissue cryopreservation in Singapore General Hospital from 2008 until present. Medical records were reviewed for age, indication, cancer treatment and fertility outcomes. Results: There is total of 22 patients underwent ovarian tissue cryopreservation. The age of the patients ranged from 17 to 40 years old. The average age was 28 years old. Of these, half of them had breast cancer, four had female genital tract cancers, two had Hodgkin's lymphoma, four had other malignancy, and two had haematological disease. Four passed away and four opted for ovarian tissue disposal. Two patient got pregnant and delivered (one conceived spontaneously and another patient conceived with IVF stimulation of the contralateral ovary). One had autologous transplantation and restored menstruation. Conclusions: The human experience with reimplantation of ovarian tissue is still limited, and due to the invasive nature of ovarian biopsy, ovarian tissue cryopreservation remains controversial. A comprehensive algorithm to manage fertility preservation is needed according to the local context.

Disclosure of Interest: None Declared

P75

INTRA-UTERINE HERPES SIMPLEX VIRUS (HSV) INFECTION: ULTRASOUND SUSPICION OF FETAL ANEMIA

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Problem Statement: Neonatal infection with herpes simplex virus (HSV) is associated with serious morbidity and mortality. Three periods of acquisition can be distinguished: intra-uterine, perinatal and postnatal. Intra-uterine HSV occurs in less than 5% of all HSV infections, but is associated with miscarriage, stillbirth and congenital malformations. Survivors may exhibit a characteristic triad of cutaneous, ophthalmologic and central nervous system manifestations. Prenatal ultrasound findings in case of intra-uterine HSV reported on fetal growth restriction, hydrops fetalis, cerebral anomalies and intra-abdominal and intra-cardiac calcifications. Methods: Case report:

Results: A 43-year-old multipara, with a known history of recurrent miscarriages was referred for detailed sonography at suspicion of fetal anomalies at the Standard Anomaly Scan at 20 weeks' gestation.

Prenatal course was uneventful so far.

Sonography demonstrated oligohydramnios and fetal growth restriction. No major structural fetal anomalies were seen. However, Doppler flow investigation demonstrated signs of fetal anemia with an elevated peakflow velocity in the middle cerebral artery (44 cm/s, > 1.5 MoM), cardiomegaly,

ascites, echogenic bowel and increased placental thickness. Diagnostic cordocentesis was performed at 21+0 weeks of gestation. Results revealed a normal QF-PCR and array and demonstrated a low-normal ranged fetal hemoglobin of 5.5 mmol/l =8.8 g/dl and a low platelet count of 39 10⁶/l. Follow-up of sonography demonstrated a progressively growth restricted fetus at 23 weeks of gestation (all measurements <3rd percentile), oligohydramnios, bilateral borderline cerebral ventriculomegaly, ascites, cardiomegaly, echogenic bowels, increased placental thickness, and a remarkably thickened-echogenic umbilical cord "calcifying funisitis". Meanwhile, PCR testing of the cord blood on viral infections appeared to be positive for HSV1, and negative for ParvoB19 and CMV. Although without clinical symptoms, the mother was tested positive for HSV1-PCR as well. Parents were counseled on the expected poor prognosis and outcome of this pregnancy, but desired to prolong pregnancy. At a routine prenatal visit at 26+1 weeks' gestation, fetal heart tones were not detected, and sonography confirmed an intrauterine fetal death. Conclusions: This is the first report on the association of intrauterine HSV infection with prenatal ultrasonographic suspicion of fetal anemia. Although rare, in cases of fetal anemia of unknown origin, intra-uterine HSV infection should be considered in differential diagnosis, since outcome is associated with high rates of perinatal mortality and morbidity.

Disclosure of Interest: None Declared

P77

ENDOMETRIOSIS IN A TWIN PREGNANCY LEADING TO MASSIVE HEMOPERITONEUM AND INTRAUTERINE DEATH – A CASE REPORT

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Problem Statement: Endometriosis occurs in about 10% of women in the reproductive age group and infertility rates have been reported to be as high as 50%. It is commonly thought to be quiescent during pregnancy and the relationship between endometriosis and pregnancy has been an area largely unexplored as compared to other areas of endometriosis. With rapid advances in Assisted Reproductive Techniques (ART), an increasing number of women with subfertility as a result of endometriosis are now able to conceive, translating to a rise in obstetric related complications, in particular hemoperitoneum which is a rare but fatal obstetric complication in these women. Methods: We report a case in our centre of massive endometriotic bleed in a second trimester DCDA IVF twin pregnancy in a 31-year-old primip presenting with acute onset of abdominal pain leading to intra-uterine death and acute hemoperitoneum necessitating exploratory laparotomy and hysterotomy. Results: New breakthroughs in areas of assisted reproductive techniques will see an increased proportion of women suffering from subfertility as a result of endometriosis to conceive. This translates into a rise in obstetric complications, both from the underlying endometriosis for which evidence is still uncertain, as well as from ART. Conclusions: It is imperative for the primary obstetrician to be mindful and vigilant of the associated risks especially in surgically confirmed severe endometriosis and for heightened surveillance in pregnancy. Although there is a lack of appropriate preventive measures currently, appropriate counseling of the risks associated with endometriosis should be made known clearly to these women.

Disclosure of Interest: None Declared

P78

SUCCESSFUL MEDICAL TREATMENT OF AN ECTOPIC CAESAREAN SCAR PREGNANCY WITH METHOTREXATE

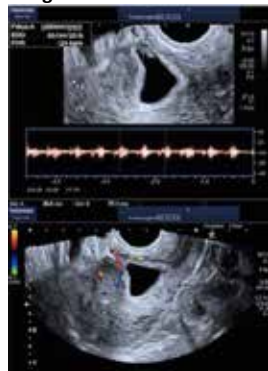
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Problem Statement: Implantation of a pregnancy within a Caesarean fibrous tissue scar is considered to be the rarest form of ectopic pregnancy. It is a life-threatening condition due to the high risk of uterine rupture and maternal complications. **Methods:** The authors present a case report of an ectopic caesarean scar pregnancy treated with methotrexate (MTX). **Results:** A 36-year-old woman with a previous C-section presented in our clinic requesting an abortion at 6 weeks of gestation (according to last menstrual period). She was asymptomatic and physical examination was negative. A transvaginal ultrasound was performed and revealed a caesarean scar pregnancy according to the Jurkovic criteria. The gestational sac, containing a yolk sac and an embryonic pole with cardiac motion, was located in the anterior isthmus, in the location of the previous caesarean scar. Serum β -human chorionic gonadotrophin (β -hCG) level was 81979 mIU/mL. Medical treatment with methotrexate was offered and a written informed consent was obtained. The patient was hospitalized and an intramuscular injection in addition to a local injection of MTX was administered. Daily serum β -hCG level was determined until day 6 and a transvaginal ultrasound was performed every 48 hours. The patient was discharged asymptomatic at day 6 with a β -hCG level of 65298 mIU/mL and an ultrasound revealing no embryonic cardiac motion. At day 18, the patient was admitted in the emergency room complaining of pelvic pain and vaginal bleeding. The transvaginal ultrasound revealed an irregular gestational sac with no visible embryo, hemoperitoneum or uterine rupture. Vital signs and blood tests were normal and therefore the patient was discharged. Serum β -hCG was negative in 30 days.

Image:



Conclusions: Various treatment modalities for ectopic caesarean scar are available. According to the literature, medical treatment with MTX, either systemic, intra-amniotic or both, is a frequently used option.

Disclosure of Interest: None Declared

P79

TREATMENT OF PRE-CANCEROUS LESIONS OF CERVICAL CANCER

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Problem Statement: Cervical cancer is the fourth most frequent cancer in women and is a consequence of persistent infection with human papillomavirus (HPV). A large loop excision of the transformation zone (LLETZ) is the most frequent procedure to treat high-grade cervical dysplasia. The goal of our study was to analyze cases of LLETZ and to correlate colposcopic findings and histological results from cervical biopsy guided by colposcopy. **Methods:** Retrospective study of all LLETZ of the cervix performed in a district hospital during 2015 (n=57). Demographic data and cytologic, colposcopic and histologic results were recorded. Correlation between colposcopy and histologic results was then performed. Histological results of cone biopsy (LLETZ) were divided into 3 groups: A - high-grade squamous intraepithelial lesions (HSIL), B - low-grade squamous intraepithelial lesions (LSIL) and C - normal.

Results: Among the 57 LLETZ performed:

- Group A had a total of 42 women: mean age was 39.2 years-old, 20 (47.6%) were smokers, 23 (54.8%) were on combined oral contraceptive pills. The most frequent cause of referral to colposcopy was an abnormal cytology (HSIL in 19 cases and atypical squamous cells-cannot exclude HSIL (ASC-H) in 10 cases). Grade 2 colposcopic findings were present in 71.4% (30 cases) and a cervical biopsy was performed in 36 cases (HSIL in 33 cases, LSIL in 2 cases and an inconclusive result in one case). A diagnostic LLETZ was performed in 7 cases. Most of LLETZ had clear endocervical (n=27) or exocervical (n=36) margins. LLETZ was always complemented with LASER ablation of surgical margins.

- In group B there were 8 cases: mean age was 43.4 years-old, 2 were smokers and 6 were on oral combined contraceptive pills. An abnormal cytology was the most frequent indication to colposcopy (4 HSIL, 2 LSIL). Colposcopy findings were grade 1 (2 cases), grade 2 (4 cases) and 2 cases presented with normal findings. A cervical biopsy was performed in all women except for two cases with the following results: 3 HSIL, 2 LSIL and 1 normal. Diagnostic LLETZ was done in 3 women. Margins were clear in all LLETZ.

- 7 women represented group C: 43.3 years-old was the mean age, 1 was an active smoker and 3 were on combined oral contraceptive pills. Indications for colposcopy were an abnormal cytology in 5 cases (3 HSIL) and a suspicious visible cervical lesion in 2 cases. Findings in colposcopy were grade 1 in 3 cases and grade 2 in 2 cases. In 6 women a cervical biopsy was performed revealing HSIL as the result. There was only one diagnostic LLETZ. Regarding colposcopic-histologic correlation it was higher for the HSIL category (91%) than the LSIL category (23%).

Conclusions: The major challenge for the colposcopist is to distinguish the normal from the abnormal and to sample the most abnormal appearing areas of the cervix for histologic diagnosis. Our study demonstrated a tight correlation between colposcopy and histologic results concerning the HSIL category.

Disclosure of Interest: None Declared

P80

EFFECTS OF CABERGOLINE ADMINISTRATION ON UTERINE PERFUSION IN WOMEN WITH POLYCYSTIC OVARY SYNDROME

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Problem Statement: Determine the effects of Cabergoline administration on uterine blood flow in women suffering from polycystic ovary syndrome (PCOS).

Methods: A randomized, controlled, triple-blind study which is tested on 40 pcos women who were randomly divided into two same groups and using a randomized block design during which the subjects were assessed and included. Inclusion criteria were classically defined PCOS criteria including: oligomenorrhea or amenorrhea, clinical or Laboratory findings based on increase in blood level androgen and ultrasound confirmation of PCOS. Exclusion criteria were Pregnancy, lactation, Dopamine Agonist Therapy. After selection of intervention and placebo groups, primary control Doppler ultrasound was done for both groups. Then a weekly dose of Cabergoline 0.5 mg was administered to intervention group for duration of 12 weeks. Placebo group were administered placebo in the same fashion. At the end of 12 weeks, Doppler ultrasound was performed and the results were recorded in the check lists. **Results:** No significant difference was noticed in both groups with respect to their age, employment, level of education, type of infertility, duration of marriage, and results of RI and PI before intervention. Later, PCOS patients under the treatment of Cabergoline showed a significant increase in uterine blood flow Pulsatility Index (PI) before 2.65±0.52 and after 1.98±0.52 and RI before 0.85 and after intervention (0.77), yet no significant difference was found in PCOS patient under the treatment of placebo. **Conclusions:** PCOS patients were shown to have more resistance in uterine blood flow than healthy people;



however, Cabergoline administration proved to increase uterine blood perfusion and regulate menstruation cycle.

Disclosure of Interest: None Declared

P81 RARE COMPLICATIONS OF FEMALE GENITAL MUTILATIONS – CASE REPORTS

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Problem Statement: Female genital mutilation (FGM is defined by the World Health Organization (WHO) as “all procedures that involve partial or total removal of the external female genitalia or other injury to the female genital organs for non-medical reasons.WHO estimates that 100–140 million women and girls around the world have experienced the procedure including 92 million in Africa.The prevalence rates ranged between 50% and 90%.The latest UNICEF report estimates that 87% of Sudanese women and girls aged between 15 and 49 have been cut. Severe pain, excessive bleeding, shock and genital tissue swelling leading to urination problems are major acute complications. We would like to highlight the danger of this procedure even if it is done in its simplest form and even if performed by medical practitioners.

Methods: case reports

Results: Case 1: "Necrotizing Fasciitis: Figure 1. A 7-year-old girl presented to Kassala New Hospital on 2 March 2005 with high fever following FGM. The procedure had been done 7 days' prior to admission. After the cutting, an herbal powder was applied to the wound. No antibiotic was given. During that period, she experienced high fever and difficulty in passing urine. She was brought to hospital when her condition deteriorated. She was very ill, febrile, hypotensive with profound tachycardia. There was extensive perineal and anterior abdominal wall necrosis. The left labium majus, the lower three-quarters of the left labium minus and most of the mons pubis were eaten away. The clitoris was preserved. There was extensive loss of skin and subcutaneous fat of the right inguinal region. Debridement of the wound was performed under general anaesthesia. With repeated debridement and dressing, she showed progressive improvement. Wound swab culture showed group A streptococcal growth that was sensitive to the drug prescribed. This is a case of necrotizing fasciitis. After 7 days her family took her away from hospital and she was not seen again. Case 2: Large inclusion cyst complicating female genital mutilation. (Fig 2). Case Report A 40-year old grand-multiparous woman presented to our hospital with painful genital swelling. She had experienced spontaneous vaginal deliveries, the last five years ago. She was circumcised before school age. De-infibulations, re-infibulations and episiotomy were performed after each delivery. Three years ago, she noticed a painless swelling in her vulva which was gradually increasing in size. She did not tell anybody about it. Sexual intercourse became difficult, thus she abstained for almost two years. Her movement became restricted, and after being unable to walk due to severe pain for a few days, she decided to seek treatment. Local examination showed a large cystic swelling originating in the circumcision line and covering the introitus. A diagnosis of inclusion cyst at the site of circumcision was made. The cyst was easily removed by dissection along the lines of cleavage. It measures 11X10.6 cm and weighed 1.9 kg. The redundant skin was excised and the edges were approximated. There were no complications following surgery and the patient was discharged on Day 2 after surgery.



Conclusions: A serious complication of necrotizing fasciitis could result from even simple its form of FGM. A common complication of FGM (inclusion cyst) could be very serious if neglected.

Disclosure of Interest: None Declared

P82 COMPLETE HYDATIDIFORM MOLE WITH COEXISTENT EUPLOID FETUS

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Problem Statement: Hydatidiform mole coexisting with live fetus is a rare occurrence, with an estimate prevalence of 1 in 20000 to 100000 pregnancies, with most being complete hydatidiform moles (CHM) coexisting with a normal fetus and placenta and so allowing for expectant management. Nevertheless, the decision whether to conserve or not is always problematic. Formerly, termination of pregnancy was indicated to avoid complications as preeclampsia, thyrotoxicosis, thromboembolic disease, hemorrhage, intrauterine demise and a potentially lethal risk of gestational trophoblastic neoplasia. However, CHM is associated with advanced maternal age and the use of assisted reproductive techniques (ART), reflecting how difficult the decision of termination can be. We report a case of a complete hydatidiform mole (CHM) with a coexistent euploid fetus. **Methods:** Review of clinical reports. **Results:** A 38-year-old Caucasian woman (gravida 2, para 1), with a nonconsanguineous spontaneous pregnancy was referred to our center for routine first trimester ultrasound as a part of the existing protocol. The routine ultrasound at the 12th gestational week showed multiple cystic placenta with no significant vascularity and a normal developing fetus; the maternal ovaries were normal. Genetic analysis using polymorphic markers of both the hydroptic and the apparently normal placenta confirmed normal diploid fetus (46, XY) and the histologic analysis showed placental tissue with molar degeneration of trophoblast. The patient opted for expectant management with close surveillance. At 23 weeks and 5 days the patient was admitted to our emergency room in labour with premature rupture of membranes. Pathologic examination of the placenta was consistent with de diagnosis of CHM. Additional QF-PCR studies did not permit to confirm or exclude the diagnosis of twin gestation. **Conclusions:** Continuation of a pregnancy with complete hydatidiform mole is an acceptable option. There is, though, an increased risk of developing maternal and fetal complications, as so, very few progresses to term as they often have spontaneous or induced terminations. Close surveillance of an on going pregnancy is essential to detect potential early signs of complications.

Disclosure of Interest: None Declared

P83**GASTROSCHISIS AND OMPHALOCELE: A TEN-YEAR REVIEW AT A TERTIARY CARE CENTER**

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Problem Statement: Gastroschisis and omphalocele are the most common foetal abdominal Wall defects, with an approximate prevalence of 3-4 per 10000 pregnancies. Gastroschisis is a full-thickness, paraumbilical Wall defect, usually associated with evisceration of bowel. Several hypotheses have been proposed to explain the pathogenesis of gastroschisis, all involving defective formation of the body wall in the embryonic period. A differential diagnosis is omphalocele, which is a midline defect of variable size, covered by a membrane of amnion and peritoneum with Wharton's jelly between the two layers, and containing abdominal viscera. The defect occurs at the base of the umbilical cord, with the cord/umbilical vessels inserting at the apex of the sac. Omphaloceles are categorized as either non-liver containing or liver containing (80%). Non-liver containing omphaloceles are commonly associated with foetal aneuploidy (up to 60%), while liver-containing are usually associated with euploid fetuses. The range of associated structural anomalies ranges from 35-70%. Our objective was to describe and compare the outcomes of pregnancies and fetuses diagnosed with gastroschisis or omphalocele at our Centre from January 2004 and April 2015.

Methods: Review of the clinical files of the patients with the diagnosis of fetal gastroschisis and fetal omphalocele between January 2004 and April 2015.

Results: There were 10 cases of gastroschisis and 10 cases of omphalocele. The mean gestational age of diagnosis was 20 weeks (11-33 weeks) for gastroschisis and 13 weeks (12-20 weeks) for omphalocele. There was a higher rate of aneuploidy in the omphalocele group (n=1) compared to the fetuses with gastroschisis where there were no cases of aneuploidy detected (2 cases without genetic testing). The rate of associated structural anomalies was 30% in the fetuses with gastroschisis and 60% in the fetuses with omphalocele. Termination of pregnancy was performed in 4 cases of gastroschisis and 6 cases of omphalocele. Of the remaining 10 cases, 2 were lost to follow-up. The mean gestational age at delivery was 35 weeks (range from 32-39 weeks) and in 9 cases by caesarean section. The mean newborn weight was 2298 g (range from 1795g – 3300g) and 6 of them were submitted to surgery on day 1. There was one death in the omphalocele group on day 69 (associated with Patau Syndrome).

Conclusions: As described in literature, gastroschisis were associated with few structural anomalies and aneuploidy when compared to omphalocele. Gastroschisis and omphalocele were associated with an increased risk of preterm delivery. Ideally, delivery should occur at a tertiary care center. In the absence of standard indications, it is reasonable to await spontaneous labor.

Although 6 of our cases were born by caesarean section, there is no evidence that caesarean delivery improves outcome in uncomplicated cases, although some centers have elected to deliver fetuses with giant omphaloceles by caesarean.

Infants with Omphalocele had higher overall mortality rates.

Disclosure of Interest: None Declared

P84**AMNIOTIC FLUID MATRIX METALLOPROTEINASE-8 IN RELATION TO HISTOLOGIC CHORIOAMNIONITIS WITH OR WITHOUT MICROBIAL INVASION OF THE AMNIOTIC CAVITY**

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Problem Statement: Intra-amniotic infection and inflammation (IAI) are major causes of spontaneous preterm birth. Microbial invasion of the amniotic cavity (MIAC) often leads to histologic chorioamnionitis (HCA). However, inflammatory changes may occur in fetal membranes and placenta also without proven microbiologic etiology. We evaluated amniotic fluid (AF) matrix metalloproteinase -8 (AF-MMP-8) in relation to HCA with or without MIAC in preterm singleton pregnancies. Methods: Amniocentesis was performed in 34 singleton pregnancies between 24+1 and 32+0 gestational weeks with suspected intra-amniotic infection. Both women with preterm prelabor rupture of membranes (PPROM) and intact membranes were included. Amniocentesis-to-delivery interval was limited to two weeks. AF-MMP-8 was analyzed by immunoassay (MMP-8 IEMA, Medix Biochemica, Espoo, Finland). Microbiological analyses were performed with PCR (n= 34) or culture (n=29). Histologic chorioamnionitis and funicitis were categorized as a present or absent. Results: Eighteen (53%) women had PPRM. MIAC was found in 18 (53%) women. Nine of those occurred in PPRM pregnancies and nine in pregnancies with intact fetal membranes. MIAC was polymicrobial in three cases (17%). Altogether, 26 women had HCA. HCA was present in all MIAC cases (n=18), but also in eight cases (50%) without MIAC. Funicitis was present in 14 (54%) of the HCA cases. The presence of funicitis did not differ between cases with HCA and MIAC and cases with HCA without MIAC (n=11 vs n=3, p=0.40). The median concentration of AF-MMP-8 was highest in cases with both HCA and MIAC [4219.5 ng/mL (45-13292)], when compared to cases with HCA but no MIAC [1550.5 ng/mL (90-6145)], and cases without either HCA or MIAC [53.5 ng/mL (3-6591), p=0.021]. Neonates born from pregnancies with HCA and MIAC had more often Apgar score less than 7 at 5 min of age or early sepsis than those neonates born from pregnancies with HCA but no MIAC, (n= 12 vs n=1, p=0.008) and (n=6 vs n=0), respectively. All neonatal deaths [n=3 (19%)] occurred in pregnancies with both HCA and MIAC. Increased MMP-8 concentration was not associated with early sepsis.

Conclusions: HCA with MIAC produce more intense inflammatory reaction and worse neonatal outcome than HCA without MIAC. That highlights the importance of detection of IAI by amniocentesis.

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P85

EFFECTS OF INTRAVENOUS PROPRANOLOL FOR LABOR INDUCTION IN WOMEN WITH RUPTURE OF MEMBRANES: A RANDOMIZED CONTROLLED TRIAL

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Problem Statement: Premature rupture of membranes (PROM) defined as rupturing membranes before onset of labor. Prolonged rupture of membranes is associated with increased risk of fetomaternal infections and due to chorioamnionitis can lead to serious fetal, maternal and neonatal complications. This study was conducted to evaluate whether use of intravenous propranolol could reduce duration of labor augmentation in women with rupture of membranes. **Methods:** Between 2013 and 2014, 140 parturients with premature rupture of membranes at 34 weeks of gestation or greater who were candidate for induction, were randomized. Before oxytocin infusion, propranolol or placebo was administered intravenously according to the groups. The trial is registered at irct.ir, number IRCT201211108151N4. **Results:** There were not significant differences among two groups for mode of delivery and duration of labor. In the subgroup analysis (parturients with gestational age more than 37 weeks), the time interval between beginning of induction to adequate contractions and oxytocin dosage in the propranolol group were significantly less than the placebo group. **Conclusions:** It seems that administration of intravenous propranolol was not effective in shortening of augmentation time in premature rupture of membranes between 34 and 42 weeks of gestation, however, parturients with gestational age more than 37 weeks obtained significant benefit from it.

Disclosure of Interest: None Declared

P87

THE EFFECTS OF AROMATHERAPY IN CHILDBIRTH: A REVIEW

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Problem Statement: Over the past decade, interest in complementary and alternative medicine has escalated among healthcare professionals and the public worldwide. Many women would like to avoid pharmacological or invasive methods in labour and this may contribute towards the popularity of complementary methods. This review examined currently available evidence supporting the use of aromatherapy in labour. **Methods:** We searched the Cochrane Library, MEDLINE, PubMed. **Results:** Birth can be described as one of the best moments in the life of an expectant mother and father. It has a unique place in the life of a woman; getting through the pregnancy period without any problems and remembering the event as a healthy and successful experience, is of particular importance for the health of both baby and mother. Pain is one of the most frightening and distressing experiences faced by women during labor. Two different methods are used to control labor pain: pharmacological and nonpharmacological. Owing to the medical side effects of pharmacological measures, there is currently an increasing trend towards nonpharmacological methods. Although nonpharmacological methods have some limitations, due to lack of evidence from controlled trials showing clinical efficacy, these methods are generally preferred for the convenience of pain control by the pregnant woman herself. One of the nonpharmacologic methods used during labor, aromatherapy has been defined as utilizing the remedial effects of essential oils derived from herbal sources to treat an individual mentally, physically, and spiritually. Aromatherapy is one of the most widely used nonpharmacologic methods in nursing practice. Studies in the literature report that aromatherapy maintains physical and mental balance, provides

relaxation, and reduces anxiety, fear, and pain and enhances the feeling of wellbeing. These studies have reported that extracts of rose, jasmine, cinnamon leaf and lavender ease uterine contractions and reduce fear by relieving pain and stress. The present study evaluated the effects of aromatherapy on labor and part of nursing and midwifery practice, as one of the nonpharmacological methods that has increasing significance in the reduction of labour pain.

Conclusions: There is a lack of studies evaluating the role of aromatherapy in labour. Further research is needed before recommendations can be made for clinical practice.

Disclosure of Interest: None Declared

P86

DOPPLER ASSESSMENT OF THE UTERINE ARTERY IN PREGNANT WOMEN WITH RISK FACTORS, FOR THE PREDICTION OF PREECLAMPSIA

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Problem Statement: Preeclampsia remains an important issue of Obstetrics, being a main cause of maternal and fetal morbidity and mortality. The placental perfusion is reduced in pregnancies with Preeclampsia secondary to failed remodeling of the maternal vessels. High resistivity in the spiral arteries and reactivity to vasopressors can be evaluated using Doppler examination and are commonly found before the clinical onset of Preeclampsia. **Methods:** We have performed Doppler ultrasound of the uterine artery in the first (11-14 GW) and second (20-23 GW) trimester of pregnancy in women with risk factors, using the pulsatility index and/or the presence of the notch to predict the early onset of Preeclampsia. The presence of the bilateral uterine artery notch and/or the mean PI >95-th percentile were considered normal. **Results:** 26 of the patients from the total of 120 have developed Preeclampsia and were included in lot I, and 94 of them had a physiological outcome of pregnancy, being included in lot II. Doppler examination of the uterine artery in the first trimester of pregnancy showed a pathological PI in 26.9% of the patients from lot I and in 13.8% from lot II. The predictive power of PI values in the first trimester was medium (AUROC=0,6786). Bilateral notch in the uterine artery in the first trimester was found in 61.5% of the patients from lot I and in 41.5% from lot II. The global evaluation of altered Doppler parameters in the first trimester showed pathological PI, notch or their association in 65.4% patients from lot I and 48.9% from lot II. The predictive power of PI values associated with notch was slightly higher (AUROC=0.6825) than the one using only the PI values. Doppler examination of the uterine artery in the second trimester of pregnancy showed a pathological PI in 53.8% from lot I and in 13.8% from lot II. The predictive power of PI values in the second trimester was higher than that of the first trimester (AUROC=0.7641 vs 0,6786). Bilateral notch in the uterine artery in the second trimester was found in 34.5% patients from lot I and in 10.6% patients from lot II. The global evaluation of altered Doppler parameters in the second trimester showed pathological PI, notch or their association in 73.1% patients from lot I and 23.4% from lot II. The predictive power of PI values associated with notch in the second trimester was higher (AUROC=0.8128) than the one in the first trimester (AUROC=0.6825). **Conclusions:** Doppler examination of the uterine artery is an efficient non-invasive screening test for the onset of Preeclampsia in pregnancies with risk factors. The sequential changes in the uterine artery Doppler between the first and the second trimester may be useful in monitoring the patients with risk for developing Preeclampsia. The persistency of the bilateral notch and the finding of abnormal PI value in the first through the second trimester have identified the group of patients with the highest risk for developing Preeclampsia. An intermediate risk was found in patients that had either an alteration or a normalization of the mean value of PI between the first and the second trimester. The screening for Preeclampsia by using Doppler examination of the uterine artery was more efficient in the second trimester than the first.

ASSESSMENT OF SERUM AND FOLLICULAR FLUID TOTAL OXIDANT AND TOTAL ANTIOXIDANT LEVELS IN VITRO FERTILIZATION (IVF) CASES

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Problem Statement: We aimed to assess the effects of serum and follicular fluid total oxidant (TOS) levels, total antioxidant capacity (TAC), and oxidative stress index (OSI) on oocyte maturation, fertilization, embryogenesis, and clinical pregnancy in in Vitro Fertilization (IVF) cycles. **Methods:** Blood samples were collected on gonadotropin starting, oocyte pick-up (OPU) and embryo transfer (ET) days from infertile females (n=100) who were enrolled for IVF due to tubal factor infertility. Additionally, follicular fluid specimen obtained during OPU was collected. TAS, TOS levels and oxidative stress indexes (OSI: TOS/TAS) in serum samples and follicular fluid specimens between clinically pregnant and non-pregnant patients were compared. The total oxidant status (TOS) in the plasma was measured using a novel automated calorimetric measurement method developed by Erel. The total antioxidant status (TAS) in the plasma was measured using a novel automated calorimetric measurement method developed by Erel. **Results:** No significant difference was noted between couples who had positive clinical pregnancy and those who did not in terms of the woman's age, duration of infertility, day 3 FSH-LH-estradiol levels, day 3 AFC, the number of retrieved oocytes, number of day 3 grade I+II embryos or number of transferred embryos. There was also no significant difference in TAS, TOS and OSI levels in serum samples obtained during three phases of treatment cycle (basal gonadotropin starting day [A], OPU day [B] and ET day [C]) and in follicular fluid samples [D]. **Conclusions:** In IVF cycles of infertile couples with tubal factor infertility, oxidative stress measurements seem ineffective to predict clinical pregnancy as an outcome.

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DETERMINATION OF ADAPTING TO PREGNANCY AND COPING STYLES WITH STRESS OF PREGNANT DIAGNOSED OF HYPEREMESIS GRAVIDARUM

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Problem Statement: This research has been done as a descriptive in order to determine of adapting to pregnancy and coping styles with stress of pregnant diagnosed of hyperemesis gravidarum.

Methods: The study was conducted between 18.07.2015-11.11.2015 in a hospital of women's health education and research in Ankara. Data has collected from 160 pregnant women hospitalized with a diagnosed of hyperemesis gravidarum, 18 years and above, without any pregnancy complications except hyperemesis gravidarum and without chronic disease, non-psychiatric problems, open verbal communication, volunteer and non-multiple pregnancies. Ethics Committee approval and the necessary permits are obtained for this research. Information Form, Prenatal Self Evaluation Questionnaire and Ways of Coping with Stress Inventory (WCSI) are used to collect of data. Number, percentage, mean, standard deviation, minimum and maximum values are used to define of data. The suitability of the normal distribution of data is evaluated with Kolmogorov-Smirnov test. ANOVA test is used for multiple group comparison, bonferroni test is used as a post hoc

test. t test is used for comparison of two groups. Pearson correlation test is used for the evaluation of the relationship between variables. Results: Pregnant participating in the study are determined to be 40,6% of 24 years and under 62,5% of secondary school graduates, 87,5% of have social security, 71,8% of equal to the expense of revenue, 82,5% of unemployed, 70,6% of owned nuclear family type and 70,0% of lived in the city center. The husband of the pregnant are determined to be 50,6% of 30 years and above, 52,5% of secondary school graduates. Pregnant is determined 48,1% of the first pregnancy, 64,3% of that pregnancy interval more than 2 years, 60,0% of had no living children and 72,5% of pregnancies that are planned. It is found to be PSEQ average score of 173,3 ± 35,8, WCSI subscales mean scores; "self-confident approach" to 14,5 ± 4,5, "optimistic approach" to 10,1 ± 3,1, resorting to "social support" 7,4 ± 2,2, "helpless approach" to 11,6 ± 4,8 "submissive approach" to 8,1 ± 3,6 in this study. The effective methods to cope with stress with total PSEQ average score between "self-confident" (r = -0,403, p <0.001) and "optimistic approach" (r = -0,372, p <0.001) is detected a significant relationship in the negative direction, the ineffective methods between "helpless" (r = 0,293, p <0.001) and "submissive approach" (r = 0,196, p=0.013) is detected a significant relationship in the positive direction.

Conclusions: While the use of "self-confident" and "optimistic approach" that the effective methods increases, adapt to pregnancy increases; and while the use of ineffective methods increases, adapt to pregnancy decreases.

EVALUATION OF THE LEVEL OF SATISFACTION OF PATIENTS WITH THE USE OF A NEWLY MARKETED VAGINAL GEL (SATISVAG SURVEY)

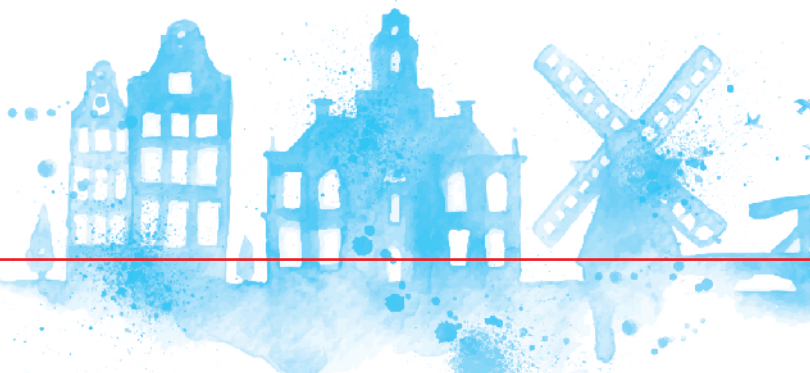
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Problem Statement: In any product that is administered vaginally, both the comfort of the application and the sensations of the patient are key factors to determine the overall satisfaction with the product, which has a direct impact on the adherence and, ultimately, in the effectiveness of the prescribed treatment. Quickly learn of the advantages and disadvantages of a newly marketed product, could be useful to improve its employment conditions.

PalomacareR is a multi-ingredient medical device marketed in Spain since July 2015, that it is applied vaginally in form of gel and that has moisturizing and restorative properties of the vaginal mucosa, indicated for improvement of symptoms and signs that make up the genitourinary syndrome. The objective of this survey was to know the opinion of doctors in relation to the overall satisfaction of patients with the use of PalomacareR, and to know that early satisfaction after the product commercialization.

Methods: The Satisvag survey was conducted during the first quarter of 2016. A questionnaire of 8 questions was performed (7 one choice and 1 with multiple choice) related to the use of PalomacareR in clinical practice. The survey was targeted to Spanish gynecologists who were visiting women who already were using PalomacareR and following a homogeneous distribution in the whole country. A double entry of information in Excel file was performed to assure the quality of the data. **Results:** A total of 62 doctors participated in the survey, and around 90% of those with 5 or more patients using PalomacareR. 98% of the survey respondents indicated that the overall satisfaction with the product is good or excellent. Most of prescribers (94%) considered that the product is comfortable or very comfortable, and 95% indicated that abortion, understood as the absence of product loss, is good or excellent. On the other hand, 84% of participants point out their patients think PalomacareR is better or much better than previous treatments (figure 1). Regarding this, the main advantages of PalomacareR indicated by users, especially compared to previous products, were: minor feeling of vaginal dryness (72,5% of participants), better absorption (52%) and improvement in sexual relations (43,5%) (figure 2).



Finally, almost 90% of the doctors said that no patient had reported any adverse effect. Stinging/burning was the most adverse effect indicated by the participants (only 5% of them).

Image:



Conclusions: PalomacareR is a well-tolerated product with a comfortable application, with specific features that make the product highly satisfactory and perceived as better than other previous treatments by their users.

Disclosure of Interest: S. Palacios Consultant for: Procare health, F. Losa Consultant for: Procare health

P91 COMPARATIVE STUDY OF IMMUNOREGULATORY PROTEIN PROFILES IN CERVICOVAGINAL FLUID BETWEEN WOMEN WITH AND WITHOUT INTRA-AMNIOTIC INFECTION IN THE PRETERM LABOR

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Problem Statement: To compare the profiles of immunoregulatory proteins in cervicovaginal fluid (CVF) of women with and without intra-amniotic infection in the preterm labor, and to identify novel biomarkers for intra-amniotic infection.

Methods: A case-control study was conducted using stored CVF samples that were collected from 40 women with preterm labor and intact membranes [(20 positive amniotic fluid (AF) cultures (case subjects) vs. 20 negative AF cultures (control subjects matched by gestational age)]. Protein analysis in the CVF was done by Raybio human antibody array technology, which can simultaneously detect the relative expression of 507 human proteins. To validate the antibody array results, levels of interleukin-8 (IL-8), tissue inhibitors of matrix metalloproteinase (TIMP-1), and DKK-3 were quantified by ELISA. Results: Twenty-nine human proteins studied exhibited intergroup differences. Twenty-six proteins, including IL-8, TIMP-1, DKK-3, activin, APRIL, BMPR-1B (ALK-6), BDNF, BAX, CXCL14 (BRAX), CCR8, CNTF, CXCR1 (IL-8 RA), M-CSF and MIP-1a, were detected in high densities in women with intra-amniotic infection. Three proteins, including endostatin and IGFBP-2, were present in higher densities in control subjects. Validation by ELISA confirmed significantly higher levels of CVF IL-8, TIMP-1, and DKK-3 in women with intra-amniotic infection, compared with control subjects. Conclusions: The expression pattern of multiple mediators, including cytokines and chemokines, cell adhesion molecules, and growth factors, in the CVF of women with intra-amniotic infection varies from that of women without intra-amniotic infection. The increased levels of DKK-3 and TIMP-1 in CVF indicated candidates of potential new biomarkers for intra-amniotic infection in women with preterm labor.

Disclosure of Interest: None Declared

P92 A REVIEW OF STUDIES ON THE EFFICACY OF HERBAL MEDICINES FOR PRIMARY DYSMENORRHEA

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Problem Statement: Primary dysmenorrhea is a common gynecological complaint among adolescent girls and women of reproductive age. The prevalence of primary dysmenorrhea is estimated to be 20 to 90% among women of reproductive age, and 15% of female adolescent's experience severe primary dysmenorrhea. Principal pharmacological therapies for primary dysmenorrhea include non-steroidal anti-inflammatory drugs (NSAIDs) or oral contraceptive pills (OCPs). In Korea, many patients who failed to respond to conventional treatments for primary dysmenorrhea have been treated with herbal medicines. Herbal medicines are considered as feasible alternatives for the treatment of primary dysmenorrhea. Herbal medicines have long been used in Eastern countries, but recently these therapies are increasingly being used worldwide. Herbal medicines are relatively well tolerated by patients because of fewer adverse effects and lower recurrence rates associated with them. This study aims to review the findings of published articles on the in vitro and in vivo efficacy of herbal medicines for primary dysmenorrhea. Methods: Articles published in English from their inception were searched in the following databases: MEDLINE, EMBASE, and Allied and Complementary Medicine Database (AMED). All available in vitro and in vivo studies that assessed the potential effects of herbal medicines on primary dysmenorrhea were included in our review. Research on the compounds isolated from herbs, individual herbal extracts, or herbal formula decoctions were included. Exclusion criteria were clinical trials, review articles, or letters. In vitro and in vivo studies of the compounds or extracts of foods were also excluded. Articles regarding secondary dysmenorrhea or analgesic effects of herbal medicines on general pain were excluded. The titles and abstracts of all the selected articles were examined to eliminate the duplicates. A flow diagram of the article selection process is shown in Fig 1. Results: A total of 18 studies involving herbal medicines exhibited their inhibitory effect on primary dysmenorrhea. We identified 10 in vitro studies, five in vivo studies, and three studies of both in vitro and in vivo experiments. The majority of in vitro studies investigated the inhibition of uterine contractions. In vivo studies suggest that herbal medicines exert a peripheral analgesic effect and a possible anti-inflammatory activity via the inhibition of prostaglandin (PG) synthesis. The mechanisms of herbal medicines for primary dysmenorrhea are associated with PG level reduction, suppression of cyclooxygenase (COX)-2 expression, superoxide dismutase (SOD) activation and malondialdehyde (MDA) reduction, nitric oxide (NO), inducible nitric oxide synthase (iNOS), and nuclear factor- κ B (NF- κ B) reduction, stimulation of somatostatin receptor, intracellular Ca^{2+} reduction, and recovery of phospholipid metabolism.



Conclusions: Herbal medicines are thought to be promising sources for the development of effective therapeutic agents for primary dysmenorrhea. Further investigations on the appropriate herbal formula and their constituents are recommended.

Disclosure of Interest: None Declared

P93

ASSESSMENT OF OVARIAN RESERVE AFTER HYSTERECTOMY: LAPAROSCOPIC VS. NON-LAPAROSCOPIC SURGERY

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Problem Statement: To evaluate changes of ovarian reserve after hysterectomy by comparing serum anti-Mullerian hormone (AMH) levels following laparoscopic hysterectomy (LH) to those of non-laparoscopic hysterectomy (non-LH). **Methods:** Prospectively, serum AMH levels were measured pre-operatively (AMH0), 7 days (AMH1), 2 months (AMH2), and 6 months (AMH3) after LH (total laparoscopic hysterectomy or laparoscopy-assisted vaginal hysterectomy) and non-LH (vaginal hysterectomy or abdominal hysterectomy) in 91 premenopausal women (LH=60, non-LH=31). Changes of serum AMH levels were compared between the two groups. **Results:** AMH0 was similar between the two groups ($P=0.400$). Also, AMH1, AMH2, and AMH3 were not different between the two groups ($P=0.333$, 0.534 , and 0.726). A significant decrease of serum AMH level (30% decreases from AMH0) at 7 days, 2 months, and 6 months was observed in 44.4%, 34.8%, and 40% of all patients. Interestingly, the incidence of a significant decrease of serum AMH levels at postoperative 2 months was considerably higher in LH group compare to non-LH group (43.9% vs. 20.0%, $P=0.042$). Multivariate analysis revealed that laparoscopic hysterectomy was an independent risk factor for the significant decrease of serum AMH at postoperative 2 months (Hazard ratio 4.147, 95% confidence interval 1.139-15.097). **Conclusions:** Laparoscopic hysterectomy, which is associated with electro-thermal vessel ligation, might have negative effect on ovarian reserve after surgery. More large-scaled, long-term follow-up study required.

Disclosure of Interest: None Declared

P94

DETERMINATION RH D OF THE FETUS FROM MATERNAL BLOOD

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Problem Statement: Rh alloimmunization of RhD-negative pregnant women in the erythrocyte antigen RhD-positive fetus is now the most common cause of hemolytic disease of the fetus and newborn (HDFN). The incidence of Rh immunization in (during)-Rhesus incompatible pregnancies is approximately 1.8%; caused by the transfer of invisible Rh-positive fetal red cells in the circulation of pregnant women in an amount sufficient to induce an immune response. **Problem statement:** The aim of this study was antenatal determination of fetal RhD status- in order to make the selection of RhD-negative pregnant women with no RhD antibodies for antenatal Rh prophylaxis (if the fetus is RhD-negative Rh-prophylaxis is not needed). Antenatal determination of fetal RhD-status selects Rh-immunized pregnant women who require invasive diagnosis and fetal therapy (if the fetus is RhD-positive). **Methods:** Involved 90 Rh negative patients, between 7. and 40. week of gestation. Detection of fetal RhD erythrocytes is carried out on the basis of exon 2: 7 and 10, and at the same time in order to detect the sex of the fetus. The technique is real time PCR, Roche Cobas surface 7480. Th sex is required to confirm a sufficient number of fetal cells. **Results:** RhD status of one fetus from the mother with severe Rh alloimmunization could not be determined. (2x). In 2 cases with RhD alloimmunization a reanalysis in the advanced pregnancy was successful. Analysis of the fetal sex was successful in all cases. False-negative results were 3 (2 females and 1 male sex), and false positive: 1 (male). **Conclusions:** The sensitivity of the test is 93%, even in the present series of pregnant women with RhD antibodies. In addition to the determination of fetal RhD factor, non-invasive determination of sex may be important for X-related diseases and syndromes. If we get a female RhD analysis should be repeated in 3 weeks.

Disclosure of Interest: None Declared

P95

CESAREAN DELIVERY IN GESTATIONAL DIABETES MELLITUS: RISK FACTORS AND PERINATAL OUTCOME

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Problem Statement: Gestational diabetes mellitus (GDM) is a glucose metabolism disorder detected during pregnancy and it is associated with an increased cesarean delivery rate with a negative impact on perinatal outcome. In Portugal, the diagnosis of GDM is established either in the first trimester with a fasting glucose value of $\geq 92\text{mg/dL}$ or between 24-28 weeks of gestation, using a 75g Oral Glucose Tolerance Test (OGTT), in which it is necessary at least one of the glucose values to be altered, that is, $\geq 92\text{mg/dL}$ at fasting (0') and/or $\geq 180\text{mg/dL}$ at 60' and/or $\geq 153\text{mg/dL}$ at 120'. The aim of the present study is to investigate the risk factors associated to cesarean delivery in GDM and the impact of cesarean delivery on perinatal outcome compared with vaginal delivery in this population. **Methods:** Data from a total of 487 women diagnosed with GDM that delivered in our hospital between 2012 and 2014 were retrospectively collected. Only singleton pregnancies were considered. The pregestational studied factors included family history of diabetes mellitus, weight and body mass index before gestation, parity and history of GDM or of macrosomia in former pregnancies. The gestational studied factors included maternal age, gestational trimester of diagnosis, fasting plasma glucose levels or OGTT values at diagnosis, requirement and gestational age at the beginning of antenatal insulin treatment, total dose and number of daily insulin administrations, 3rd trimester HbA1c value, presence of hypertensive gestational disorders and maternal weight at the end of pregnancy. The perinatal outcomes assessed were neonate birthweight, admission to neonatal intensive care unit, presence of neonatal respiratory distress syndrome, asphyxia, infection, hypoglycemia or jaundice. Statistical analysis was performed using the SPSS (v23.0)®. Two-sided P values <0.05 were used to indicate statistical significance. **Results:** The incidence of GDM was 6.7% in our population during the studied period. The cesarean delivery rate in the studied group was 29.4% (institutional cesarean rate: 26.5%). Higher maternal weight and obesity were the only pregestational factors significantly correlated to cesarean delivery. Advanced maternal age, higher maternal weight at the end of pregnancy, the requirement for antenatal insulin treatment with higher total dose and number of daily administrations were significant gestational predictors of cesarean delivery. There were no significant differences in newborn birthweight between the groups. The incidence of respiratory distress syndrome and neonatal infection was significantly increased in the cesarean group. Neonate jaundice was significantly associated to vaginal delivery. **Conclusions:** In conclusion, despite its retrospective design and small size, this study shows that a worst metabolic control during pregnancy with requirement of antenatal insulinotherapy and higher pregestational maternal weight gain are important predictors of cesarean delivery. The incidence of macrosomia at term was similar in both groups. Cesarean delivery showed to be associated with poor neonatal outcome.

Disclosure of Interest: None Declared

P96

RISK OF CEREBRAL PALSY IN RELATION TO PRETERM BIRTH

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Problem Statement: Preterm delivery (PTD) is the leading cause of neonatal mortality and a significant cause of morbidity including cerebral palsy. Cerebral palsy (CP) is strongly linked to prematurity, with infants born at an earlier gestational age at higher risk. CP is a neurological disorder resulting from abnormalities in fetal and infant brain development. The prevalence of CP is 2/1000 live births, with principal obstetric risk factors being preterm



birth and very low birth weight (less than 1500g). Obstetric contributors include chorioamnionitis, antepartum haemorrhage, complications of multiple pregnancy, placental insufficiency and, less commonly, perinatal asphyxia. Neonatal intraventricular haemorrhage and periventricular leucomalacia are risk factors for CP and are inversely associated with gestational age. The aim of our study was to assess the risk of developing cerebral palsy in relation to pregnancy disorders and preterm birth. Methods: This study was a retrospective chart review of 82 pregnant women whose children have cerebral palsy. Among them 40 (48.7%) cases were in women with preterm delivery and early premature birth were in 11 (27.5%) of women, when the children were born with extremely low birth body weight under 1500 g. All children were born more than 5 years ago. Magnesium sulphate wasn't given to mothers shortly before delivery reduces the risk of cerebral palsy and roctets gross motor function in those infants born preterm. Results: The average age of women was 29±2.3 years. Primigravidas were 28 (34.1%) of women, multiparous (more than 4 births) - 4.8%. History of smoking had every fifth woman Different extragenital pathology was in every fourth woman. However, severe diseases were not diagnosed. Anaemia was in 30% of women. Complicated course of pregnancy was in 52 (63.4%) of women. Of them, most often had a threatened miscarriage in the first and second trimester in 60%, in the third trimester in 25% of women. Preeclampsia moderate severity was in 12 (14.6%). Placental insufficiency and growth retardation of the fetus was in 18 (21.9%) cases. Oligohydramnios was noted in 14 (17.1%), polyhydramnios in 8 (9.7%) of women. Preterm birth was complicated by preterm premature rupture of membranes in 18 (45%) of cases. Breech presentation was in 5 (12.5%), the transverse presentation and umbilical cord prolapse was in 4 (10%) of cases. An umbilical cord prolapse presents a great danger to the fetus. Placenta abruptio was in 3 (7.5%) cases. Cesarean section was made in 15 (37.5%) cases of premature birth. When assessing 1-minute Apgar score in preterm labor fetal distress was noted in 36 (90%) cases, of which 9 (22.5%) Apgar score was <3, i.e. severe asphyxia. More than 60% of newborns had respiratory distress syndrome, 16 (40%) was hypoxic-ischemic encephalopathy (HIE) and convulsions. Two children had periventricular leukomalacia of brain and 6 (15%) newborns had brain edema. Signs of cerebral palsy in preterm infant were evident at the 2 year of life, including tetraplegia in 4 (10%). Conclusions: Thus, preterm delivery (especially early preterm delivery) is a risk factor of fetal distress and asphyxia of the newborn, which subsequently can lead to the development of cerebral palsy. Therefore, the question of miscarriage and preterm labor is a relevant and debatable.

Disclosure of Interest: None Declared

P97

CORRECTION OF HORMONAL IRREGULARITIES IN WOMAN WITH THE BENIGN PROLIFERATIVE DISEASES OF THE REPRODUCTIVE ORGANS

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Problem Statement: Patients with hyperplastic syndrome of reproductive organs and thyroid dysfunction in the presence of hormonal imbalance, expressed luteal phase deficiency combined with metabolic disorders and somatic pathology is often difficult group of patients, which requires a comprehensive approach to long-term treatment. The aim of our work was to study the effectiveness of special treatment and rehabilitation complex in patients with confirmed simple and complex endometrial hyperplasia and fibrocystic breast disease and confirmed subclinical hypothyroidism. Methods: Study included anthropometric survey, clinical and biochemical survey. Verification of diagnosis conducted on basis of ultrasound, MRI, hysteroscopy, endometrial biopsy with subsequent histological analysis. Study of hormone levels (TSH, FSH, LH, prolactin, estradiol, progesterone) at blood serum was performed by immunochemical test (Roche Diagnostics, Switzerland). Results: Subclinical hypothyroidism was diagnosed in 34.2% of women with combined benign proliferative diseases (in control in 8.0%, $p < 0.05$). Manifest hypothyroidism with TSH levels over 10 mIU/l and reducing

the level of free T4 (8.3 ± 1.1 pmol/l) occurred in 3.2% of women with combined benign proliferative diseases with absence in control group. In patients with subclinical hypothyroidism simple endometrial hyperplasia was detected in 2.1 times more often than complex endometrial hyperplasia, while in manifest hypothyroidism occurred only complex hyperplasia, in one case - complex atypical hyperplasia. Breast fibrocystic disease was diagnosed in 88.4% of patients with combined proliferative disorders. The main group consisted of 54 patients with combined benign proliferative diseases and subclinical hypothyroidism treated with micronized progesterone in a daily dose of 400 mg (second phase of menstrual cycle), product that contain 200 mg of 3,3-diindolimetan, 45 mg of epigallocatechin-3-gallate double daily and 50 mg levothyroxine daily for 6 months. Comparison group consisted 30 women with similarly diagnosis treated with levothyroxine and progesterin in the same doses and timing. The criteria for effectiveness of therapy were selected reduction of clinical symptoms, normalization of hormonal homeostasis, condition of endometrium and breast. Patients both groups had lack of cycling gonadotrophic activity with increased LH levels compared with patients in euthyroid state. In women with euthyroid state in absence of pathology of reproductive organs ratio E/P was 5.0 ± 0.2 , while in patients both groups ratio E/P was 25.5 ± 0.4 ($p < 0.001$). Conclusions: The most significant positive changes in hormonal balance observed in patients of the main group, which was reflected in the recovery ratio of FSH and LH, prolactin optimization, achieving euthyroid status, reducing the value of E/P, improve the endometrium.

Disclosure of Interest: None Declared

P98

DEFICIENCY OF VITAMIN D AND BENIGN PROLIFERATIVE DISEASES OF THE REPRODUCTIVE ORGANS

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Problem Statement: Benign proliferative disease of the female reproductive system - uterine fibroids, endometriosis, endometrial hyperplasia, and breast occupy a leading place in the structure of general gynecological morbidity rate of comorbidity between 30 and 90%. Vitamin D is involved in the regulation of proliferation and differentiation of cells of all organs and tissues, including blood cells and immunokompetent cells. Antiproliferative and cell differentiation stimulating the activity of vitamin D is considered as a factor inhibiting proliferative processes reproductive organs. At a concentration of 25 (OH) D over 30 ng/ml risk of malignant tumours of various localization reduced by 25-35%. Methods: We study D-status of patients with benign hyperplastic processes of reproductive organs. Methods. Under the supervision were 60 women aged 24 to 38 years with hyperplastic gynaecological syndrome and 20 women of similar age without extragenital and gynaecological pathology. Verification of diagnosis conducted on the basis of ultrasound, MRI, hysteroscopy, endometrial biopsy with subsequent histological analysis. Study of 25 (OH) D, Hormone levels at blood serum was performed by immunochemical test (Roche Diagnostics, Switzerland). Assessment D status conducted under recommendations of Central Europe experts. Results: Results of the study of metabolism, metabolic disorders showed significance for the prevalence and clinical manifestations dishormonal hyperproliferative processes reproductive organs. Overweight or obese women had a 47.7% core group, preferably with subclinical hypothyroidism. Established inverse relationship between the level of 25 (OH) D and body mass index (IMT) over 30 kg / m², obesity is associated with a deficiency of vitamin D. It is hard deficiency of vitamin D (8.9 ± 1.7 ng/ml) was detected in 21.5% of patients, deficiency of vitamin D (14.9 ± 1.7 ng/ml) - in 64.6% of women. Only in 13.9% of patients with gynecological proliferative syndrome occurred close to the optimal level of vitamin D (22.3 ± 1.5 ng/ml), while women in the control group close to the optimal level of vitamin D (23.1 ± 2.0 ng/ml) was detected in 75.0% of women ($p < 0,001$), while 25.0% - the optimal level of vitamin D (34.9 ± 2.7 ng/ml). More pronounced deficiency of vitamin D (levels of 25 (OH) D from

5.9 to 15.0 ng/ml) was detected more frequently in women with overweight (BMI 27-29.9 kg / m²) and obese (BMI 30.0-34.9 kg/m²) (p<0,01).

Conclusions: In 72.7% of the woman of Lviv region revealed vitamin D deficiency varying degrees of severity. Probably more severe vitamin D deficiency is characteristic of women with benign proliferative disorders combined reproductive organs, subclinical hypothyroidism and obesity. Due to pleiotropic effects of vitamin D, it is necessary to study the effect of normalizing the status of D-proliferative processes in the course of the reproductive organs.

Disclosure of Interest: None Declared

P99

FITZ-HUGH-CURTIS SYNDROME AFTER INTRODUCTION OF INTRAUTERINE DEVICE, A CASE REPORT

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Problem Statement: Fitz Hugh Curtiss Syndrome is characterized by perihepatic and peritoneal inflammation. It is associated with pelvic inflammatory disease caused by Neisseria gonorrhoeae or Chlamydia trachomatis. This syndrome is not well known in the medical community and often underdiagnosed. The aim was to present a typical case and review the pathophysiology of this syndrome, as well as their clinical presentation and therapeutic approach.

Methods: We present a case of Fitz-Hugh-Curtis-Syndrome. Results: We present a 38 years old female patient with personal history of b thalassemia. No other relevant family of personal history. Menarche at 12, regular cycles and oral contraceptive use until age of 30. She had one copper intra uterine device (IUD) in 2011 for 6 months, after which she removed it for intense dysmenorrhea and abnormal bleeding. Recently divorced, 2 sexual partners in her life, the last of which in the last 5 months. Obstetric history of one pregnancy in 2011, cesarian section at term, female newborn of 3560g, normal apgar score. In 16 of April of 2016 (Day 0), she inserts a IUD with 13.4mg of levonorgestrel (Jaydess®). Immediately after insertion patient reports a "stabbing" hypogastric pain.

At day 4 patient reported intense pain with lumbar irradiation and abnormal bleeding. At day 6, the pain worsens and she has a lipothymia at home, which resulted in a laceration of the face. She was sutured. At day 7 she removed IUD with instant relief of the "stabbing" hypogastric pain, but maintaining abdominal pain. At day 22 she reports fever and increasing abdominal pain. She presented in the ER with a "bloody and smelly" discharge was diagnosed with endometritis. Medicated with oral cefradina and topical nifuratel plus nistatina. At day 29 she reports a strong pain in the upper right abdomen, that worsens with deep breathing. She maintains this pain for 2 days and goes to the ER and is discharged with likely diagnoses of renal lithiasis. At day 32 she returns to private hospital with right abdominal pain. Analyses reveal high inflammatory markers and doctors consider the diagnosis of appendicitis, renal or vesicular lithiasis. Abdominal Ultrasound and CT scan don't confirm, and she is discharged with the diagnosis of thoracic neuralgia. At day 33 her pain worsens, with fixated right upper abdominal pain that awake her from sleep. CT scan was re-evaluated and small perihepatic fluid is noticed. She was finally admitted to the gynaecology ward with the suspicion of Fitz-Hugh-Curtis-Syndrome. Intravenous and vaginal metronidazole and oral doxycycline were administered empirically. Analytic results showed mild alteration of hepatic function that progressively improved. She was negative for HIV, HCV, HBV and syphilis. She was positive for chlamydia pneumoniae IGG antibodies. Vaginal exudate was positive for Gardnerella vaginalis. She was discharged after 7 days, without pain and total improvement of inflammatory markers and started oral contraceptives. Follow up after 3 month revealed she was asymptomatic. Conclusions: Fitz-Hugh-Curtis Syndrome is an uncommon problem, difficult to diagnose without an high level of suspicion. Diagnosis is possible by clinical findings. Some cases are not possible to confirm the

pathogen. Timely treatment usually reverts pain and prevents chronic complications of the syndrome.

Disclosure of Interest: None Declared

P100

EFFICACY OF 2 METHODS IN MANAGEMENT OF CERVICITIS WITH CERVICAL NABOTHIAN CYSTS: A COMPARATIVE STUDY

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Problem Statement: The objective of this study is to compare the uterine cervical cryosurgery (cryotherapy) with draining of nabothian cysts in chronic cervicitis by syringe needle besides cryosurgery. Methods: This Quasi-experimental study conducted on 144 patients with infectious nabothian cysts due to chronic cervicitis referred to Dr. Rasekh clinic outpatient in jahrom city, Iran. The patients were divided into 2 groups after ethics approval from the ethics committee. Group A was treated just with cryotherapy and group B in addition to cryotherapy, drainage of nabothian cysts was performed with syringe needle, the correct technique. Data was analyzed with SPSS 21. p<0.05 considered significant. Results: 144 patients were participated in this study. They were divided in to 2 groups: case: 72 patients and control: 72 patients. The patients in the control group (A) were treated with cryotherapy and antibiotics and case group (B) were treated with cryotherapy and antibiotics in addition to drainage of nabothian cysts by syringe needle. Comparison of pre and post manipulation of the mean symptoms (vaginal discharge, abdominal pain, dysuria and dyspareunia) score in both groups demonstrate significant difference (p=0.001) according to T test. There was significant difference between the 2 groups regarding the duration of treatment (P=0.001) and no significant difference were found between 2 groups regarding frequency of treatment (p=0.884). Conclusions: It appears that there are less side effects and the chance of recrudescence is lesser if treatment of infectious nabothian cysts performed by drainage of cyst besides cryotherapy. Combination of these two methods showed that symptoms of the disease might heal faster, recurrence of the disease could be prevented and the frequency of cryosurgery would decrease.

keywords; management, cervicitis, nabothian cyst, cryotherapy

Disclosure of Interest: None Declared

P101

ENDOMETRIOSIS AND NON HODGKIN LYMPHOMA: A RARE ASSOCIATION?

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Problem Statement: Several epidemiological studies support an association between endometriosis and ovarian cancer. An increased risk of other malignancies as endometrial, breast cancer and non-Hodgkin's lymphoma has also been reported, although the evidence remains scarce.

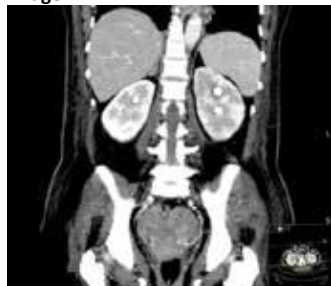
Methods: A case report of a woman with a recent diagnosis of endometriosis with a pelvic mass of acute onset. An overview of the diagnostic approach through a challenging differential diagnosis is provided. Results: We report a case of a 48-year-old woman with a history of chronic pelvic pain and lower urinary tract symptoms, diagnosed one year ago with deeply infiltrating endometriosis. The diagnosis was established after vesical transurethral



resection of a vesicouterine pouch lesion, which was revealed by pelvic magnetic resonance imaging (MRI). A year after the diagnosis of endometriosis, the patient was admitted to the intensive care unit with sepsis due to acute pyelonephritis. Abdominopelvic computerized tomography (CT) and MRI revealed two large pelvic contiguous lesions involving both ovaries, causing bilateral obstruction of superior urinary tract; small volume ascitis; retroperitoneal lymphadenopathy; hepatomegaly with hypodense nodular lesions and splenomegaly. Tumoral markers for gynecological malignancy were negative except for carbohydrate antigen 125, which was elevated (93 U/mL).

A marrow biopsy was performed to investigate a persistent pancytopenia, revealing an immunophenotype consistent with non-Hodgkin lymphoma. We performed a CT guided biopsy of the pelvic mass involving the uterus and both ovaries, which revealed infiltration by B cell lymphoma, consistent with Burkitt lymphoma.

Image:



Conclusions: The diagnostic approach of a new onset pelvic lesion in patients with endometriosis is a challenging task. Clinicians should be aware of increased risk of malignancy in these women, namely some subtypes of ovarian, endometrial cancer and disseminated lymphoproliferative disease. Further studies should focus on the pathophysiologic mechanisms of progression to malignancy in order to identify subsets with higher risk and to search for effective diagnostic tools and therapies.

Disclosure of Interest: None Declared

P102

INCREASED OVERALL MORTALITY AMONG OFFSPRING OF WOMEN WITH PLACENTAL ABRUPTION

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Problem Statement: Women with births complicated by placental abruption have an increased risk of adverse offspring outcome, including prematurity, stillbirth, hypoxia, perinatal death and major congenital anomalies. Perinatal mortality associated with placental abruption and the short-term outcome of children born after placental abruption has been studied. There is also data showing that children who survive after placental abruption have a greater risk for conditions such as cerebral palsy, intraventricular hemorrhage and sudden infant death syndrome. However, studies on overall mortality of offspring born after placental abruption do not exist. Our aim was to study in detail the overall effect of placental abruption on both short-term and long-term offspring mortalities. **Methods:** A register-based retrospective case-control study was carried out during 1987–2005. Data on baseline characteristics, birth outcomes, and offspring mortality were collected from the Finnish Medical Birth Register, the Hospital Discharge Register, and the Cause-Of-Death Register. Altogether, 3888 women with singleton birth had placental abruption. Three matched reference women without placental abruption (n=12530) were selected for each case. Stillbirths were excluded. The main outcome was offspring mortality among

women with or without placental abruption. **Results:** By the end of the follow-up (Dec 31 2013), 280 children born to women with placental abruption (cases) and 107 children born to women without placental abruption (controls) had died. The overall mortality was nearly 15-fold during the neonatal period (0-27 days) among cases compared with controls (HR 14.8, 95% CI 10.9-20.0) asphyxia being the leading cause of death (HR 108, 95% CI 34-341). The overall mortality remained increased during 28-365 days (HR 10.3, 95% CI 4.83-21.8) and beyond 365 days (HR 1.70, 95% CI 1.03-2.79). Furthermore, the overall mortality was increased in cases born at gestational age of 32-36+6 weeks (HR 3.48, 95% CI 1.66-7.27) and at ≥37 weeks (HR 12.4, 95% CI 7.41-20.7). Four offspring cases died of sudden infant death syndrome, which is three times more than expected. **Conclusions:** It is well known that the perinatal mortality is increased among women with placental abruption. The current study shows that the long-term offspring mortality is also notable.

Disclosure of Interest: None Declared

P103

SEVERE GESTATIONNAL HYPERTRIGLYCERIDEMIA: CASE REPORT

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Problem Statement: Severe hypertriglyceridemia is a rare condition in pregnancy and usually occurs in the third trimester. It is often multifactorial, threatens maternal and fetal prognosis. **Methods:** We report a case of severe, non-genetic, non-familial, pregnancy-induced hypertriglyceridemia. **Results:** A 34-year-old woman, with no particular medical history, presented to the hospital in her third pregnancy, at 30 weeks of amenorrhea, for hyperemesis. The pregnancy was a monochorionic diamniotic twin pregnancy, antenatal screening tests were normal. Her diabetes screening was negative. At the first physical examination, the patient had a blood pressure at 160/90 mmHg, with 2 cross proteinuria at the strip test without other signs of pre-eclampsia and normal deep tendon reflexes. Her abdomen was supple but she has irregular uterine contractions.

Her cervix was 2 cm dilated with intact membranes. Both fetuses monitoring were normal with normal growth at ultrasound examination. A full blood count taken was noted to be grossly lipemic (Figure 1). A fasting blood specimen showed elevated cholesterol and triglyceride. A severe HTG to 108,3mmol / l (normal value <2, 28 mmol / l) and a severe hypercholesterolemia 28,38mmol / l (normal value <5.16 mmol / l) were found. Serum analysis revealed normal glucose, amylase, lipase, and thyroid stimulating hormone. Urea and electrolytes were normal. Liver function tests were all normal. The 24-hours proteinuria was normal. Abdominal ultrasound scan was unremarkable. The patient was put under calcium channel blockers intravenously as tocolysis and antihypertensive. Corticotherapy for fetal lung maturation has been started. The blood pressure was stabilized and the uterine contractions have stopped initially. The patient was affected by a type V hypertriglyceridemia, according to the Fredrickson/WHO classification of hyperlipoproteinemias [10]. This subtype is characterized by the presence of severe hypertriglyceridemia associated with hypercholesterolemia. Acute pancreatitis was eliminated by the clinic, biology and abdominal ultrasound. The hyperlipidemia was controlled by an extremely low-fat diet. The patient was managed initially by intravenous fluids with a low-carbohydrate. The plasma lipid levels quickly decreased with this diet. Fetal extraction was performed by caesarean section at 31 WA, due to secondary persisting uterine contractions despite the tocolysis. The patient delivered two male new born, weighing 1900 g and 2050 g. They were supported by the neonatology team. The evolution was favorable during postpartum with a normalization of blood pressure, a negativity of proteinuria and good regression of triglycerides and cholesterol plasma levels (Figure 2). The patient was then supported by endocrinologists for further investigations and monitoring. After two months of following, the lipid plasma levels still normal, and there were no abnormalities in other explorations. Both newborns showed a neonatal severe hypertension

requiring antihypertensive intravenous treatment. This hypertension remains unexplained despite all the explorations. Conclusions: The severe HTG during pregnancy is a rare condition. It is a problem for diagnostic, prognostic and therapeutic.

Dietary is still the essential therapeutic, but fetal extraction also can be considered if the gestational age permits.

Disclosure of Interest: None Declared

P104

PATIENT PREFERENCES FOR FSH INJECTION DEVICES: A MAXDIFF ANALYSIS IN SEVEN EUROPEAN COUNTRIES

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Problem Statement: One critical aspect to improve the likelihood of success in ART is patient adherence to self-injection of FSH. Currently on the market, there are many injection devices used for FSH treatment. In this study, we sought to characterize the specific injection device features that were preferred by patients in individual European countries. **Methods:** We surveyed 402 patients from Germany (n=94), France (n=76), United Kingdom (UK; n=76), Italy (n=69), Spain (n=55), the Netherlands (n=20), and Belgium (n=12). Patients completed an online questionnaire consisting of 19 Maximum Differential Scaling (MaxDiff) questions on selected FSH injection device features that could potentially influence their choice of FSH products. Country-specific patient preferences were then derived and expressed as relative importance scores (IS) normalized to sum to 100 using MaxDiff analysis. **Results:** Survey data analyzed by MaxDiff analysis suggested that patients from the UK, Germany, and France shared similar views of the relative importance of certain FSH injection device attributes. The top three attributes preferred by patients from these countries were dosing accuracy, type of injection device (pen vs syringe), and reduced daily injection volume. Data from patients in Italy, Spain, and Belgium suggested additional product preferences. Italian patients highly valued a dial-back function (IS=10.17) and low incremental dosing (IS=7.35). Spanish patients valued reduced daily injection volume (IS=9.54) and type of injection device (IS=8.77) to a greater extent than dosing accuracy (IS=6.69). For Belgian patients, a dial-back function (IS=9.91) and minimal product wastage (IS=8.93) were highly ranked. Patients from the Netherlands ranked as most important having a dial-back function, a steady grip feature, and a visibility feature, which enables patients to estimate residual cartridge contents. Patients across markets also considered the ability to reuse the pen for multiple cartridges as an important attribute (Average IS=5.61). **Conclusions:** Data from our European survey support the conclusion that patients perceived similar needs for FSH injection-device design at a country-specific level, focusing on factors that affect daily living as well as accurate treatment. Country-specific differences exist in overall order of product characteristics, however, most important features typically remain constant. Patients overall preferred a highly accurate injector with a dial back function and low incremental dosing to ensure that they receive the appropriate therapy. Additionally, convenience factors such as having a pen injector with a low daily injection volume to minimize injection site pain, and the ability to reuse for multiple cartridges were critical drivers for patients. Although this was an unbranded study, which encompassed characteristics of all devices on the market, our results showed that the features most important to patients were all functions of the Ovaleap pen, whereas one or more features were absent from all other devices.

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P105

AMNIOTIC FLUID ERYTHROPOIETIN IN TERM AND POST-TERM BIRTHS

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Problem Statement: Children born post-term (≥ 42 gestational weeks) are at increased risk of perinatal asphyxia, which can lead to excessive perinatal morbidity, mortality, and neurologic complications. Erythropoietin (EPO), a hormone regulating erythropoiesis, is a biomarker of chronic hypoxia. In various complicated pregnancies EPO levels in fetal plasma and amniotic fluid are elevated. High EPO levels are associated with increased risk of acute adverse neonatal outcome, such as decreased umbilical artery pH and base excess (BE), and increased risk for intensive care unit admission. The objective of this study was to evaluate amniotic fluid EPO levels in uncomplicated term and post-term pregnancies, and to find out if amniotic fluid EPO could predict neonatal primary outcome. **Methods:** The study population consisted of 101 uncomplicated pregnancies with vaginal delivery. Amniotic fluid samples were collected vaginally at the time of labour induction by amniotomy between 37+4 and 42+2 weeks of gestation. Concentrations of amniotic fluid EPO were quantitated by immunochemiluminometric assay. Normal amniotic fluid EPO level was defined as < 3 IU/l and abnormal as > 27 IU/l. Primary neonatal outcomes were umbilical artery pH and BE, and Apgar score at one and five minutes. **Results:** Post-term births comprised 33.7% (n = 34) of the total study population. The median concentration of amniotic fluid EPO was 5.9 IU/l (range 0.5 – 58.2 IU/l). Amniotic fluid EPO levels were higher among post-term pregnancies as compared to term pregnancies (p = 0.045). Gestational age at birth correlated with amniotic fluid EPO (r = 0.314, p = 0.001), umbilical artery pH (r = -0.222, p = 0.027), and umbilical artery BE (r = -0.247, p = 0.014). Amniotic fluid EPO was not associated with umbilical artery pH (p = 0.671) or BE (p = 0.758). There were only few neonates with low Apgar score < 7 at one and five minutes in the study population (n = 5 and n = 0, respectively). Amniotic fluid EPO was not associated with low Apgar score. **Conclusions:** Amniotic fluid EPO levels were associated with gestational age and were higher among post-term births as compared to term pregnancies. This is probably due to gradually deteriorating placental function along with advancing gestation. However, amniotic fluid EPO levels did not predict acute adverse neonatal outcome, possibly reflecting efficient fetal compensatory mechanisms in these uncomplicated pregnancies.

Disclosure of Interest: None Declared

P106

TITLE: DOES THE USE OF HORMONAL CONTRACEPTION PRIOR TO OVARIAN SUPEROVULATION (IVF/ICSI) AFFECT PREGNANCY RATE IN GnRH ANTAGONIST CYCLES?

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Problem Statement: To evaluate the impact of oral contraceptive pill on clinical pregnancy in GnRH (Gonadotropin releasing hormone) antagonist cycles.

Methods: Retrospective study analysing data from assisted conception data base with permission from Head of department. This covered period of 2014 and 2015. Patients who did not use OCP (oral contraceptive pill) were selected



from the data base during that period consecutively till we get 80 patients. Patients who do not meet criteria were not included as mentioned in exclusion criteria below. Patients using OCP were selected similarly as above. Microgynon 30 was used. We had a total of 160 patients who were included in the study. There were eighty patients in each group.

Group1: Those who used OCP with GnRH antagonist protocol.

Group2: Those who did not use OCP with GnRH antagonist protocol.

Exclusion criteria: All patients with PCOS (polycystic ovarian syndrome) as they always receive Oral contraceptive pill+metformin prior to starting GnRH antagonist cycles. Also patients having emergency IVF due to oncology reasons were excluded from the study. Patients having IVF for pre implantation genetic diagnosis(PGD) were not included.

Outcome Measure: The Primary outcome parameter was clinical pregnancy in all groups. PROTOCOL: Patients in group 1 started ocp after excluding any contraindication to use of ocp from day2 to day5 of cycle for 14to 21 days. Last pill was taken on friday and ovarian stimulation was started on thursday the following week after 5 days wash out. Cetrorelix started from day 6 of bleed. Patients in group 2 started ovarian stimulation from day 2 or day3 of menstrual cycle with cetrorelix added from day 6 of periods. Results: Each group was subdivided into age subgroups:<37 years,37 to 39 years,39 to 40 years and >40 years.

There was no significant difference in mean age(P=0.9355), body mass index(P=0.0698) and AMH levels(P=0.361). Clinical pregnancy (presence of fetal heart at 7weeks TVS (transvaginal scan) as per unit protocol was 32 in group 1(40.0%) and 29(36.2%)in group 2. Based on Chi-Square test the difference in the pregnancy outcome between the 2 groups was not found to be statistically significant (p-value = 0.58) (95%CI=0.11 to 0.12) Conclusions: Use of oral contraceptive pill with a 5 day wash out period does not affect clinical pregnancy rates in antagonist cycles. It helps in scheduling of cycles giving flexibility especially in busy units. Work load can be distributed evenly through the working week. Age of patient itself is not a limitation for use of oral contraceptive pill provided no other absolute contraindications.

Disclosure of Interest: None Declared

P107

THROMBOPHILIA GENE MUTATIONS IN RELATION TO RECURRENT MISCARRIAGE

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Problem Statement: The present study was undertaken to investigate the prevalence of thrombophilia-associated gene mutations (factor V Leiden, prothrombin gene G20210A and methylene-tetrahydrofolate reductase MTHFR C667T) in relation to recurrent miscarriage. Methods: Two hundred pregnant women divided into two groups were included in the study. Group I included 100 women with history of ≥ 3 unexplained consecutive pregnancy losses and group II included 100 age-matched controls with no history of recurrent miscarriage. Blood samples were collected from all pregnant women enrolled in the study for DNA extraction and genotype analysis based on polymerase chain reaction and reverse hybridization. The frequency of homozygous and heterozygous gene mutations, as well as, the co-expression of mutations was determined. Results: Factor V Leiden and prothrombin gene mutations did not differ significantly between groups, whereas, MTHFR C667T mutations and combined thrombophilias (factor V Leiden and MTHFR C667T) were significantly increased in group I compared to controls. Moreover, the total prevalence of gene mutations was significantly increased in group I (61%) compared to controls (21%).Homozygosity and heterozygosity did not differ significantly between groups, however, in group I, heterozygotes were significantly increased compared to homozygotes for each of the three gene mutations studied. Conclusions: There is an association between some types of thrombophilia and recurrent pregnancy loss, but the absolute risk is small and varies

considerably among reports. Standardized inclusion criteria among selected patients, clinical homogeneity and complete information on important covariates should be applied in future studies in an attempt to eliminate contradictory results.

Disclosure of Interest: None Declared

P108

VARIANTS OF CONGENITAL ABNORMALITIES AND ITS FETAL OUTCOME

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Problem Statement: To determine the variants of congenital fetal abnormality and find out the outcome of fetus in case of congenital anomaly.

Study design

Observational study

Study setting and period

Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh, (April 2015 to September 2015)

Participants/Materials/Subjects/Patients: Pregnant women with congenital anomaly admitted for termination or delivery in the in-patient Department of Obstetrics and Gynaecology in BSMMU during the study period.

Methods: Data along with maternal and fetal outcome and their complications were collected by using a pre-design questionnaire.

Main outcome measure(s): Different type of congenital anomaly, gestational age, parity, mode of delivery, fetal outcome, APGAR score and birth weight

Results: 63.0% of the patients belonged to 3rd decade, Anencephaly 21.0%, Bilateral hydronephrosis 17.0%, Hydrocephalus 11.0% and Ventriculomegaly 8.0%. 76.0% of the pregnant women were found <37 weeks of gestation, 67.0% were multi Para. 89.0% delivered normally and 11.0 % underwent caesarean section. 53.0% of the fetus was male and 47.0% was female. 53.0% aborted, 19.0% still born & IUD, 28.0% were alive baby and perinatal death was found 23.0%. 75.0% and 78.6% of the new born had APGAR score <7 at 1st minute and <7 at 5th minute respectively.64.3% of the new born had LBW, 10.7% VLBW and 25.0% had normal birth weight. Conclusions: Anencephaly, Bilateral hydronephrosis, Hydrocephalus and Ventriculomegaly were common congenital abnormality. Abortion, still born, IUD (Intra uterine death), perinatal death, APGAR score <7, LBW (low birth weight) and VLBW (very low birth weight) were routine fetal outcome.

Disclosure of Interest: None Declared

P109

WHAT IS THE IMPACT OF OVERWEIGHT AND OBESITY DURING PREGNANCY?

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Problem Statement: Obesity is a medical condition with an increasing prevalence and it is a risk factor for many medical problems. In what concerns to pregnancy, obesity is known to influence its outcome and to have an impact on neonatal morbidity and mortality. Our aim was to study the consequences of overweight and obesity on pregnancy outcomes. Methods: Retrospective review of all deliveries which occurred throughout 2015 in our maternity (N=1635). We excluded 64 women because of missing data and 16 multiple gestations (N= 1555). We studied demographic characteristics, pregnancy variables, medical complications of pregnancy as hypertensive disease, gestational diabetes and preterm birth, as well as neonatal outcomes. We used the WHO categories of BMI and divided our

sample into 2 groups: A – Normal weight or control group (BMI 18.5 – 24.9; n=934); B- Overweight or obesity group (BMI≥25; n=537). After studying the demographics and descriptive statistics of our population we excluded underweight women (BMI < 18.5; n=84) in order to compare Groups A and B. Adequate weight gain during pregnancy followed the ACOG recommendations (Committee Opinion number 548). Data were analyzed using SPSS® software, version 24. Results: The mean age in our study group was 29.8 years old. Nulliparous represented 48.3% of our study group. Overall cesarean rate in our population was 22.8%. In what concerns to BMI categories and prevalence of obesity: 5.4% of women were underweight, 60.1% had a normal weight, 21.9% had overweight and 12.7% were obese. When we compared groups A and B we obtained statistical significance regarding the mean age (29.48 ± 5.47 SD versus 30.94 ± 5.54 SD years old; p value 0.000); the mean weight gain during pregnancy (15.37 ± 5.54 SD versus 13.35 ± 6.51 SD kilograms; p value 0.000); the birth weight (3182.6 ± 458.6 SD versus 3282,9 ± 454 SD grams); p value 0.000). Gestational Hypertension (GH), Chronic Hypertension (CH) and Gestational Diabetes (GD) and were more frequent in women with a BMI≥25 (GH: group A – 2.0 versus group B – 4.7%; p value 0.004; CH: group A – 0.6 versus group B – 4.8%; p value 0.004; GD: group A – 4.2 versus group B – 9.9 %; p value 0.000). When testing the cesarean rate of group A (21.5%) versus group B (27.2%) we obtained a p value=0.014. Nulliparity had a prevalence of 54.4% in group A and 37.8% in group B (p value=0.000).

Conclusions: We conclude that women with a BMI superior to 25 had a better control of weight during pregnancy, probably due to pregnancy follow up in our institution and intensification of pregnancy care and surveillance. Although our institution is not a tertiary unit in obstetric care, which is noticed by our ideal overall cesarean rate (22,8%), obesity is a common condition that may implicate serious complications and raise important obstetrical problems. Our work confirms the medical complications of pregnancy, which are typically related to overweight and obesity as hypertensive disease, gestational diabetes, and a higher rate of cesarean delivery.

Disclosure of Interest: None Declared

P110
TVT-EXACT IN THE MANAGEMENT OF FEMALE STRESS URINARY INCONTINENCE – A RETROSPECTIVE REVIEW OVER 1 YEAR IN A TERTIARY CARE HOSPITAL

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Problem Statement: Tension-free vaginal tape is currently the gold standard treatment for female stress urinary incontinence. GYNECARE TVT-EXACT™, a new tension-free vaginal tape (TVT) device designed with the aim of reducing bladder injury, was first introduced in 2010. We evaluated the outcomes and complication rates of patients who underwent isolated TVT-EXACT procedures in our institution. Methods: The study was a retrospective case review of all cases of isolated tension-free transvaginal tape procedures with cystoscopy using GYNECARE TVT-EXACT™ in 2012. Baseline, 1 month, 6 months and 1-year post surgery outcomes and complication rates (intra-operative complications such as bladder perforation, early and late post-operative complications) were extracted from case notes and from phone follow up consultations. Results: A total of 31 patients underwent isolated TVT-EXACT procedure in 2012. Mean duration of follow-up was 14.8 ± 6.8 (1.1–28.1) months. Mean age of the subjects was 54.2 ± 8.8 years. Two patients (6.5%) suffered from intra-operative bladder perforation, both of which did not require prolonged catheterisation. One patient (3.2%) suffered from tape erosion post-operatively. Subjective and objective success rates were both 100% at 1-year follow-up. Subjective and objective cure rates were 85.7% and 100% respectively at 1-year follow-up.

Conclusions: GYNECARE TVT-EXACT™ retropubic mid-urethral slings achieve excellent cure rates with low complication rates over a 1-year follow-up period. Complication rates with GYNECARE TVT-EXACT™ appear unchanged

compared with those in the published literature using GYNECARE TVT™. Longer-term follow-up studies are needed to further evaluate the long-term outcomes for the GYNECARE TVT-EXACT™ sling.

Disclosure of Interest: None Declared

P111
NURSES AND MIDWIVES DETERMINATION OF ORGANIZATIONAL ETHICS CLIMATE PERCEPTION: A MULTICENTER STUDY

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Problem Statement: The aim of this study was to determine the organizational ethical climate perceptions of nurses and midwives who are working in obstetrics&pediatric hospital and were participated in Emergency Obstetric Care (EOC) training. Methods: This study is descriptive. The study sample consisted of 273 participants (216 nurses, 57 midwives) who are working in obstetrics&pediatric hospital and were attendanced in Emergency Obstetric Care (EOC) training between March 2015-May 2016. Data was collected with the personal information form and Ethical Climate Questionnaire (ECQ) from participants with face to face interview. The analysis of SPSS 16.0 statistical software package is used. Evaluation of the data; frequency distribution, t-test, Mann-Whitney U test and Kruskal wallish test was used.

Results: All of participants were female and the mean age of them were 36,40 ±9,10 (min:19, max:60) years. It was determined 48% of participants were bachelor's degree graduates, 40.3% of them worked 20 years and over. 76,6 % worked in state hospitals, 73.3% working as a clinical nurse and 20.9% working as midwives. 24.2% of the participants has been working in intensive care in obstetrics&pediatric hospital. 52% of them works 16 hours at night. 72,9% of the participants have taken Ethics course during the undergraduate education. 49.8% of the participants joined an event related to ethics after graduation. ECQ average score was found to be 0.39 ± 3:11. The mean of subscale scores, 1.00 ± 0.10 in the egoistic climate types, 1.07 ± 0.19 climate type of helpfulness, 1.04 ± 0.16 in the principled type of climate was found. Participants have received undergraduate ethics course has a significant effect on the perception of ethical climate (p0 <0.05). On the other hand, age, education level, years of profession, studied clinical and clinical status were found to be ineffective (p> 0.05).

Table 1: Organizational Ethics Climate Scale (mean±SD)

Climate Type	Mean	SD
Egoistic	1.00	0.10
Principled	1.04	0.16
Helpfulness	1.07	0.19

Table 2: Comparison of Organizational Ethics Climate Scale with socio-demographic characteristics of health workers (N=273)

Characteristic	Mean	SD
Age	36.40	9.10
Education Level	1.00	0.10
Work Experience	1.07	0.19
Workplace	1.04	0.16
Professional Status	1.00	0.10
Work Hours	1.07	0.19
Workload	1.04	0.16
Work Environment	1.00	0.10
Work Satisfaction	1.07	0.19
Work Motivation	1.04	0.16
Work Commitment	1.00	0.10
Work Ethical Climate	1.07	0.19

Conclusions: We can say that the participants have a positive perception of organizational ethical climate.

Key words: Ethics climate, perception, organizational commitment

Disclosure of Interest: None Declared



P112

INVESTIGATION OF THE ANGIOTENSIN CONVERTING ENZYME (ACE) POLYMORPHISM IN UNEXPLAINED INFERTILITY

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Problem Statement: Infertility defined conventionally as the inability or failure of a couple to initiate a pregnancy after at least a year of unprotected sexual intercourse emerges as a problem that effect approximately %10-15 of couples in reproductive age. Angiotensin Converting Enzyme (ACE) located in endothelial cells, lungs and plasma. ACE gene is considered to have an important role in fertility. It is associated with the angiogenesis of ovarian endothelium in vitro and the resumption of meiosis, steroid genesis and follicular growth. The insertion/deletion (I/D) polymorphism within the intron 16 region of ACE gene has been recently identified. There have been lots of studies in the literature concerning how ACE gene polymorphism and male infertility are related with each other. But, there have not any study associated with unexplained infertility. The main aim of this study is that both identify the ACE gene polymorphism in patients with unexplained infertility in our society and show whether there is any relationship between gene polymorphism and infertility by comparing with healthy female controls. In addition to this, it was aimed to measure and compare the serum ACE and AMH levels in both patients and healthy controls in order to determine their roles in unexplained infertility. **Methods:** In this study, 47 unexplained infertility patients and 41 healthy controls, matched for age (32.2±4.7, 30.4±4.8, respectively), were enrolled. The study was approved by Turgut Özal University Hospital Medical Ethics Committee, and written informed consent was obtained from the patients or their relatives. The Declaration of Helsinki was adhered to in this study. To determine the ACE gene polymorphisms, DNA isolation were performed firstly from both patients and controls. Then polymerase chain reaction was done. Serum ACE and AMH levels were measured spectrophotometrically by using a commercial assay kit, according to the manufacturer's instructions and evaluated with SPSS packed programme (version 17.0 software, SPSS Inc. Chicago, Illinois, USA). **Results:** According to the experimental result, no association was detected between ACE I/D polymorphism and unexplained infertility susceptibility, statistically ($p>0,05$). However, when the relationship was analyzed between ACE gene I/D polymorphism and infertility risk, and ID genotype were chosen as a reference, it was found to be 2.33 times more risk of unexplained infertility that the women have DD genotype (DD vs. ID: odds ratio [OR] = 2.33, 95% confidence interval [CI] (0,88-6,19); $p=0,086$). Serum ACE levels were decreased in unexplained infertility patients (107,73±71,92 U/L) as compared with controls (113,05±75,26 U/L) but the decrease were not statistically significant. Similarly, serum AMH levels did not significantly differ between both groups ($p>0,05$). But, in the control group, a positive correlation between mean levels of ACE and AMH was found ($r=0.911$, $p<0.01$); in the patient group, a positive correlation between mean levels of ACE and AMH was found ($r=0.893$, $p<0.01$). **Conclusions:** As a conclusion, much as there is no significant association statistically between infertility and ACE polymorphism, the DD carriers showed an increased risk of developing unexplained infertility as compared with the ID carriers (OR=2.33; $p=0.086$). Further studies are warranted to confirm this finding, especially with a larger population.

Disclosure of Interest: None Declared

P113

SELECTION OF SPERM WITHOUT NUCLEAR VACUOLE-LIKE STRUCTURES IMPROVES IMPLANTATION POTENTIAL OF BLASTOCYSTS IN ADVANCED MATERNAL AGE: AN INDICATION FOR IMSI

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Problem Statement: In male infertility the introduction of intracytoplasmic sperm injection (ICSI) was an important step. If we keep in mind that ICSI bypasses the natural barriers of reproduction, and an abnormal spermatozoon bears the danger of transferring putative negative effects on the offspring, it might be reasonable to develop optimize selection. Sperm selection is generally performed under an ICSI-microscope using magnification between 200-400x. However, spermatozoa are the smallest cells in the human body and higher magnification is necessary to observe sperm fine morphology. Motile sperm organelle morphology examination (MSOME) at high magnification (6.500x) was therefore established enabling the observation of small structures probably important for sperm competency, including sperm nuclear vacuole-like structures (NVLS). A correlation between the occurrence of sperm NVLS and sperm defects including impaired chromatin condensation, altered protamine and methylation patterns, DNA fragmentation, and even aneuploidy was reported. It is well known that with advancing maternal age, the ability of the oocyte to repair DNA-damage decreases. The aim of this study was to investigate whether de-selection of sperm with NVLS will improve implantation potential of blastocysts in relation to maternal age. **Methods:** In a retrospective analysis 250 IVF cycles with intracytoplasmic morphological selected sperm injection (IMSI) and single blastocyst transfer (SBT) were analyzed. Data were evaluated in 2 groups regarding female age (≤ 38 years = group I ; >38 years = group II). Blastocyst morphology was classified according to the Gardner criteria. Semen parameters (WHO, 2010) and MSOME criteria according to the Vanderzwalmen criteria were assessed. The following semen groups were used: A = normozoospermia, sperm without NVLS present, B = reduced spermiogram according to WHO 2011, but spermatozoa without NVLS present, C = reduced spermiogram plus no normal-shape spermatozoa without NVLS present. Main outcome parameters were pregnancy rates (PR), clinical PR, birth rate (BR) and miscarriage rates (MR). **Results:** The rate of SBT with top-quality blastocysts in group I (≤ 38 years) was: A (56.9%), B (53.3%), C (54.2%) and in group II (>38 years): A (31.0%), B (43.2%), C (25.0%). In group I (≤ 38 years) no differences regarding the clinical outcome after injection with different semen qualities was observed [PR: A (54.9%), B (53.3%), C (66.7%); cPR: A (47.1%), B (48.9%), C (58.3%); BR: A (45.1%), B (45.6%), C (54.2%)]. In contrast, IVF success was diminished in group II (>38 years) with declining sperm quality and the presence of NVLS [PR: A (44.8%), B (35.1%), C (18.8%); cPR: A (37.9%), B (29.7%), C (12.5%); BR: A (31.0%), B (21.5%), C (12.5%)]. **Conclusions:** Our results show, that semen quality becomes more important with advancing maternal age, a group of patients that is of big relevance in ART. Blastocysts derived from fertilization of sperm with NVLS and/or sub-optimal morphology decreases chances for a live birth in women >38 years. This is most possibly due to reduced correction and reparation capacity of the aging oocyte. Female age is therefore an indication for IMSI.

Disclosure of Interest: None Declared

P114

COMPARISON OF OUTCOMES AND COSTS OF ELECTIVE SINGLE BLASTOCYST TRANSFER VERSUS DOUBLE EMBRYO TRANSFER

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Problem Statement: Multiple studies have shown that a single cycle of elective single embryo transfer (eSET) has poorer pregnancy rates but less costly than a single cycle of double embryo transfers (DET). However, if a single cycle of eSET is combined with a thaw cycle, pregnancy rates do not differ from a single cycle of DET. A caveat from these studies is cleavage stage embryos were used for transfer. Blastocyst transfer has been shown to have better outcomes than cleavage stage transfer. The hypothesis of this study is that an elective single blastocyst transfers (eSBT) is more effective

and less costly than DET in a single cycle. Methods: A retrospective study on all patients who underwent eSBT or DET from years 2011 to 2014 in KK Women's and Children's Hospital in Singapore was performed. Primary outcomes were live birth rates, rates of multiple gestation, gestation age at birth and cost per live birth. Average costs of a fresh IVF cycle with and without blastocyst culture, normal vaginal delivery, cesarean section, and neonatal intensive care unit stay were obtained from the IVF center and admissions department. Values were compared using the t-test, chi-squared test or Fisher's test as appropriate with significance level set at $p < 0.05$. Results: Women who had eSBT had significantly higher singleton live birth rate than those who had DET (41.2% vs. 25.3%). Multiple gestations were also significantly higher in the DET group (8.2% vs. 0). More babies were delivered preterm in the DET group than the eSBT group (30.4% vs. 14.2%). In the eSBT group, cost per live birth at 50th centile and 75th centile remained at S\$23,187. In the DET group, cost per live birth at 50th centile was S\$22,839 but was raised to S\$24,520 at 75th centile.

Table 1. Characteristics of subjects and outcomes

	eSBT	DET	P
n	48	374	
Age	33.2 ± 3.3	34.5 ± 3.3	0.003*
Number of good embryos	4.3 ± 4.1	5.2 ± 3.3	0.087
AMH (ng/ml)	5.97 ± 3.3	4.7 ± 8.19	0.039*
Weight at birth (kg)	3.62 ± 0.19	3.62 ± 0.20	0.854
Pregnancy outcomes, n (%)			0.004*
No pregnancy/ biochemical pregnancy	56 (92.8)	3179 (87.4)	
Abortions/miscarriage/abortion	4 (5.9)	344 (9.1)	
Singleton live birth	20 (41.2)	959 (25.3)	
Multiple live birth	0	31.7 (8.2)	
Gestation age at birth (weeks)			0.014*
≥37 and above	24 (88.7)	881 (91.8)	
32 to <37	2 (7.1)	134 (28.4)	
28 to <32	0	36 (7.4)	
<28	2 (7.1)	36 (9.4)	
Obvious hyperandrogenic syndrome, n (%)	3 (4.4)	143 (5.7)	0.766
Route of delivery type, n (%)			0.007*
Vaginal delivery	13 (46.4)	566 (45.1)	
Cesarean section	15 (53.6)	667 (54.9)	
Cost per live birth (SGD)			
Mean	43,762	37,633	
50 th centile	23,187	22,839	
75 th centile	23,187	24,520	

Conclusions: Contrary to previous studies, this study showed eSBT to have significantly higher live birth rates than DET. Women with eSBT also avoided risk of multiple gestations and had lower incidence of preterm delivery. Majority of women who had eSBT paid less per live birth than those who had DET.

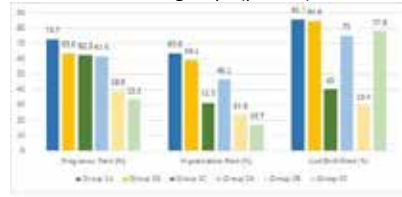
Disclosure of Interest: None Declared

P115 PREGNANCY, IMPLANTATION AND LIVE BIRTH RATES OF DAY 5 EMBRYO TRANSFER ARE DEPENDENT ON THE EMBRYO MORPHOLOGY AND AGE OF PATIENTS

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Problem Statement: To analyse how day 5 embryo quality and the age of patients affect pregnancy, implantation and live birth rates. Methods: A total of 132 patients aged 28 to 45 years who had a fresh or frozen-thawed cycle with day 5 embryo transfer between Jan 2013 and May 2015 were analysed in a retrospective study. Patients were separated into groups 1 (<35 years) and 2 (≥35 years) and further divided into 3 subgroups, A, B and C. Group A consisted of patients who had 2 blastocysts for day 5 embryo transfer. Patients in group B had one blastocyst and one non-blastocyst for transfer whilst those in group C had two non-blastocysts. Pregnancy, implantation and live birth rates were compared amongst subgroups A, B and C for both groups 1 and 2 and between groups 1 and 2 for each of the subgroups. Results: The pregnancy rates for subgroups 1A, 1B, 1C and 2A, 2B, 2C were 72.7%, 63.6%, 62.5% and 61.5%, 38.9%, 33.3% respectively. There were no significant differences among all the subgroups compared ($p > 0.05$). Implantation rates for subgroups 1A, 1B, 1C and 2A, 2B, 2C were 63.6%, 59.1%, 31.3% and 46.2%, 23.6%, 16.7% respectively. Live birth rates for subgroups 1A, 1B, 1C and 2A, 2B, 2C were 85.7%, 84.6%, 40% and 75%,

29.4%, 77.8% respectively. There were significant differences for both implantation and live birth rates between 2A and 2B ($p = 0.007$ and 0.004 respectively) as well as 1B and 2B ($p = 0.004$ and 0.008 respectively) but not between other subgroups ($p > 0.05$).



Conclusions: Pregnancy, implantation and live birth rates were highest for younger patients and patients who had two blastocysts during day 5 embryo transfer. Due to small sample size, the data was not significant between most subgroups. However, they are promising and day 5 embryo transfer should be striven for.

Disclosure of Interest: None Declared

P116 OUTCOME OF TWIN-TWIN TRANSFUSION SYNDROME COMPLICATED WITH SELECTIVE INTRAUTERINE GROWTH RESTRICTION AFTER FLOC Wang Xueju*, Zhao yangyu Peking University Third Hospital, Beijing, China

Problem Statement: To evaluate the clinical effect of fetoscopic laser occlusion of chorioangiopagous vessels (FLOC) in treating twin to twin transfusion syndrome, to investigate the morbidity of twin to twin transfusion syndrome complicated with selective intrauterine growth restriction in order to evaluate the pregnancy outcome of twin-twin transfusion syndrome complicated with selective intrauterine growth restriction.

Methods: Retrospective analysis was made on 116 pregnant women who had TTTS in the Peking University Third Hospital, from 1st September, 2008 to 1st September, 2014. TTTS was diagnosis by twin oligopolyhydramnios sequence, staging of TTTS is using the Quintero staging system. The TTTS+ sIUGR was defined as TTTS patients with one twin weight < 10th percentile. The morbidity of TTTS complicated with sIUGR was compared among the 4 stages of TTTS. Of 116 TTTS patients, there were 44 patients had chosen FLOC and the pregnancy outcome were followed up. Results: 1. From Quintero staging I to IV, both twins survival rates were 57.1% (4/7), 71.4% (10/14), 26.3% (5/19), 75.0% (3/4); all the fetal survival rate was 57.1% (8/14), 75.0% (21/28), 31.6% (12/38), 75% (6/8) respectively. All the fetal survival rate in those TTTS patients complicated with sIUGR from Quintero staging I to IV was 50.0% (3/6), 58.3% (7/12), 21.4% (6/28), 50.0% (2/4), respectively, and in stage III, all the fetal survival rate in TTTS patients complicated with sIUGR was significantly lower than that in TTTS patients not complicated with sIUGR ($P < 0.05$). 2. Of 116 patients, 54.31% (63/116) TTTS was complicated with sIUGR. The morbidity of TTTS complicated with sIUGR in TTTS stage I, stage II, stage III, stage IV was respectively 40.0%, 47.8%, 77.8%, 45.5%, the morbidity of sIUGR in TTTS stage III was significantly higher than other three stages ($P < 0.05$).

Conclusions: The higher morbidity of sIUGR may contribute to the lower fetal survival of TTTS III after FLOC.

Disclosure of Interest: None Declared



P117

COMPARISON OF ADHESIVE GLUE AND SUBCUTICULAR STITCH USING NONE-ABSORBABLE MATERIAL AS WOUND CLOSURE METHOD FOR CESAREAN DELIVERY

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Problem Statement: Cosmetic results of wound closure is important factor to determination quality of life. The aim of present study was to determine proper wound closure method in order to minimize scar formation. In this study, we compared adhesive glue and subcuticular stitch with none-absorbable material.

Methods: Total 417 cases of patient underwent cesarean delivery were enrolled prospectively. 209 cases underwent closure of skin wound with adhesive glue. 208 cases underwent subcuticular skin closure using 4-0 dermalon. After 6 weeks of follow up period, we evaluated skin incision wound using burn scar scale (vascularity, pigmentation, pliability, height).

Results: There were no significant differences in outcome between the groups at 6 weeks after cesarean delivery (vascularity 69.3% vs 67.3% P=0.763, pigmentation 59.8% vs 61.5% P=0.701, pliability 44% vs 46.1% P=0.958, height 81.3% vs 82.2%, P=0.983). No significant differences in wound infection rate and disruption rate were noted. Aesthetic satisfaction of patients who underwent repeat cesarean delivery shown significant difference between two groups (68.7% vs 36.6%).

Item	Adhesive Glue	Subcuticular Stitch
Number of patients	209	208
Mean age (years)	32.1	32.5
Mean BMI (kg/m ²)	23.5	23.8
Mean gestational week at delivery	37.2	37.1
Mean duration of surgery (min)	45.2	46.1
Mean duration of wound closure (min)	12.3	15.4
Mean duration of anesthesia (min)	105.1	106.2
Mean duration of hospital stay (days)	4.2	4.3
Mean duration of wound healing (days)	12.1	13.2
Mean duration of scar maturation (days)	18.5	19.1
Mean duration of patient satisfaction (%)	68.7	36.6
Mean duration of wound infection (%)	0.5	0.6
Mean duration of wound disruption (%)	0.2	0.3

Conclusions: There were no objective differences between both skin closure methods with adhesive glue and none-absorbable material in field of cesarean delivery. In some point of view Skin closure with adhesive glue is better than subcuticular stitch with none absorbable material. Because, adhesive glue group's subjective aesthetic and none-aesthetic (enable earlier shower, less requirement of wound dressing, no need to stitch-off) satisfaction were better than subcuticular stitch group.

Disclosure of Interest: None Declared

P118

UNILATERAL PRIMARY FETAL PLEURAL EFFUSION – A CASE OF GOOD PROGNOSIS

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Problem Statement: Fetal pleural effusion, collection of fluid in fetal pleural space(s), can be primary (ex: congenital chylothorax) or it can occur with many fetal abnormalities such as chromosomopathies or genetic syndromes, structural malformations, viral infections or fetal anemia. It can be an isolated finding or as part of a generalized fetal edema and hydrops. Primary congenital chylothorax is a rare condition that affects 1:10000-15000 pregnancies, more common in males, and it can be uni or bilateral (20%). Frst described in 1917, probably is due to a maldevelopment of lymphatic that leads to accumulation of chyle in pleural space. Sonographic appearances differ according to severity, going from a thin hypochoic rim of fluid around the lung to a severe accumulation with collapsed lung(s) and hydrops. Progression is variable and depends on severity, with spontaneous resolution in one end or hydrops and fetal demise on the other. Prenatal

management includes serial ultrasounds and when small and unilateral they usually resolve or remain stable. Methods: Consultation of clinical file Results: Case report: a 35-year old patient, resident in São Tomé and Príncipe, presented at 35 weeks with a fetal pleural effusion suspected a few weeks before in her country. We confirmed the presence of right moderate pleural effusion with no mediastine deviation and no other malformations, and with progressive decrease until 39 weeks. Subsequent investigation showed no signs of infection or isoimmunization. Delivered occurred at 40 weeks (3540g, IA:9/10). Newborn remained with no respiratory distress but, because of effusion increase, drainage was performed with success and no recurrence of fluid accumulation. Fluid analysis revealed a chylothorax.

Conclusions: Conclusion: Fetal pleural effusion is a rare condition and when no cause is identifiable a primary chylothorax should be considered. We presented a case with excellent prognosis, a small unilateral effusion that decreased until birth and resolved postnatal with drainage

Disclosure of Interest: None Declared

P119

ATYPICAL OVARIAN HYPERSTIMULATION SYNDROME (OHSS): BILATERAL PLEURAL EFFUSION AS THE ONLY MANIFESTATION

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Problem Statement: OHSS is a complication associated with in vitro fertilization (IVF) treatment. The clinical manifestations are due to an increase of vascular permeability and extravasation of fluid in a third space. Ascites is usual, however, pleural effusion is uncommon as isolated manifestation.

Methods: We reviewed this case and the current literature.

Results: Case report: A 37-year- old patient presented with dyspnea and orthopnea in addition to dry cough and chest pain 2 weeks after an IVF cycle with 13 oocytes retrieved, E2: 2435 pg/ml and 2 cleavage stage embryo transferred.

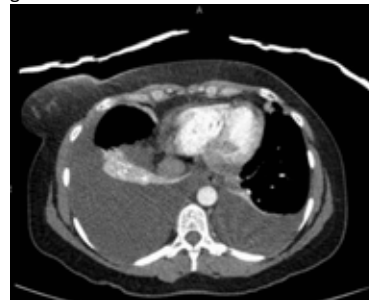
Patient was afebrile, tachycardic, tachypneic with normal oxygen saturation. Decreased breath sounds of both lungs bases were detected.

Laboratory tests showed Albumin 2.8 g/dl, hCG 1494 mU/ml, fibrinogen > 500 mg/dl, D-Dimer 666 ng/ml. Hematocrit, renal and liver function tests were in normal range.

ECG was normal. Transvaginal sonography did not show free fluid. Chest X-ray revealed bilateral pleural effusion and angio-CT discarded pulmonary embolism (PE).

Patient was admitted to the Intensive Care Unit for seven days for fluid management and treatment with intravenous diuretics and albumin, oxygen and low molecular weight heparin. She was improving and discharged on the thirteenth day.

3 days after she was re-admitted for chest pain without any other symptoms. PE was discarded again with a lung scintigraphy and pleural effusion persisted in Chest X-ray. Pleural fluid examined after thoracentesis was compatible with exudate, negative for malignancy. The patient improved with 2 days of symptomatic management. A single intrauterine gestational sac was seen but it ended in miscarriage at 8 weeks.



Conclusions: Isolated pleural effusion is an uncommon feature in severe cases of OHSS. It is a life-threatening complication that has to be differentiated from PE.

Disclosure of Interest: None Declared

P120

INSULIN RESISTANCE AND FREE ANDROGEN AS PREDICTORS FOR OVARIAN HYPERSTIMULATION SYNDROME IN NON-PCOS WOMEN UNDERGOING MEDICALLY ASSISTED REPRODUCTION: EVALUATION OF THE OPTIMUM CUT-OFF POINTS

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Problem Statement: To investigate the isolated polycystic ovarian syndrome (PCOS) characteristics as risk factors for ovarian hyperstimulation syndrome (OHSS) in non-PCOS women undergoing medically assisted reproduction (MAR)

Methods: Case control study: Sixth-six of OHSS patients (cases) were matched with 77 patients (controls). All the patients were infertile non-pcos women with regular menstrual cycle who underwent MAR cycles (Assisted reproductive technology (ART) or ovulation induction (O/I))

Results: Result(s): Seventh-eight percent of patients with OHSS underwent IVF/ICSI cycles in comparison with o/I(ovulation induction) cycles(22%)($P < 0.001$). Polycystic ovarian morphology(PCOM) was more frequent in cases(74%) than controls (29%)($p < 0.001$). FAI and HOMA-IR means were significantly higher in OHSS group than controls (5.52 ± 4.68 vs. 2.43 ± 1.53 and 3.21 ± 1.6 vs. 1.58 ± 0.79 respectively)($p < 0.001$). HOMA-IR and FAI in IVF/ICSI stratum and only HOMA-IR in O/I stratum retained as risk factors for OHSS(the respective odds ratio[OR] and its 95% confidence interval[CI] are as follow : 4.55; 95%CI(1.52-13.55), 1.70; 95%CI(1.01-2.87) and 4.1; 95%CI(1.66-10.16)). The best thresholds for HOMA-IR and FAI in O/I stratum were 2.20 (AUC=0.82, sensitivity= 0.78, specificity= 0.85) and 2.25 (AUC=0.72, sensitivity= 0.78, specificity= 0.58) respectively. The best cut-points for HOMA-IR and FAI in IVF/ICSI subgroup were 2.36 (AUC=0.78 , sensitivity= 0.75, specificity= 0.70) and 3.9 (AUC=0.67 , sensitivity= 0.54 , specificity= 0.80) respectively

Conclusions: Patient with a higher level of androgen and IR are more which not confined to those with PCOS likely to develop OHSS

Disclosure of Interest: R. Nikbakht Grant/ Research support from: Vice chancellor for research, Ahvaz Jundishapur, M. Zargar Consultant for: Vice chancellor for research, Ahvaz Jundishapur, F. Moramezi Consultant for: Vice chancellor for research, Ahvaz Jundishapur, M. Ziafat Grant/ Research support from: Vice chancellor for research, Ahvaz Jundishapur, H. Tabesh Consultant for: Vice chancellor for research, Ahvaz Jundishapur, A. Sattari Consultant for: Vice chancellor for research, Ahvaz Jundishapur, S. A. Sattari Consultant for: Vice chancellor for research, Ahvaz Jundishapur

P121

THE CAUSES OF INFERTILITY AND PREVALENCE OF SPONTANEOUS PREGNANCY IN INFERTILE WOMEN

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Problem Statement: Infertility is one of the most important issues in all human societies. The aim of this study was the evaluation of causes of infertility in the south west of Iran and determination of the rate of spontaneous pregnancy without any treatment.

Methods: This research is a cross sectional study. This study was done from March 2012 to March 2013 at infertility center of Ahvaz Jundishapur University of Medical science . The required information collected from each file by designed questionnaire. The medical records of them were retrospectively reviewed. Descriptive data were analysis by t-test and chi-square test , SPSS version 22. P-value ≤ 0.05 was considered as significant level

Results: In this study 658 couples infertile were enrolled. The most common cause of infertility in the study were female factors (85%) included of ovulatory dysfunction (27%), tubular disorders (16.3%), uterine factors 8.2%, endometriosis (0/7%)and two or three of preceding females factors (32.8%) , male factor (62.5%) included of abnormalities in sperm parameters without varicocele (31.48%) ,history of varicocele (11.72%), abnormalities in sperm parameters along with history of varicocele (19.29%) , combined factors (female and male factors) 50.2% and unexplained infertility 5.1%. Thirteen -two cases (4.9%) of infertile couples had a spontaneous pregnancy without any medical and surgical intervention. Rate of spontaneous pregnancy were in female factors 35.5%, male factors 27.4%, combine factors 25.8% and unknown factors 11.3%. There was not a statistically significant relationship between primary and secondary infertility with spontaneous pregnancy. It was determined the duration of infertility ≤ 3 years is associated with a significant increase in rate of spontaneous pregnancy ($P=0.01$).

Conclusions: This study showed rate of spontaneous pregnancy in infertile couples is almost 5% and the duration of infertility ≤ 3 years is the most factors without any intervention, so in infertile couples with duration more than 3 years and especially in unexplained infertility adequate treatment should be planned.

Disclosure of Interest: R. Nikbakht Consultant for: Vice chancellor for research, Ahvaz Jundishapur University of Medical Sciences , N. Saadati Grant/ Research support from: Vice chancellor for research, Ahvaz Jundishapur University of Medical Sciences , A. Sattari Consultant for: Vice chancellor for research, Ahvaz Jundishapur University of Medical Sciences , F. Amininezhad Consultant for: Vice chancellor for research, Ahvaz Jundishapur University of Medical Sciences

P122

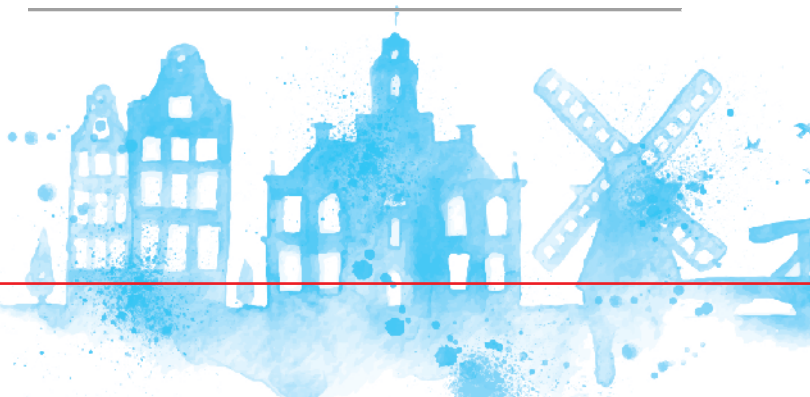
THE EFFECT OF AMINO GUANIDINE ON SPERM MOTILITY AND MITOCHONDRIAL MEMBRANE POTENTIAL IN VARICOCELIZED RATS

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Problem Statement: Increased levels of nitric oxide (NO) in the testicular veins of people suffering from varicocele have already been reported. However, the role of NO-synthase (NOS) isozymes and their inhibitors have not been extensively studied. The purpose of our study was to assess the inhibitory effects of aminoguanidine, on sperm motility, vitality, and mitochondrial membrane potential (MMP) in varicocele rats.

Methods: 24 male wistar rats were divided into four groups: control, sham, varicocele and treatment. Varicocele and treatment groups underwent partial ligation of left renal vein. Sham group rats underwent the same procedure as the varicocele and treatment group but without vein ligation. 10 weeks after varicocele induction, sperm MMP, viability and motility were evaluated in all groups. Treatment group was 1 injected with 50 mg/kg aminoguanidine daily for 10 weeks, and were then sacrificed, before assessing the above parameters. Sperm viability and MMP were assessed by flow cytometry using propidium iodide (PI) and rhodamine 123 (Rh 123) respectively. Results: Our results showed that sperm viability, motility and MMP are decreased in varicocele group. After AG injection, we observed that all the above parameters were significantly increased in treatment group. Rh123staining showed a positive relation between MMP and sperm motility. Moreover, a positive relation was found between immotile sperm and viability, as assessed by PI staining.

Conclusions: The findings of our study suggest that aminoguanidine ameliorates spermatozoa motility and MMP that may be related to infertility in rats.



P123

CAN WE DO SCREENING OF GDM BY USING CAPILLARY BLOOD GLUCOSE MEASUREMENT

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Problem Statement: Screening of GDM using traditional plasma analysis on venous plasma glucose is very expensive and time consuming. We can do screening of GDM by using capillary blood glucose measurement as a simple and inexpensive method

Methods: In this cross sectional study, 256 pregnant women were screened for GDM, by glucometer on capillary blood samples and simultaneously, by laboratory plasma analysis method on venous blood samples, obtained after one-hour 50-g Glucose Challenge test. Statistical analysis was done using SPSS 19 software.

Results: Capillary glucose levels were significantly higher than venous plasma glucose levels. There was a significant correlation between venous and capillary glucose levels. A lower threshold of 157mg/dl (area under the ROC curve=.922) with a 88.5% sensitivity and 87% specificity and an upper threshold of 211 mg/dl (area under the ROC curve=.982) with a 91.7% sensitivity and 95.7% specificity, was determined to diagnose GDM in 24-28 weeks pregnant women, using Reservoir Operating Curve. Using kappa agreement coefficient, a 64% agreement was shown between two tests, in 24-28 weeks pregnant women, which is of great significance.

Conclusions: GDM screening by glucometer on capillary blood samples, is a high sensitive and specific test to diagnose GDM and significantly reduces the number of further tests needed for the diagnosis of GDM and is cost saving as well.

Disclosure of Interest: None Declared

P124

IS THERE A DIFFERENCE BETWEEN OUTCOMES OF THE SPONTANEOUS NATURAL CYCLE AND HORMONE REPLACEMENT TREATMENT IN FROZEN-THAWED HUMAN EMBRYO TRANSFER?

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Problem Statement: Frozen-thawed embryo transfer can be accomplished during a natural cycle after spontaneous ovulation or after artificial preparation of endometrium with exogenous steroids. We sought to evaluate and compare the implantation, pregnancy and live birth rates following frozen-thawed embryo transfer (FET) in a natural and hormonal control cycle.

Methods: Two groups were constituted in this retrospective trial: Group 1 consisted of 101 women who underwent FET after spontaneous ovulation; while 143 women had FET after endometrial preparation with hormone replacement therapy. Rates of implantation, clinical pregnancy, and live birth were compared between two groups.

Results: There was no difference between two groups in terms of rates of clinical pregnancy (p=0.13), implantation (p=0.19) and live birth (p=0.26). Interestingly, number of embryos transferred were significantly higher in patients with twin implantation (p<0.001). Table 1 presents a comparative overview of various clinical parameters.

Two groups were similar on average maternal ages at time of freezing (p=0.91) and transfer of embryos (p=0.85), the number of previous fresh (p=0.16) and frozen ET cycles (p=0.58), the number of oocytes (p=0.82) and mature oocytes (p=0.91) obtained in natural cycles. Similarly, there was no difference between 2 groups with respect to number of initially frozen (p=0.73) and transferred (p=0.19) embryos.

Tables

Table 1. Comparison of descriptive, clinical and laboratory parameters in patients receiving frozen-thawed embryo transfer after natural cycle and hormone replacement therapy.

Variable	Group		p Value	
	Natural cycle (n=102)	HRT (n=142)		
Age at freezing ¹	30.0±4.3	30.0±5.3	0.91	
Age at time of FET ¹	30.8±4.1	30.9±.0	0.85	
No. of transferred embryos	2.0-1.0	1.0-1.0	0.19	
Clinical pregnancy	Yes	63 (61.8%)	74 (52.1%)	0.13
	No	39 (38.2%)	68 (47.9%)	
Implantation	None	37 (36.3%)	68 (47.9%)	0.19
	Singleton	53 (52.0%)	61 (43.0%)	
	Twin	12 (11.8%)	13 (9.2%)	
Live birth	None	46 (45.1%)	79 (55.6%)	0.26
	Singleton	48 (46.6%)	55 (38.7%)	
	Twin	8 (7.8%)	8 (5.6%)	

(Abbreviations: *, statistically significant; HRT: hormone replacement therapy; ET: embryo transfer; ¹: expressed in mean±standard deviation; other parameters are expressed in median-interquartile range)

Conclusions: Results of the present study indicated that FET in natural cycle is a comfortable method that provides satisfactory rates of pregnancy as well as reduction of costs and avoidance of side effects linked with HRT. In spite of increased workload and need for close follow-up, therapeutic outcomes of FET during the natural cycle are comparable to that of FET after endometrial preparation with HRT.

We suggest that FET in natural cycle is a comfortable method that provides satisfactory therapeutic outcomes as well as reduction of costs and avoidance of side effects linked with hormone replacement therapy.

Disclosure of Interest: None Declared

P125

FEMOSTON (1.0 MG ESTRADIOL PLUS 5.0 MG DYDROGESTERONE) FOR MENOPAUSAL HORMONAL REPLACEMENT IN MORBID OBESE WOMEN Natalia Artymuk¹, Olga Tachkova¹

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Problem Statement: It's well known that the menopause is a risk factor for abdominal and morbid obesity (Gravena AA, 2013). Women with morbid obesity have certain characteristics of their menopause: more severe menopausal symptoms, especially neuroendocrine and metabolic, higher frequency of the urogenital disorders and cardiovascular diseases, higher bone density in comparison of nonobese women (Artymuk N., 2014). However, interaction period of menopausal transition, weight gain and obesity are under investigation. The issue of menopausal hormonal therapy in women with morbid obesity is unclear. (Stachowiak G., 2015).

The objective of this study was to estimate efficacy and safety 1.0 mg estradiol plus 5.0 mg dydrogesterone in postmenopausal women with morbid obesity.

Methods: 24 patients were randomized in two groups by envelop method. The inclusion criteria were severe menopausal symptoms, early menopause, morbid obesity. The exclusion criteria were reproductive age, late postmenopause, uterine bleeding, history of the breast, endometrial and ovarium cancers, acute hepatitis, hepatic tumor, thrombosis, allergy to MHT



components, porphyria, hepatic dysfunction, endometriosis, leiomyoma, family hypertriglyceridemia. Both groups consisted of 12 women with morbid obesity in early postmenopause. Average age in both groups were 53.4 ± 0.3 y ($p > 0.05$). BMI in group I was 41.2 ± 0.7 kg/m², in group II – 40.6 ± 0.8 kg/m², the duration of menopause were 4.2 ± 0.6 and 4.4 ± 0.8 years, Kupperman index (KI) – 48.8 ± 9.2 and 48.6 ± 10.2 ($p > 0.05$). We used clinical methods, evaluation of modified Kupperman index (KI), and determination of glucose, cholesterol, triglycerides, HDL-C, LDL-C, hemostasiograma. Femoston (1.0 mg estradiol plus 5.0 mg dydrogesterone) has been administered to the patients from Group I continuously. Patients from group II received symptomatic treatment.

Results: The results of this study showed that KI more significantly decreased in group I than in group II: one month later it was 28.2 ± 6.2 and 42.0 ± 6.2 , three months later – 18.8 ± 4.2 and 40.8 ± 4.2 6 months later – 9.0 ± 2.2 and 36.2 ± 4.6 ($p < 0.001$). Women from group I had evidently rather headache, sleep disorders, heartbeats in comparison with women from group II – 8.3% and 50%, 16.6% and 75%, 25% and 75% ($p < 0.05$). Patients from group I had not uncontrolled arterial hypertension and sympathoadrenal crisis. 6 months later body mass index (BMI) in group I slightly decrease and was 39.1 kg/m², in group II – 41.8 kg/m² ($p > 0.05$).

6 months later, the patients from group I had significantly lower cholesterol indicators, triglycerides triglycerides, HDL-C, LDL-C and index atherogenesis than patients from group II. Main indicators of haemostasis did not differ significantly between both groups.

Conclusions: Thus, femoston (1.0 mg estradiol plus 5.0 mg dydrogesterone) for menopausal hormonal replacement in morbid obese women were effective for the treatment of the menopausal symptoms without any negative interaction on the lipid, carbohydrate and hemostasis. These results allow us to make the next investigations in the future.

Disclosure of Interest: None Declared

P126

ADVERSE EFFECTS OF NIGHTTIME LIGHTING ON CONCEPTION AND FETAL DEVELOPMENT

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Problem Statement: exposure to room light before bedtime, Exposure to artificial light at night is a common practice in modern society, which can affect a woman's reproductive health and also the health of her unborn child. Therefore, the aim of this review was to identify the adverse effects of nighttime lighting on the conception and fetal development

Methods: A literature review was conducted. Published papers related to adverse effects of nighttime light exposure was identified by searching databases.

Results: Based on the review, the dark night stimulates the pineal gland to produce melatonin. The level of melatonin peak around the midnight and then began to drop. The lighter a person exposed to at night, the more melatonin production is reduced—decreasing the probability of conception or threatening the health of the fetus. Melatonin has strong antioxidant features that protect the egg from free-radical damage, Particularly during women's ovulation. The disruption of the light/dark cycle during pregnancy has been related with many adverse consequences. Increases the risk of small gestational age, low birth weight babies, and preterm labor among women who work at the night. The mother's blood melatonin plays multiple roles in a fetus. It carries information about dark and light cycles to the fetal brain, assisting the developing child to start forming its own circadian rhythm. Moreover, it is believed that melatonin plays a significant role in activating specific genes that are crucial to adequate development from conception to birth. Insufficient amounts of melatonin have been related to behavioral impairments such as attention deficit hyperactivity disorder (ADHD) or autism in children. In addition, pregnant women who have inadequate amount of melatonin are at greater risk for pre-eclampsia,

intrauterine growth restriction, and other disturbance than can have serious effects on both mother and child.

Conclusions: Therefore, there should be no interruption of nighttime darkness with light, especially in the last trimester of pregnancy.

Disclosure of Interest: None Declared

P127

INVESTIGATION THE MEDICAL MALPRACTICE CLAIMS IN OBSTETRICS AND GYNAECOLOGY

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Problem Statement: Medical complaints have created many problems for patients and physicians and may reduce the people's trust towards doctors as well as provide a lot of stress for doctors. The aim of this study was to investigate malpractice complaints referred to the department of legal medicine organization in an area in Iran.

Methods: In this cross-sectional descriptive study we attempted to study general malpractice claims referred to the department of Legal Medicine Organization Medical Commission for consideration during the 2005-2010. SPSS software was used for data analysis.

Results: During 5 years, 46 decisions related to malpractice were made. The majority of patients (37%) were less than 10 years of age. The highest number of malpractice claims were against obstetric and gynecologist (32.6%). Twelve cases (%26.1) were about medical negligence in obstetric and gynecology. The most common type of negligence was carelessness (36.8 %) followed by nonconformity of governmental disciplines or medical rules (26.3%).

Conclusions: In obstetrics the lives of the mother and the fetus are at risk, the possibility of malpractice claim is higher than with other specialities. Therefore Establishing a freindly communication with the patient and their family, explaining what will be done and what the consequences of choices are, will make it possible to prevent unjustified claims.

Disclosure of Interest: None Declared

P128

A SYSTEMATIC STUDY USING A LASER REVEALS DIFFERENCES IN THE BLASTOCYST HATCHING RATE AND CLINICAL OUTCOMES BETWEEN TWO DIFFERENT METHODS: CLASSIC ASSISTED HATCHING (AH) AND ZONA THINNING (ZT)

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Problem Statement: The objective of this observational retrospective unicenter study is to compare the effect of two laser assisted hatching techniques on the blastocyst formation and hatching rates, and clinical outcomes.

Methods: Patients undergoing autologous IVF cycles (n=270) with fresh embryo transfer on day 5 and embryo culture in a time lapse system were included. Assisted hatching was performed using a laser (Navilase®, OCTAX Microscience GmbH, Germany) on day 3 of development. Patients were divided in 3 groups according to the type of hatching technique applied:

Group AH (n=22, 116 embryos[GC1]; 1.6 ± 0.5 embryos transferred): classic assisted hatching technique involving 2 laser pulses that opened a hole in the zona pellucida (ZP). The hole was 1.5 times wider than the thickness of the ZP of each embryo.

Group ZT (n=26, 169 embryos; 1.4 ± 0.5 embryos transferred): 25% of the ZP perimeter was thinned to half of its thickness. Thinning was performed using 15 consecutive pulses.



Control group (n=222, 1451 embryos; 1.4±0.7 embryos transferred): no laser intervention.

Embryos were cultured in the Embryoscope (Vitrolife, Sweden) and images were taken every 10 minutes. Kinetic markers, in hours post injection, included: time to start blastulation (tSB), blastocyst cavitation, blastocyst expansion, initiation of hatching [GC2] and the interval between the start of blastulation and initiation of hatching (tBiH-tSB).

Results: No differences were found in patient's baseline characteristics or in the embryo quality on Day 2, Day 3 and Day 5 of development.

Blastocyst formation rate was statistically higher in AH group (73.3%) when compared to ZT (56.5%, p=0.0033) or control (60.5%; p=0.0064). Similarly, blastocyst hatching rate was significantly higher in AH vs. ZT and control groups (38.8%, 7.2% and 6.2% respectively; p<0.0001).

With respect to kinetic markers, we found statistical differences in the time to hatching, especially in tBiH-tSB [GC1] (10.2±4.7 for AH, 18.2±4.3 for ZT and 20.2±4.5 for control; p<0.0001).

When analyzing clinical outcomes, implantation rate in AH group (45.7%) showed to be significantly (p=0.0344) higher than ZT group (33.3%). No differences were found when both groups were compared to control (42.2%).

Clinical pregnancy rate was significantly higher in AH group vs. control (77.3% vs. 50.2%; p=0.0152) but no difference was found between AH and ZT groups (77.3% vs. 65.2%).

Ongoing pregnancy rate was also higher in the study groups: 63.6% in AH group vs. 38.1% in control group; p= 0.0078 and 65.2% in ZT group vs. 38.1% in control group; p=0.0201.

Conclusions: These preliminary results suggest that:

1. Assisted hatching using a systematic laser methodology is safe and does not impair embryo development.
2. Assisted hatching in general, increases the rate of blastocyst hatching and AH appears to be more efficient than ZT.
3. AH may help improving implantation rates, however, results must be confirmed in a larger study.

Disclosure of Interest: None Declared

P129

HMGB-1 AND INFLAMMATORY CYTOKINES IN FOLLICULAR FLUID OF PATIENT WITH ENDOMETRIOSIS

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Problem Statement: The aim of the study was to examine the inflammatory status of follicular fluid in endometriosis by detecting High mobility group box-1 (HMGB-1) and inflammatory cytokines, which reflect the milieu of oocyte that may play a role for infertility.

Methods: Total 60 patients who had received in vitro fertilization and embryo transfer (IVF-ET) from March, 2013 to March, 2016 were included: 30 patients who had endometriosis as case group, 30 participants without endometriosis as the control. Follicular fluid (FF) was obtained from a dominant follicle during oocyte retrieval and stored at -70°C. Level of HMGB-1 was measured with ELISA, as well as inflammatory cytokines including Interleukin (IL)-1β, IL-6, IL-8, and tumor-necrosis factor (TNF)-α.

Results: Level of HMGB-1 was significantly higher in FF samples from the endometriosis group compared to the controls. IL-6, IL-8, and TNF-α levels were significantly higher in the endometriosis group compared to those in the control. There were significant positive correlations among the four inflammatory cytokines. The levels of the inflammatory cytokines positively correlated with the levels of HMGB-1 in the FF samples. TNF-α levels were negatively correlated with the cumulative embryo score per embryo. Logistic regression analysis revealed that the number of high-quality embryos was an independent factor predicting clinical pregnancy.

Conclusions: This study showed that HMGB-1 and inflammatory cytokines may play an important role through NF-κB pathway, in inflammatory cascade affecting oocyte milieu.

Disclosure of Interest: None Declared

P130

CLINICAL AND PATHOLOGIC COMPARISONS OF ADNEXAL TORSION IN NON-PREGNANT AND PREGNANT WOMEN

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Problem Statement: Adnexal torsion is considered to be gynecologic emergency especially in women who have not finished with their family planning. It occurs when the ovary and the fallopian tube twist, resulting strangulation and it blocks blood supply which eventually leads to ischemia. As it causes partial or complete occlusion of blood supply, rapid detorsioning of the adnexal mass is crucial but the definitive diagnostic method is direct confirmation using laparoscopy. Since 70-75 % of women with adnexal torsion are reproductive women that it would be interesting to classify these women into non-pregnant and pregnant groups and compare their data.

Methods: This is a retrospective study of women with adnexal torsion who underwent surgical correction in Severance Hospital, Seoul, Korea. Total 239 cases, consisting of 206 non-pregnant and 33 pregnant women were included whose diagnosis was coded with N835, Torsion of ovary, ovarian pedicle and fallopian tube from January, 2006 to December 2015. Baseline characteristics, pre-operative information, operative findings, post-operative information were obtained by chart review. All statistical analyses were conducted using SPSS ver. 15.0 (SPSS Inc., Chicago, IL, USA). A P-value less than 0.05 was considered to be statistically significant.

Results: Non-pregnant women were found to have larger sized torsioned adnexal cysts in average (non-pregnant vs. pregnant = 9.18 ± 4.07 cm vs. 6.41 ± 2.26 cm, P-value <0.001) and they were also found to have higher percentages of having necrotic tissues (43.7 % vs. 12.1 %, P-value <0.001) than pregnant women. Dermoid showed the highest prevalence in non-pregnant women (61 cases, 29.6 %), and corpus luteum showed the highest prevalence in pregnant women (14 cases, 42.4 %). Among pregnant women, women in second trimester showed the highest degrees of adnexal torsion among the three groups, and the difference was statistically significant (1st trimester vs. 2nd trimester vs. 3rd trimester = 427.92 ± 228.568° vs. 855.00 ± 172.337° vs. 468.00 ± 433.497°, respectively, P-value = 0.042).

Conclusions: Presentation of adnexal torsion is different in non-pregnant and pregnant women. The size of torsioned adnexal cyst was smaller, and it seems to be detected earlier inducing lower prevalence of necrosis in pregnant than non-pregnant women due to enlarged uterus resulting lack of space in pelvic cavity. Not only the size but also the frequent pathologies detected in both groups were different which probably have caused by physiologic changes of pregnancy.

Disclosure of Interest: None Declared

P131

THE CLINICAL EFFICACY OF ABLATION ZONE BASED ON PELVIC MRI ANATOMY IN THE HIFU (HIGH INTENSITY FOCUSED ULTRASOUND) TREATMENT FOR ADENOMYOSIS

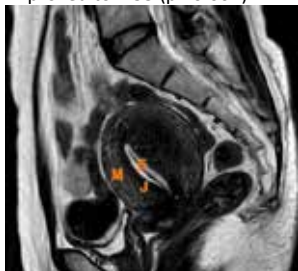
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Problem Statement: The evaluation of junctional zone myometrium & endometrium as a treatment indicator in the HIFU (High Intensity Focused Ultrasound) treatment for adenomyosis

Methods: 1. Retrospective reviews were performed for 23cases of

adenomyosis treated through USG-guided HIFU (JC, Chongqing Haifu, China) from Feb 1 2015 to Oct 10 2015 at Cheongdam HIFU Clinic. All of the cases were of the "do not want baby" category and checked preparation MRI T2 and post operation MRI T1 enhanced. Ablation areas were marked endometrium(E), junctional zone myometrium(J) and outer myometrium(M) based on post operation MRI T1 enhanced. Degree of treatment was marked partial(P) or complete(C) 2. Comparing postoperative UFS-QOL(the uterine fibroid symptom and quality of life) score and ablation groups of post operation MRI T1 enhanced. three months after treatment, all participants reported improvement in the UFS-QOL Results: twenty three woman with a mean age of 43 years enrolled, and 6 were group I (J partial ablation), 6 were group II (J complete ablation), 10 were group III (J & E complete ablation), 1 were group IV (J complete & M partial ablation) The baseline UFS-QOL score of group III was 62.43 and improved to 7.55 ($p < 0.001$)



Conclusions: Postoperative QOL score of ablation group J(C) including E(C) was higher improvement in comparison to other groups

Disclosure of Interest: None Declared

P132

EVALUATION OF ANTI-MÜLLERIAN HORMONE SERUM LEVELS IN EACH STAGE OF ENDOMETRIOSIS

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Problem Statement: Endometriosis is an abnormal gynecological condition in which tissue, more or less perfectly resembling the endometrium, occurs outside the uterus - most often in the pelvic cavity. The precise incidence of the disease is unknown but several studies suggest that 25% to 50% of infertile women suffer from endometriosis. The causes of endometriosis are also unknown. Some evidence suggests that fragments of endometrium from the lining of the uterus are refluxed during menstruation through the fallopian tubes into the peritoneal cavity. Four stages of endometriosis (ASRM classification) are recognized, according to severity. AMH is a glycoprotein produced by granulosa cells of ovarian follicles. Findings about the relationship between AMH and endometriosis are controversial. Thus, we decided to evaluate serum levels of AMH in women with different stages of endometriosis targeting stage III (moderate) and IV (severe) -the presence of deep endometriomas on the ovaries. The aim of the study was to evaluate the relationship of endometriosis with the AMH serum levels and to assess the usefulness of AMH in distinguishing the individual stage of endometriosis.

Methods: We assessed a group of 365 women aged 24 - 41 (median 33) years. 224 as a control group and 141 with the endometriosis divided to the four groups according to the stage (stage/number of women: I/38, II/34, III/57, IV/12). Diagnosis and endometrioma location on the ovaries was performed using pelvic ultrasound scanning. Serum samples from each patient were collected and stored at -20°C. The samples were thawed only once just prior to the analysis. AMH serum levels were assayed using the chemiluminescent kit ACCESS AMH (Beckman Coulter, USA). SAS 9.2

(Statistical Analysis Software release 9.2) was used for all statistical analyses. AMH is changing with the age. We tested all assessed group for the age equivalence and in case of age difference age adjustment was applied. Results: The median of AMH levels in the control group was 2.35 ng/ml. The median of the entire endometriosis group was 2.40 ng/ml. No statistically significant differences were found ($p=0.5070$). The medians and statistical significances of AMH levels in endometriosis groups according to the stages were: stage I=2.51 ng/ml ($p=0.8185$), stage II=2.54 ng/ml ($p=0.8322$), stage III=2.42 ng/ml ($p=0.2613$), stage IV=1.32 ng/ml ($p=0.0436$). No statistically significant differences in the first three stages were found. Stage IV with the presence of deep endometriomas on the ovaries may have caused a decrease in the number of follicles in the affected ovary. AMH is produced in the follicles and based on the decreased AMH we might predict a reduced number of follicles in the ovary.

Conclusions: We have not proved any direct negative impact of the first three stages of endometriosis on the serum levels of AMH. AMH cannot be used in the differentiation of individual stages of endometriosis but decreased AMH level in stage IV may serve as the negative predictive marker of fertility.

Disclosure of Interest: None Declared

P133

WHAT IS THE EFFECT OF HOT SEASON AND COLD SEASON ON SPERM PARAMETERS?

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Problem Statement: We aimed to investigate the presence of the possible seasonal pattern in the functional parameters of semen samples at the time of both ejaculation and spermatogenesis in men with normal and oligozoospermic sperm parameters.

Methods: This retrospective study includes a consecutive series of 4422 semen samples that were collected from patients as a part of the basic evaluation of the infertile couples attending the Reproductive Endocrine Outpatient Clinic of a tertiary women's hospital in Ankara, Turkey, between January 1, 2012 and December 31, 2013 were retrieved. The samples were classified according to sperm concentration: $\geq 15 \times 10^6/\text{mL}$ as normozoospermic samples and $< 15 \times 10^6/\text{mL}$ as oligozoospermic samples.

Mediterranean climate and its effect on the variations of the sperm parameters were analysed by taking the period between May and October as the hot season and the period between November and April as the cold season. Samples were compared according to the hot and cold seasons and seasonal analysis of normozoospermic and oligozoospermic semen samples were done separately.

Results: The mean age for the normozoospermic and the oligozoospermic patients was 31.86 ± 6.42 and 32.11 ± 6.22 years, respectively. Percentage of motile sperms with the fast forward movement was found to be significantly higher ($P=0.001$) in the 2036 normozoospermic samples produced during the cold season versus the 1699 specimens produced during the hot season. The mean percentage of samples with normal sperm morphology was higher during the cold season compared to the hot season. A statistically significant difference was found between the hot and the cold season in terms of the percentage of sperms with normal morphology ($11.44 \pm 8.82\%$ and $13.14 \pm 8.87\%$ respectively, $P=0.001$). In both groups, a significant improvement on sperm parameters such as sperm morphology and fast forward motility was found especially during the cold season compared with the hot season, the above observed trends for the season related differences in sperm parameters were preserved when the data were analysed by the season of spermatogenesis in both normozoospermic and oligozoospermic groups.



Table1. Seasonal variations in Normozoospermic sperm samples by the day of collection

	Hot season (n=1699)	Cold season (n=2036)	p*
	mean±SD	mean±SD	
Age (years)	32.06±6.49	31.66±6.33	0.115
Volume (ml)	2.83±1.35	2.84±1.17	0.067
Concentration (M/ml)	50.69±28.35	51.92±29.05	0.254
Motility, total (%)	59.99±20.08	59.54±19.48	0.416
Motility, fast (%)	33.12±26.43	40.74±22.28	<0.001
Motility, slow (%)	26.88±23.62	18.79±17.58	<0.001
Morphology (%)	11.44±8.82	13.14±8.87	<0.001
Hot season: May-October Cold season: November-April			

Image:

Table2. Seasonal variations in Oligozoospermic sperm samples by the day of collection

	Hot season (n=1699)	Cold season (n=2036)	p*
	mean±SD	mean±SD	
Age (years)	32.06±6.45	31.66±6.33	0.115
Volume	2.69±1.39	2.75±1.09	0.039
Concentration (M/ml)	10.40±2.93	10.56±3.02	0.404
Motility, total (%)	48.42±18.22	49.33±16.18	0.470
Motility, fast (%)	19.87±19.86	24.28±17.56	<0.001
Motility, slow (%)	28.55±18.29	25.05±16.52	0.038
Morphology (%)	6.67±5.94	7.51±6.23	<0.001
Hot season: May-October Cold season: November-April			

Conclusions: Both normozoospermic and oligozoospermic semen samples had better sperm parameters in the cold season. The circannual variation of semen parameters may be important in diagnosis and treatment decisions.

Disclosure of Interest: None Declared

P134

REDUCTION PERINATAL HIV TRANSMISSION IN MEXICO ANALYSIS OF THREE YEARS AND COMMITMENTS FOR 2018.

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Problem Statement: Problem: The perinatal transmission of HIV is a public health problem that can be avoided and it is an ethical imperative. In Mexico every year there are 1,500 women who require treatment and follow-up order both to reduce the risk. In Mexico 2.5 million babies are born each year. Methods: Material and methods: over 3 years have implemented public policies to reduce HIV transmission from mother to child. Screening of pregnant women. Reactive test. Individual monitoring and treatment is initiated with immediate antiretroviral drugs and monitoring. Cesarean delivery and breastfeeding is avoided. It monitors the mother and newborn. The numerical data of the country are presented in two previous decades. The HIV screening coverage throughout the country and institution that serves people with HIV. Strategies to deepen the impact in reducing cases. Results: In 3 years decreased the incidence of 131 cases in 2012 to 71 in 2015. 45% reduction. It is expected to reduce by 86 % in 2018.

Conclusions: perinatal HIV transmission can be reduced in 98 % of cases with preventive measures and treatment, is considered an ethical imperative for the health system of any country.

The main problem in achieving the impact speed is the lack of quality health services, in addition to the social determinants Auno not overcome in the XXI century. Poverty, lack of access to services and limited education

Disclosure of Interest: None Declared

P135

UNILATERAL PRIMARY FETAL PLEURAL EFFUSION – A CASE OF GOOD PROGNOSIS

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Problem Statement: Fetal pleural effusion, collection of fluid in fetal pleural space(s), can be primary (ex: congenital chylothorax) or it can occur with many fetal abnormalities such as chromosomopathies or genetic syndromes, structural malformations, viral infections or fetal anemia. It can

be an isolated finding or as part of a generalized fetal edema and hydrops. Primary congenital chylothorax is a rare condition that affects 1:10000-15000 pregnancies, more common in males, and it can be uni or bilateral (20%). Frst described in 1917, probably is due to a maldevelopment of lymphatic that leads to accumulation of chyle in pleural space. Sonographic appearances differ according to severity, going from a thin hypoechoic rim of fluid around the lung to a severe accumulation with collapsed lung(s) and hydrops. Progression is variable and depends on severity, with spontaneous resolution in one end or hydrops and fetal demise on the other. Prenatal management includes serial ultrasounds and when small and unilateral they usually resolve or remain stable.

Methods: Consultation of clinical file

Results: Case report: a 35-year old patient, resident in São Tomé and Príncipe, presented at 35 weeks with a fetal pleural effusion suspected a few weeks before in her country. We confirmed the presence of right moderate pleural effusion with no mediastine deviation and no other malformations, and with progressive decrease until 39 weeks. Subsequent investigation showed no signs of infection or isoimmunization. Delivered occurred at 40 weeks (3540g, IA:9/10). Newborn remained with no respiratory distress but, because of effusion increase, drainage was performed with success and no recurrence of fluid accumulation. Fluid analysis revealed a chylothorax.

Conclusions: Conclusion: Fetal pleural effusion is a rare condition and when no cause is identifiable a primary chylothorax should be considered. We presented a case with excellent prognosis, a small unilateral effusion that decreased until birth and resolved postnatal with drainage

Disclosure of Interest: None Declared

P136

TREATMENT SATISFACTION, ADHERENCE, AND MENSTRUAL SYMPTOMS AMONG WOMEN IN FIVE EUROPEAN UNION COUNTRIES USING MONTHLY-CYCLE ORAL CONTRACEPTION

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Problem Statement: Women in the European Union (EU) seeking oral contraception (OC) have recently been given the option of extended-cycle OC. Whether EU women will show improved outcomes with extended-cycle OC vs monthly-cycle OC is not yet known. Beneficial outcomes among women in the United States (US) using extended-cycle OC, including improved satisfaction, adherence, and menstrual symptoms, were demonstrated in the 2013 National Health and Wellness Survey (NHWS). Our study examines these key outcomes among women receiving monthly-cycle OC in 5 EU countries to assess whether EU women may also benefit from extended-cycle OC.

Methods: Data from the 2013 NHWS were examined. The NHWS was conducted in 5 EU countries, including the UK (N=15,000), France (N=15,000), Germany (N=15,000), Italy (N=10,000), and Spain (N=7,000). Women eligible for inclusion in this study were premenopausal, without hysterectomy, and aged 18-50 years old, who reported current use of monthly-cycle OC. Key assessments included satisfaction with monthly-cycle OC (from 1 "extremely dissatisfied" to 7 "extremely satisfied"), adherence (8-item Morisky Medication Adherence Scale®; scores categorized as low/medium vs high adherence), and presence in the past month of menstrual cycle pain, heavy menstrual bleeding, or dysmenorrhea. Menstrual-related symptoms (presence of 15 symptoms) due to premenstrual syndrome (PMS)/premenstrual dysphoric disorder (PMDD) were examined. Depression (Patient Health Questionnaire [PHQ]-9) was assessed. Analyses were descriptive.

Results: A total of 5,905 women were enrolled from the EU5, including France (N=2,056), Germany (N=1,574), UK (N=1,355), Italy (N=500), and

Spain (N=420). The mean ages ranged from 29.7 years (Germany) to 32.9 years (Italy). Satisfaction with monthly-cycle OC treatment ranged from a mean of 5.2±1.6 (France) to 5.9±1.1 (UK), indicating moderate to high satisfaction with monthly-cycle OC among EU5 women. Low to medium adherence was reported by 64.0% (Spain) to 75.0% (Italy) of women. Heavy menstrual bleeding ranged from 7.7% (France) to 16.1% (UK) of women, and menstrual cycle pain in the past month, among those who reported experiencing menstrual pain, ranged from 29.9% of women (France) to 46.5% (Italy). Presence of dysmenorrhea ranged from 17.0% of women (France) to 38.1% (Spain). The most frequently reported menstrual-related PMS/PMDD physical symptom was abdominal pain, ranging from 62.6% of women (Italy) to 80.4% (Spain). Among menstrual-related PMS/PMDD emotional symptoms, irritability was most common, ranging from 55.7% of women (France) to 69.5% (UK). Mean depression scores ranged from 4.9±5.2 (Germany) to 6.1±5.2 (Italy).

Conclusions: Our findings related to treatment satisfaction, adherence, and menstrual symptoms among women in France, Germany, Italy, Spain, and the UK who were using monthly-cycle OC indicate the ongoing need for improvement in these OC-related outcomes. Beneficial improvements have been demonstrated in US women using extended-cycle OC vs monthly-cycle OC. Women in the EU may also benefit from use of an extended-cycle OC regimen.

Disclosure of Interest: I. Lete Consultant for: HRA Pharma, Merck Sharp & Dohme, Nordic Pharma, Teva Pharmaceuticals, Speakers Bureau for: Merck Sharp & Dohme, Teva Pharmaceuticals, L. Lee Employee of: Kantar Health, which received funding from Teva Pharmaceuticals to conduct this study, N. Flores Employee of: Kantar Health, which received funding from Teva Pharmaceuticals to conduct this study, R. Nappi Consultant for: Bayer Pharma, Eli Lilly, Gedeon Richter, HRA Pharma, Merck Sharp & Dohme, Novo Nordisk, Pfizer, Shionogi, Teva, M.-C. Micheletti Employee of: Teva Europe Women's Health, B. Tang Employee of: Teva Pharmaceuticals

P137

MENSTRUAL SYMPTOMS, SATISFACTION, ADHERENCE, HEALTH-RELATED QUALITY OF LIFE, AND DEPRESSION DURING MONTHLY-CYCLE ORAL CONTRACEPTION AMONG WOMEN IN THE EUROPEAN UNION AND THE UNITED STATES

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Problem Statement: Extended-cycle oral contraception (OC) recently became available to women in the European Union (EU); however, data examining whether EU women show improved outcomes with extended-cycle OC are limited. Women in the United States (US) showed improved satisfaction, adherence, and menstrual symptoms with extended-cycle vs monthly-cycle OC in the 2013 National Health and Wellness Survey (NHWS). To help understand whether EU women may also benefit from extended-cycle OC, we examined similarities among EU and US women using monthly-cycle OC. Menstrual symptoms, satisfaction with OC, adherence, health-related quality of life (HRQOL), and depression were examined.

Methods: Study data were drawn from the 2013 NHWS, including data from the US (N=75,000) and 5 EU countries (EU5 [United Kingdom, France, Germany, Italy, Spain], N=62,000). Women 18-50 years old reporting current use of monthly-cycle OC without menopause or hysterectomy were eligible. Key outcomes examined were presence of menstrual cycle pain in the past month, heavy menstrual bleeding, dysmenorrhea, satisfaction with OC (1 "extremely dissatisfied" to 7 "extremely satisfied"), and adherence (8-item Morisky Medication Adherence Scale®; scores categorized as low/medium vs high adherence). HRQOL was assessed using the Medical Outcomes Study 36-Item Short Form scores for physical component summary (PCS), mental component summary (MCS), and health utilities (SF-6D index, from 0 to 1 with higher scores indicating better health status). Depression was

examined using the Patient Health Questionnaire (PHQ)-9. Descriptive analyses were used for all outcomes.

Results: EU5 (N=5905) and US (N=3616) women were similar in age (EU5, mean 30.4 y vs US 30.3 y). More EU5 women were currently smoking (25% vs US 10%), and more US women were overweight or obese (43.2% vs EU5 30.4%). EU5 and US women were similar in report of ≥1 episode of ≥20 minutes of exercise in the past month (EU5 68.2% vs US 78.2%). Menstrual cycle pain in the past month was reported by 36.1% of EU5 women vs 47.7% of US women, heavy menstrual bleeding by 11.2% vs 14.3%, and dysmenorrhea by 23.7% vs 15.0%. Duration of OC use was somewhat longer in EU5 women (68.2±64.8 mo vs US 58.9±62.8 mo). Mean satisfaction was somewhat lower in EU5 women (5.5±1.5 vs US 5.8±1.2) but adherence was similar with 69.9% of EU5 women and 66.7% of US women reporting low to medium adherence. HRQOL was similar for PCS (EU5 54.4±7.3 vs US 54.4±7.0) and EU5 women vs US women had slightly lower MCS (44.2±10.5 vs 46.7±10.2) and SF-6D (0.7±0.1 vs 0.8±0.1). EU5 women reported slightly higher mean depression (5.4±5.3 vs US 4.8±5.3).

Conclusions: Menstrual symptoms, satisfaction with OC, adherence, physical well-being, and depression did not differ greatly among EU5 and US women using monthly-cycle OC. Compared with monthly-cycle OC, US women have previously demonstrated better outcomes with extended-cycle OC. Altogether, these findings suggest women in the EU5 may also show improved outcomes with extended-cycle OC.

Disclosure of Interest: I. Lete Consultant for: HRA Pharma, Merck Sharp & Dohme, Nordic, Teva, Speakers Bureau for: Merck Sharp & Dohme, Teva, L. Lee Employee of: Kantar Health, which received funding from Teva Pharmaceuticals to conduct this study, N. Flores Employee of: Kantar Health, which received funding from Teva Pharmaceuticals to conduct this study, R. Nappi Consultant for: Bayer Pharma, Eli Lilly, Gedeon Richter, HRA Pharma, Merck Sharp & Dohme, Novo Nordisk, Pfizer, Shionogi, Teva, M.-C. Micheletti Employee of: Teva Europe Women's Health, B. Tang Employee of: Teva

P138

COMPLEXITY OF MANAGING PATIENTS WITH HYPOGONADOTROPIC HYPOGONADISM IN ASSISTED REPRODUCTION

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Problem Statement: Hypogonadotropic hypogonadism (HH) is characterized by failure in the gonadal function due to deficient secretion of gonadotropins (GN) with consequences on reproductive function. Patients with HH requiring assisted reproductive techniques (ART) represent a therapeutic challenge for their characteristic response to ovarian stimulation (OS). The aim of the study was to evaluate the outcome of in-vitro fertilization (IVF) cycles in women with HH in terms of ovarian response and reproductive results.

Methods: We retrospectively assessed outcomes in 9 patients with HH undergoing IVF in the Reproduction Unit of Hospital 12 Octubre between 2008 and 2016 (prevalence <0.01%). As control patients, we selected 18 patients with male or tubal factor, matched by age and date of first IVF cycle.

Results: Both groups were comparable in age, BMI and sperm characteristics. The antral follicle count was higher in control group (6.56 ± 6.93; 13.94 ± 5.68, p=0.007) which reflects the difficulty in identifying small follicles, often <5 mm, in women with HH. The number and percentage of cycles with insufficient ovarian response (<3 oocytes or E2 <600 pg/ml) was higher in the HH group (0.56 ± 0.52 vs 0.11 ± 0.47, p=0.036; 29.63 ± 34.13 vs 3.70 ± 15.71, p=0.011). The number of cycles of OS with maximum FSH starting dose was higher in the HH group (1.67 ± 1.32; 1.44 ± 0.78, p=0.044), as well as the total FSH dose used during the OS (3673.33 ± 924.46; 2110.94 ± 743.98, p=<0.0001). The risk of ovarian hyperstimulation syndrome (OHSS) should be considered in patients with HH who often require high doses of GN: There was 1 case of severe OHSS and 1 cancelled cycle because of risk of OHSS. No differences were found in terms of the number of IVF



cycles/patient, cancelled cycles, number of total embryos, embryo quality or clinical pregnancy rate.

	HH Group 9	Control Group 18	p
N			
Age	31.78 ± 3.83	31.78 ± 3.31	NS
REM	8.40 ± 7.24	5.93 ± 14.26	0.63
BMI	20.73 ± 3.17	23.69 ± 3.50	0.054
Day 3F FSH	0.14 ± 0.08	6.23 ± 1.72	< 0.0001
Number of antral follicles	6.56 ± 6.93	13.94 ± 5.68	0.007
№ of fresh cycles/patient	2.33 ± 0.86	1.89 ± 0.90	0.23
№ of criotransfer cycles/patient	1.11 ± 1.61	1.11 ± 1.27	NS
№ of cancelled cycles/patient	0.89 ± 0.60	0.56 ± 0.85	0.25
% of cancelled cycles/patient	50.00 ± 40.82	25.46 ± 40.47	0.15
№ of cycles with >15 oocytes or E2> 3000 pg/ml	0.56 ± 0.72	0.50 ± 0.78	0.86
% of cycles with with >15 oocytes or E2> 3000 pg/ml	20.37 ± 36.05	25.93 ± 40.10	0.71
№ of cycles with <3 oocytes or E2< 600 pg/ml	0.56 ± 0.52	0.11 ± 0.47	0.036
% of cycles with <3 oocytes or E2< 600 pg/ml	29.63 ± 34.13	3.70 ± 15.71	0.011
№ of cycles with FSH initial dosage> 300 UI	1.67 ± 1.32	1.44 ± 0.78	0.044
% of cycles with FSH initial dosage > 300 UI	66.67 ± 44.09	35.65 ± 46.77	0.11
Total FSH dosage	3673.33 ± 924.46	2110.94 ± 743.98	< 0.0001
№ good quality embryos	1.89 ± 2.61	2.50 ± 2.97	0.60
№ total embryos	6.22 ± 4.91	6.00 ± 4.27	0.90
Pregnancy rate/cycle (%)	16.56 ± 20.31	35.17 ± 41.18	0.12
Multiple pregnancy (%)	22.22 ± 44.09	11.11 ± 32.33	0.46
Live birth rate (%)	12.89 ± 19.94	33.33 ± 42.00	0.09
Pregnancy rate/patient (%)	44.44 ± 52.70	50.00 ± 51.45	0.79

Conclusions: In our study, limited by the retrospective design and the number of patients, IVF outcomes in patients with HH were comparable to those of control patients of same age. However, management of this patients is complex, often presenting inadequate response of OS or hyper-response with risk of OHSS making ideal FSH dose selection for OS specially challenging.

Disclosure of Interest: None Declared

P139 ASSESSMENT OF THE ROLE OF GENETIC AND IMMUNOLOGICAL FACTORS IN COUPLES WITH REPRODUCTIVE PROBLEMS

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Problem Statement: Genetic and immunological factors are the main causes of early embryo death. The most common among genetic factors are chromosomal abnormalities. Chromosomal mutations occur mostly de novo in the gametes or at the early stages of the zygote development and mostly end in abortion. The frequency of miscarriages with chromosomal aberrations is especially high in the first trimester of pregnancy. Maternal age and heterozygous carriage of translocations in one parent are recognized factors that provoke the formation of unbalanced gametes and zygotes in human. Particularly, IVF procedure (method of hormonal stimulation, temperature control when cultivation of the embryo) leads to higher frequency of aneuploidy. The total part of chromosomal abnormalities following implantation that leads to miscarriages is about 45%.

It is known that a big number of cases of early recurrent miscarriage (RM) and unexplained infertility are associated with immunological disorders. Currently there is no universally accepted classification of immunological disorders when reproductive failure. Beer A. and J. Kwak (2000) divided immunological disorders in different reproductive problems (RM, infertility, IVF failures) into 5 categories: HLA system compatibility, antiphospholipid syndrome, the presence of antinuclear/antisperm antibodies and immunological disorders associated with embryo implantation (high level of NK-cells). Over the past 15 years, there is evidence of the important role of other immunological factors of current pregnancy loss: increase of cytotoxic T cells in the endometrium, the presence of antibodies to hCG/antibodies to progesterone, decrease the concentration of colony-stimulating factors. At the same time the experts on reproductive disorders emphasize the advisability of such a researches and the search for new markers of immune reproductive failures. According to Carp H. (2015) high concentration of NK-cells in blood and compatibility in HLA genes in couple are known to be a poor prognostic factor in the course of pregnancy in women with recurrent miscarriage.

Methods: We investigated 80 married couples with reproductive problems. All the patients were divided into 2 groups. The 1 group consists of 50 couples with the history of

RM at earlier stages of pregnancy. The 2 group contains 30 couples with primary infertility. For genetic and immunological analyses peripheral blood was taken. Cytogenetic and molecular tests were done in both men and women in all the couples. Immunological diagnostic was done only among women in all couples.

Results: Karyotyping was performed in 80 couples. In the 1 group in 80% of couples normal karyotype was revealed; in 14% of couples in the karyotype of one or both partners different chromosome polymorphism (9p, 16qh+, 21ps+, 22pst+, 15pst+, Yqs+, etc.) was diagnosed; balanced chromosomal rearrangements (translocations, inversions, extra chromosome) were identified in 6% of couples: 4.5% in women and 1.5% in men. In the 2 group with infertility normal karyotype was diagnosed in 84% of couples, polymorphism of chromosomes - in 5%, and balanced rearrangements - in 11% of couples.

Conclusions: Thus, among each of the second couple combination of 2 markers has been found and among each of the fifth couple combination of 3 markers was revealed. In this connection it is important to increase immunological diagnostic in couples with recurrent miscarriage.

Disclosure of Interest: None Declared

BOOK PUBLICATIONS

B01

DYSPLASIA OF CONJUNCTIVE TISSUE AS A RISK FACTOR OF PREECLAMPSIA

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Problem Statement: Early diagnosis and prevention of preeclampsia is required to identify risk factors. **Methods:** 100 pregnant of the 3rd term with arterial hypertension were examined. 50 patients with preeclampsia were separated out (group 2). The criteria of including were blood pressure (BP) more than 140/90 mm, proteinuria, edema and absence of arterial hypertension before the pregnancy. The rest 50 pregnant had preexisting hypertension (group 3). The criteria of including were the level of BP more than 140/90 mm, absence of proteinuria and hypertension before the pregnancy. The control group was formed with the help of 50 pregnant (group 1), with normal BP, absence of proteinuria and peripheral swelling. **Results:** According to the data obtained in the group of pregnant with preeclampsia was significantly more prevalent visceral pathology characteristic of dysplasia of connective tissue (DCT), namely the mitral valve prolapse (p1-2 0.001, p2-3 0.007), an abnormally situated chord in the left ventricle (p1-2 0.001, p2-3 0.001), aneurysm of interatrial septum (p1-2 0.005, p2-3 0.005), umbilical and inguinal hernias (p1-2 0.001, p2-3 0.001), deformation of the gallbladder (p1-2 0.009, p2-3 0.009), myopia (p1-2 0.038, p2-3 0.0254), nephroptosis (p1-2 0.005, p2-3 0.005). Given these somatic anamnesis, indicating a high frequency of distribution of signs of DCT was determined by the appearance of phenotypic features of the structure of the connective tissue in the studied groups. Analysis showed that in pregnant with high blood pressure significantly more often than in pregnant control group, met phenotypic features of DCT. In the group of pregnant with preeclampsia, the prevalence of most of the exterior signs of dysmorphia were significantly higher than in the group of pregnant with essential hypertension: dolichocephalia (p1-2 0.002, p2-3 0.001), and disruption of facial proportions (p1-2 0.001, p2-3 0.001), and early graying of hair (p1-2 0.001, p2-3 0.001), and eyebrow hair is laid in different directions (p1-2 0.001, p2-3 0.009), synophrys (p1-2 0.001, p2-3 0.001), and high palate (p1-2 0.025, p2-3 0.002), the central diastema (p1-2 0.033, p2-3 0.026), hypoplasia of the ear lobe (p1-2 0.026, p2-3 0.001), and increased elongation (p1-2 0.001, p2-3 0.001), and white striae on thighs (p1-2 0.001, p2-3 0.03), scoliosis (p1-2 0.001, p2-3 0.002), winged scapula (p1-2 0.04, p2-3 0.04), positive wrist sign (p1-2 0.001, p2-3 0.001), and positive sign of the thumb (p1-2 0.001, p2-3 0.001), and two-pronged feet (p1-2=0.003, p2-3=0.001), and "sandal gap" (p1-2 0.001, p2-3 0.02), second finger is longer than first (p1-2 0.001, p2-3 0.001). According to the study, healthy pregnant had a low number of phenotypic sings of dysmorphism: less than 3 symptoms were detected in 58% of more than 6 sings only in 6% of patients. Pregnant with essential hypertension had a greater degree of stigma: less than 3 characteristics were observed at 18%, and cases from 3 to 5 – at 46%, in an amount of from 6 to 8– 24%. It turned out that patients with preeclampsia have the highest number of stigmas. In this group were not found pregnant with a number of signs of dysmorphism of less than 5. The majority of pregnant with preeclampsia: 88% - took place over 9 signs of dysmorphism. **Conclusions:** The presence of connective tissue dysplasia can be regarded as an additional risk factor and a predictor of preeclampsia, which requires the inclusion of these patients in the risk group and further research

Disclosure of Interest: None Declared

B02

PERINATAL COMPLICATIONS OF ACUTE RESPIRATORY INFECTIONS OF PREGNANT

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Problem Statement: In recent years, the leading causes of perinatal complications are acute respiratory infections (ARI) during pregnancy. ORI is associated with the risk of pregnancy in terms of its complications is very high. Compared to the General population, of pregnant women in the third trimester, increased risk of pneumonia associated with the ORI, and complications from cardiovascular system and respiratory system. To study the incidence and timing of complications of pregnant women after undergoing ORI in different trimesters of gestation.

Methods: The study included 135 pregnant women with ORI: 1 subgroup – pregnant women with diseases of the upper respiratory tract, subgroup 2 – pregnant women with the disease pneumonia and 3 subgroups – pregnant women with diseases of the lower respiratory tract, 4 subgroups - patients with a pregnancy complicated by influenza virus.

Results: The most frequent complications of pregnant women, after suffering ORI was revealed hypertensive disorders of varying severity - 87,3%, gestational pyelonephritis - 10,4 %, the development of fetoplacental insufficiency - 62,9 %, intrauterine fetal hypoxia is 45.2%, impaired utero-placental circulation – 37,4%, syndrome limit the growth of the fetus - 26.7%, intrauterine infection of the fetus - 27.4%. The dependence between the period of gestation in which a pregnant woman suffered ORI and frequency of complications for the mother and the fetus in the first trimester - was 30.3%, in the II trimester - 25,6 %, in the III trimester - 20,5%. The highest frequency of complications for mother and fetus were observed in pregnant women ill with influenza A-89,7 %.

Conclusions: After the disease ORI of pregnant increases the frequency of complications of the mother and fetus. The incidence of complications in the mother and fetus is associated with a period of gestation in which a pregnant suffered ORI. The most common complications of the mother occurred in the third trimester, and the fetus – when ORI got pregnant in the first trimester.

Disclosure of Interest: None Declared

B03

SPONTANEOUS PREGNANCY RATES AFTER OFFICE HYSTEROSCOPY

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Problem Statement: In this paper, we evaluated the incidence of pathological findings in the uterine cavity in an infertile population and the rate of spontaneous pregnancies in the year following the examination. **Methods:** The hysteroscopic findings in 433 consecutive patients were analysed. All the hysteroscopic parameters were considered normal in 257 cases (59.4%), in 176 cases (40.6%), various pathological conditions were found. Patients were divided into two groups, according to the hysteroscopic findings. The implantation and the pregnancy rates were similar between the groups. Comparing the clinical outcome in patients who had hysteroscopy with no pathology and with pathology, we did not find any statistical difference. This study suggests that hysteroscopy as a routine infertility exam should be performed in all patients, since the elevated incidence of hysteroscopic pathological findings (59.4%); hysteroscopy also seems to be the best way to repair the uterine cavity, when pathological conditions are present. **Results:** The results clearly indicate that there is no any significant difference in terms of implantation and pregnancy rates between patients with or without intrauterine abnormalities, although there is a trend toward a better clinical outcome in women with normal hysteroscopic findings. Furthermore, hysteroscopy has shown to be an excellent tool for the evaluation and treatment of intrauterine abnormalities in patients with infertility. **Conclusions:** However, performing Office Hysteroscopy in patients with unexplained infertility is not of significant value in improving the pregnancy outcome

Disclosure of Interest: None Declared



B04**DIFFERENTIAL APPROACH TO THE DELIVERY IN THE CASES OF DIABETIC FETOPATHY**

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Problem Statement: Pregnancies complicated with Diabetes Mellitus (DM) type I, II and gestational DM are associated with high neonatal morbidity in cases of diabetic fetopathy (DF). Cesarean Section (CS) rates stay high in the cases of DM type I, II and gestational DM if there is DF or compliance is low. Differential approach to the delivery if DF has already formed is not worked out yet.

Methods: a retrospective cohort comparative study (from January 1st 2010 to June 30th 2016) included the 129 cases of DF, which were divided into 3 groups: 1st – 55/129 (42.6%) DM type I; 2nd – 22/129 (17.1%) DM type II; 3rd – 52/129 (40.3%) gestational DM. Including criteria: age ≤40, gestation age >32 weeks. We worked out the scale for antenatal assessment of the severity of DF (AnDiScale) (see table I). The choice of the method of the delivery was based at the evaluation of severity of DF. In the cases of >4 scores in AnDiScale (severe DF) we performed CS, if ≤3 scores in AnDiScale (mild DF) labor induction was performed at gestational age (GA) ≥37 weeks if cervix ripeness was ≥8 in Bishop Score. **Results:** mean GA at the delivery (37.9±3.4 weeks) and Apgar Scores (1 min 7.4±0.7; 5 min 8.3±0.5) did not differ in groups. CS was performed in 41/55 (74.6%) cases in the 1st; 14/22 (63.6%) in the 2nd; 30/52 (57.7%) in the 3rd group. The rates of preterm CS were as follows: 0/55 in the 1st; 4/22 (18.2%) in the 2nd; 12/52 (23.1%) in the 3rd group. There were 13/55 (23.6%) cases of vaginal delivery in the 1st; 7/22 (31.8%) in the 2nd; 22/52 (42.3%) in the 3rd group. Operative vaginal delivery was 1/55 (1.8%) in the 1st and 1/22 (6.6%) in the 2nd group. Abnormalities of labor activity were registered in 2/15 (13.3%) cases in the 1st, 2/7 (28.6%) in the 2nd, 3/22 (13.6%) in the 3rd group. Fetal distress was in 3/15 (20.0%) cases in the 1st, 3/7 (42.9%) in the 2nd, 1/22 (4.5%) in the 3rd group. Shoulder dystocia was in 1/22 (4.5%) case in the 3rd group. The rate of macrosomia was high – 27/55 (49.1%) cases in the 1st, 12/22 (54.5%) in the 2nd, 26/52 (50.0%) in the 3rd group. Hypoglycaemia was registered in all 36/129 (27.9%) cases (mean glycaemia was 2.6±0.6 and did not vary in groups). Neonatal intensive care unit was needed in 2/55 (3.6%) cases in the 1st, 3/22 (13.6%) in the 2nd, 3/52 (5.8%) in the 3rd group. Grade I of cerebral ischemia was registered in 9/55 (16.4%) cases in the 1st, 5/22 (22.7%) in the 2nd, 9/52 (17.3%) in the 3rd group.

The Scale of Antenatal Assessment of the Severity of Diabetic Fetopathy (AnDiScale)

Parameter / scores	0	1	2
Abdomen circumference >95 centile for GA	≤2 weeks	3-4 weeks	>4 weeks
Weight large for GA	<4000 g	4000-4999 g	≥5000 g
Thickness of scalp subcutaneous tissue	<3 mm	3-3.9 mm	≥4.0 mm
Vertical Liver size >95 centile for GA	-	+	
Splenomegaly >95 centile for GA	-	-	+
Thickness of left ventricle	<5.0 mm	5.0-5.9 mm	≥6.0 mm
Amniotic fluid index	-	≤250 mm	>250 mm
Placental thickness >95 centile for GA	-	+	
Decompensation of DM	-	-	+

Conclusions: Using AnDiScale to deteriorate the severity of DF we worked out differential approach to the delivery. This strategy allows applying labor induction successfully if there is mild DF. We managed to decrease CS rate by differential approach to the delivery in the cases of DF.

Disclosure of Interest: None Declared

B05**OVARIAN RESERVE IN WOMEN WITH POLYCYSTIC OVARY SYNDROME ACCORDING TO THE PHENOTYPE**

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Problem Statement: Polycystic ovary syndrome (PCOS) is the most common disorder among women of reproductive age that leads to hyperandrogenism and anovulatory infertility. PCOS has four syndrome phenotypes: primary (phenotype A) - anovulation syndrome, hyperandrogenism, echographic signs of polycystic ovaries (PCO); anovulatory (B) - anovulation and hyperandrogenism; ovulatory (C) - hyperandrogenism and echographic signs of PCO; nonandrogenic (D) - anovulation and echographic signs of PCO. The worldwide standard for evaluation of the functional ovarian reserve: determining the concentration of Anti-Mullerian hormone (AMH); counting the number of follicles and evaluation of antral follicles diameter on USI; determining ovarian volume by transvaginal ultrasound. The purpose was to assess ovarian reserve in women with PCOS according to the phenotype. **Methods:** Thirty outpatient women of Women's Health Care Unit, Kemerovo, Russia were involved. The average age of patients was 26,06 ± 4,39. Body Mass Index - 25-29.9 kg cm². The main cause for treatment was infertility (primary - in 8 women, secondary – in 22 ones). All patients underwent medical examination in accordance with the clinical protocol. Blood samples for hormone analysis were taken on the third day of the menstrual cycle. **Results:** The diagnosis of PCOS was made on the base of clinical protocol ("PCOS in the reproductive age (modern approaches to the diagnosis and treatment)". During the study the main phenotype was identified in 16 (53.3%) patients; ovulatory – in 8 (26.6%); nonandrogenic– in 4 (13.6%); anovulatory - in 2 (6.6%). Patients with primary phenotype were from 20 to 33 years (mean age - 26,65 ± 3,88 years). Ultrasound showed that eight women had ovulatory dysfunction of the oligomenorrhea type and polycystic ovary morphology. Ovarian volume ranged from 8.1 to 16.2 cm³. Total testosterone level was 2.19 ± 0.66 nmol/l, AMG - 7.01±1.51 ng/ml. Patients with ovulatory phenotype were from 22 to 32 years (24,36±4,97). There was no menstrual dysfunction. Ultrasound showed polycystic ovary morphology in 6 women. Ovarian volume ranged from 10.8 to 17.6 cm³, total testosterone level was 1,97±0,61 nmol/l, AMG - 4,80 ± 0,61 ng/ml. Patients with nonandrogenic phenotype were from 20 to 30 years (26,62 ± 4,66). The menstrual cycle of the oligomenorrhea type and PCO morphology was found in 4 women. The volume of each ovary ranged from 11.3 to 16 cm³. The total testosterone level was 1,57±0,46 nmol/l, AMG - 4,57±0,46 ng/ml. Patients with anovulatory phenotype were from 22 to 31 years (18,6 ± 2,19). Ultrasound showed the menstrual cycle of the oligomenorrhea type and PSO morphology in 2 women. The volume of each ovary was normal and ranged from 7.4 to 9.1 cm³. Total testosterone level was in the range of 1.24 to 2.93 nmol/l, AMG - 3.1 ng / ml. **Conclusions:** Thus, among the patients, 53.3 % had the main phenotype or classical form of PCOS, in other cases incomplete phenotypes were found with less frequently. All women had PCO morphology on ultrasound, except for women with anovulatory phenotype. The AMH level corresponded to accepted standards regardless of phenotype. However, there was a tendency to have it reduced in women with incomplete phenotypes, especially with an anovulatory one. The study of indicators of ovarian reserve in women with PCOS is a promising direction that made possible to determine the reproductive potential of each woman and had an impact on treatment pattern choice.

Disclosure of Interest: None Declared

B06**DROSPIRENONE-CONTAINING COC EFFECTS ON PMS SYMPTOMS IN MIDDLE AGED WOMEN**

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Problem Statement: To investigate the effect of combined oral contraceptive (COC) containing 30µg ethinyl estradiol and 3 mg drospirenon in 21/7 regimen on premenstrual syndrome (PMS) symptoms and overall satisfaction in healthy middle-aged women. **Methods:** In a prospective study involving healthy female volunteers (35-45 years of age) information about basic and after-treatment PMS symptoms, subjective perception of menstrual bleeding pattern and overall satisfaction with the therapy as well as changes in plasma biochemical parameters were documented. **Results:** After 6 months of therapy a significant

reduction in the following symptoms has been documented: depression ($P=0.045$), tiredness ($P=0.012$), bloating ($P<0.001$), dysmenorrhea ($P=0.020$), duration of menstrual flow ($P=0.005$) and menstrual flow heaviness ($P=0.011$), other symptoms did not show statistical differences after the treatment. The overall condition reported after 6 months of therapy was as follows: 11% of participants were feeling the same, 59% were feeling better and 30% were feeling much better. Erythrocyte count, hemoglobin, hematocrit, total cholesterol and platelet count were significantly different after therapy

Conclusions: Satisfactory results can be expected in well selected population with adequate consulting quality as drospirenon containing prescription COC achieved positive effects on PMS symptoms in healthy middle aged women suffering from PMS.

Disclosure of Interest: None Declared

B07

THE CRUCIAL ATTITUDE TO HORMONAL THERAPY PRESCRIPTION

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Problem Statement: The physician has a crucial role in creation of attitude to usage of hormonal therapy by gynecological patients. Often, patient's wishing to take these medicines depends on physician's point of view on hormonal therapy. The aim of this study was the down-to-earth appraisal of gynecologist's opinions connection with benefits/risks ratio of hormonal therapy. Methods: we have performed the survey among 144 obstetrics-gynecologists, who live and work in the territory of Krasnodar region of Russian Federation. We developed the questionnaire for anonymous use consisting of the following four question: Are you taking combined hormonal contraceptives (CHC) or menopausal hormonal therapy (MHT)? -yes/no; Have you ever taken the CHC/MHT? -yes/no; How long have you taken CHC/HRT? - months/years; would you recommend CHC/MHT to your relatives and friends? - yes/no. Results: The 37.5% of doctors are taking CHC/MHT, 62.5% — do not taking CHC/MHT. However, every second doctor (45 doctors) from those who don't take CHC/HRT nowadays has earlier taken these medications. The majority (68.8%) of respondents is taking or has taken hormone therapy previously. Among the respondents who takes hormone agents there is a great number using CHC/HRT for a long time (i.e. more than 15 years). Some respondents were starting to take hormone contraceptives (they were taking them for the first three months). We have calculated the intake of CHC/HRT depending on the number of months accounted for the share of women taking the abovementioned agents nowadays to objectify the index of CHC/HRT intake duration. It appeared that 54 doctors who are taking CHC/HRT there were 2695 months of therapy, i.e. for each woman taking these agents there were 49.9 months (more than 4 years' duration!). Per each from 45 obstetrics-gynaecologists who have ever taken CHC/MHT there were — 39.4 months — i.e. 3.5 years accordingly. Then we summarized the data from both groups (doctors taking hormone therapy and not taking such therapy) the number of months of taking CHC/HRT composed 4469, accounted for one user and it composed 45.1 months, that is practically 4 years use duration for one patient. From 54 respondents who are receiving CHC/HRT 52 would like to recommend such agents to their relatives and friends (96.3%). Two doctors from this cohort answered in the affirmative, but one doctor recommended only for HRT (2.9%) and one (2.9%) answered "yes" and "no" with questioning mark. Among 45 doctors taking hormone therapy previously, 42 gave positive answer (93.3%). Only in one questionnaire the reject was noted. The other results were received from the group of doctors who has never used CHC/HRT (45 doctors). 34 doctors expressed their wish to recommend the use of hormone therapy to their relatives and friends (75.6%). One doctor doubted - 2.2%. However, 10 doctors (22.2%) are totally against the usage of hormone therapy as contraceptive measures or replacement therapy. Conclusions: Our results have shown that the most of Russian Obstetrics-Gynaecologists have properly oriented in case of CHC/MHT, that connection with their personal experience and readiness to recommend it to their relatives and friends.

Disclosure of Interest: None Declared

B08

ASSESSMENT OF CYTOKINE STATUS IN WOMEN USING INJECTABLE CONTRACEPTION

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Problem Statement: The aim of the study was learning and evaluation of cytokine status in women using injectable contraception (IC). Methods: Determination of cytokine status carried out in 35 women of reproductive age (20-49 years) residing in Khorezm region. Studies were performed in dynamics: before usage the IC. 6 months after the start of IC usage and 18 months after beginning the use of IC. The control group consisted of 12 healthy women who have not used IC, in the last 6 months have not transferred inflammatory diseases of the genital tract. In all studied women were carried out common gynaecological, laboratory and ultrasound examination of genital organs, kidneys and liver. In addition, it was determined interleukin-4 (IL-4), interleukin-6 (IL-6), tumor necrosis factor- α (TNF- α) in cervical fluid using the method of IFA using appropriate test systems. Statistical processing was performed by the method of variation statistics using the software package for biomedical research. During the organization and conduct of the studies the principles of evidence-based medicine were used. It is known that TNF- α is synthesized by natural killer (NK cells), its synthesis increases capillary permeability, affects the vascular endothelium and contributes to the formation of intravascular thrombus. High concentrations of this cytokine enhances inflammation, promotes activation of apoptosis mechanisms [Khagramanova J. A., and coauthors, 2002]. Results: It was found that after the use of IC (baseline) the concentration of TNF- α was not significantly different from those of the control group (25,1 \pm 1,3 p μ g/ml vs 23,4 \pm 1,0 p μ g/ml), but 6 months after the start using the IC index increased to 27.8 \pm 1,4 p μ g/ml, which was significantly higher than in the control group, but without significant differences from the original data. 18 months after the start using the IC index increased to 34.6 \pm 1,4 p μ g/ml, which was quite more than the previous settings. The results of the study showed that in cervical fluid of women increases the concentration of TNF- α , which is a mediator of local inflammatory reaction and indicates the development of local inflammation. Anti-inflammatory cytokine IL-4 is synthesized by T-lymphocytes and controls the proliferation, differentiation and function of B-lymphocytes. This cytokine inhibits the cytotoxicity, associated with antibodies and synthesis of proinflammatory cytokines. Increased concentration of IL-4 is observed in various inflammatory diseases [Musakhodzhaeva D. A. and coauthors, 2014]. Outcome rate of IL-4 (7,2 \pm 0,5 p μ g/ml) was not significantly different from control data (6,7 \pm 0,5 p μ g/ml), but after 6 months (10,3 \pm 0,6 p μ g/ml) and especially after 18 months were noted a significant increase (12,9 \pm 0,5 p μ g/ml) of this parameter. The activity of the proinflammatory cytokine IL-6 is associated with a reduction of antiviral immunity and chronic inflammatory process. Studies found that the concentration of IL-6 significantly decreases in 6 months (16,2 \pm 0,6 p μ g/ml) and in 18 months (12,5 \pm 0,6 p μ g/ml) use of IC in relation to the original data (19,8 \pm 0,5 p μ g/ml) and rate control (20,6 \pm 0,5 p μ g/ml). Conclusions: Thus, were observed imbalance of the cytokines synthesis, associated with the duration of injectable contraceptives usage.

Disclosure of Interest: None Declared

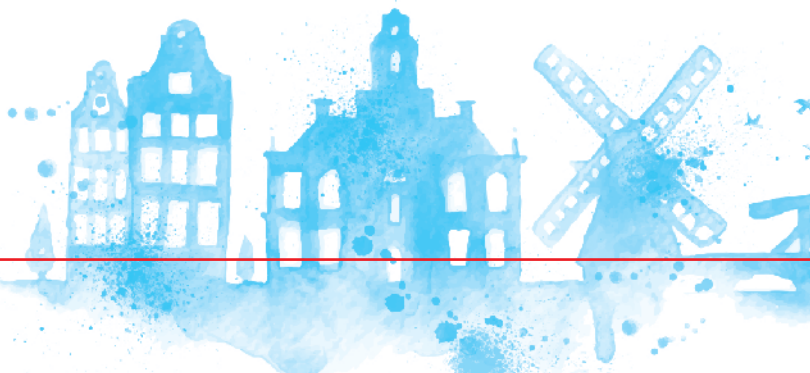
B09

COMPARATIVE CHARACTERISTICS OF SOME CLINIC-LABORATORY PARAMETERS IN WOMEN AT REPRODUCTIVE AGE USING INJECTABLE CONTRACEPTIVES.

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Problem Statement: One of the most common methods of preventing unwanted pregnancy is hormonal contraception (IC). According to WHO data more than



100 million women of fertile age use hormonal contraceptives. In Uzbekistan 151067 women use the HC that is 3,5% of the total number of users of contraception. Injectable drugs are used as a prolonged progestin. These are Depo medroksipregesteron acetate (DMPA) and norethindrone-enanat (NET-ENT). Administration of HC is carried out taking into account the medical admissibility criteria proposed by WHO. Objective: The aim of investigation was to evaluate the clinical features of the application of injectable contraceptives (IC) and the development of adverse effects in the comparative aspect in different age groups. Methods: The investigation was carried on in the Khorezm province Centre of reproductive health. There were carried out retrospective and prospective analyses of the peculiarities of application of IC among women aged 20 - 25 years (11 consumers), 26 - 35 years (55 consumers) and 36 years and older (31). There were examined in all 97 consumers of IC. There were carried out biographical particulars, analysis of outpatient cards, the general clinical laboratory study, ultrasound examination of the genitals and liver.

Results: From anamnesis it was revealed that 9% of the I group women suffered with chronic. pielonephritis, 5.4% in group II and 3.2% from the III group. In group III 32% of women suffered with chronic. choleystitis, 3.2% with chr.pielonephritis, 3.2% with chr.colitis, 3.2% with chr.gastritis and 6.4% women were diagnosed with asymptomatic uterine myoma. After receiving the IC, it was marked in women of groups II and III acyclic spotting (35 %), amenorrhea (28 %), acyclic bleeding (11 %), hypomenorrhea (26 %). In the process of laboratory and instrumental (ultrasound) methods of research there were marked symptoms of chronic pyelonephritis in II and III groups, chronic cholecystitis and infiltration of liver for 1.5 times more frequently in comparison with the group of young reproductive age. Conclusions: Among women of middle and late reproductive age somatic pathology occurs considerably more frequently than in the early reproductive age. On the background of IC application there are violations of the side effects of hormonal contraception, hypercoagulation of blood more expressed after 35 years, which dictates necessity of their correction in the prolonged process of using IC.

Disclosure of Interest: None Declared

B10

EPIDEMIOLOGY OF PREMATURE OVARIAN FAILURE: CROSS-SECTIONAL STUDY IN THE NON-SELECTIVE SAMPLE OF WOMEN OF REPRODUCTIVE AGE

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Problem Statement: Premature ovarian failure (POF) is a clinical syndrome of estrogen deficit, the main evidence of which is episodic or permanent amenorrhea in women under 40 years of age. It affects about 1% of women of reproductive age, and about 0.1% of women under 30 years of age. Women with untreated POF are at higher risk of metabolic disturbance, cardio-vascular diseases, osteoporosis, dementia, cognitive disorders, and mortality rate among them is 2 times higher. The objective of our study was to establish prevalence rate of clinically apparent POF and conditions that may be considered as potential POF in non-selective sample of women of reproductive age. Methods: The cross-sectional prospective study of non-selective sample of women of reproductive age involved 449 females up to 40 (38±3.6) years of age subjected to annual medical examination from March to August 2016; all of them signed the informed consent form. The examination included an interview, vital signs evaluation, pelvic ultrasound, PAP-smear test. Laboratory studies comprised TSH, prolactin and FSH levels tests by enzyme immunoassay. Results: Six women (1.3%) out of 449 suffered POF, their mean age made 37.83±2.4 years. Mean FSH level was 38.76±24.01 mIU/ml. Ultrasound examination found absence of follicular apparatus in one woman, less than three antral follicles – in four women, and absence of ovaries – in one woman. In the group of subjects suffering POF (n = 6) one patient (16%) had a history of cervical cancer and received radial therapy, and one woman (16%) underwent radical hysterectomy for malignant ovarian tumour without chemotherapy. Chief complaints were mild flushes and amenorrhea. In one patient (16%) we found ovarian

endometriosis, in three (50%) – primary sterility. Evaluation of somatic comorbidities established autoimmune thyroiditis (n = 1; 16%), metabolic syndrome (n = 2; 33%), post-traumatic diencephalic syndrome (n = 1, 16%). Two women (33%) smoked longer than 10 years. The group with potential POF comprising of 15 women out of total 449 (3.3%, mean age 36.33±3.5 years old) complained about irregular menstrual cycle, hypomenorrhea and reproductive problems. FSH concentration in blood serum in this group was within the normal limits (5.82±1.87 mIU/ml). According to transvaginal US findings, sharp decrease of ovarian reserve (<4 antral follicles in both ovaries) was revealed in 10 females. Two patients of this group (13%) had a history of laparoscopic surgery for primary tubal sterility, three women (20%) suffered secondary sterility of unexplained aetiology. Three women (20%) had obesity, and three women (20%) smoked longer than 10 years. None of the women with POF or potential POF has previously received MHT (menopausal hormonal therapy). Conclusions: In the non-selective sample of women of reproductive age, the prevalence of clinically apparent POF made 1.3%, and the prevalence of conditions considered as potential POF – 3.3%. Concurrently 100% of examined women have not previously received MHT.

Disclosure of Interest: None Declared

B11

EARLY PROGNOSTIC MARKERS FOR FUTURE REPRODUCTIVE LOSSES AT PCOS

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Problem Statement: Find early prognostic criteria of reproductive losses in women with PCOS. Methods: Cytokines investigated the method of indirect immunofluorescence with the monoclonal antibody laser flow cytometer FACS Calibur, USA). The rating levels IgM, IgG, IgA, sIgA held diliG. Manchini (1965). Research pelvic structures was performed on the 5th day of the menstrual cycle. The Device-Hitachi Aloka 5.5 MHz vaginal probe. Results: For 4 years of observation in the control group and the pregnancy ended Rozhen healthy children at 100% of women. With PCOS - pregnancy occurred in 79 (73.1%), abortion in the 1st trimester resulted in 23 (29.1%). Derivatives ended 56 genera (70.9%), in 29 (26.8%) -Pregnancy not come. In normal endometrial thickness, reduced vascularization, with no signs of chronic endometritis - of 42 patient's pregnancy and term delivery were observed in 100%. When a thin endometrium and chronic endometritis - an independent pregnancy has not occurred in 29 (85.3%) of 34 patients. When endometrial hyperplasia, combined with a reduction in the uterine vessels hemodynamics and chronic endometritis - Pregnancy was interrupted in 23 (71.8%) of 32 patients. Conclusions: 1. The first pregnancy with hyperandrogenism developed under adverse hormonal support, while the inflammatory process in the endometrium, caused cytokine imbalance and supports intestinal dyspepsia. 2. Methods of study non-invasive saliva sIgA can be used as a marker of the pro-inflammatory cytokine imbalance in the endometrium on Pregravidarnaja stage.

Disclosure of Interest: None Declared

B12

GESTATIONAL WEIGHT GAIN AND PERIPARTUM CARDIOMYOPATHY IN A TWIN PREGNANCY

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Problem Statement: Preeclamptic twin pregnancy with larger gestational weight gain (GWG) is suggested to have a higher risk of peripartum cardiomyopathy (PPCM). we present the details of this case emphasizing the need for attention to changes in maternal weight in the late stage of twin pregnancy complicated with hypertension. Methods: Case Presentation:A primiparous woman with twins and prepregnancy weight of 51.0 kg exhibited hypertension at gestational week (GW) 32–6/7 and GWG of 18.3 kg (6.0 kg and 2.9 kg during the last four weeks and one week of gestation, resp.) concomitant with generalized edema, gave birth at GW 34–4/7, developed proteinuria, cough, and dyspnea

postpartum, and was diagnosed with preeclampsia and PPCM showing left ventricular ejection fraction of 34% and plasma BNP level of 1530 pg/mL. Results: This was the only case of PPCM among 101 (12 with preeclampsia) and 3266 women with twin and singleton pregnancies, respectively. Thus, PPCM occurred significantly more often in women with preeclamptic twin pregnancies than in women with singleton pregnancies (8.3% [1/12] versus 0.0% [0/3266], $p = 0.0355$). This patient showed the greatest weight gain of 6.0 kg during the last four weeks of gestation and the greatest weight loss of 19.2 kg during one month postpartum among 90 women with twin deliveries at GW \geq 32. Conclusions: the present case emphasized the need for attention to changes in body weight of pregnant women, especially in preeclamptic twin pregnancies, with respect to the risk of PPCM. We show that significance and review some literatures.

Disclosure of Interest: None Declared

B13 THE CORRELATION OF ELEVATED SECOND TRIMESTER MATERNAL HEMOGLOBIN, BLOOD VISCOSITY AND FETAL WEIGHT AT BIRTH

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¹Kazan State Medical Academy, ²Health Department Kazan, Volga region Federal University, Казань, Russian Federation

Problem Statement: The rheological properties of the blood of pregnant women play an important role in ensuring the uteroplacental blood flow. There is an increase in circulating plasma volume and a decrease in hemoglobin concentration during pregnancy. This is particularly noticeable in the second trimester. This process is necessary to reduce the structural viscosity of the blood and to increase the blood flow in small blood vessels and in the intervillous space. Increased levels of hemoglobin and hematocrit in the second trimester will lead to low birth weight and other complications. The fewest complications occur when the level of hemoglobin in gestational age from 24 to 30 weeks is within 11-12 g/dL range. We have studied the relationship between hemoglobin and whole blood viscosity parameters in the second trimester and the body weight of a baby at its birth. Methods: This was a prospective study comparing two groups of women at 16-24 weeks of pregnancy who were under observation in November 2014 and June 2015. Group A consisted of 52 women who had hemoglobin above 12.6 g/dL. Whereas group B consisted of 50 pregnant women who had hemoglobin 10.5-12.6 g/dL. Whole blood viscosity measurements were made on a rotary micro viscometer MBP-1 at shear rate 25 and 250 Reciprocal seconds (s⁻¹). Results: The analysis of birth outcomes showed that the main difference between the groups was in the birth weight. The mean birth weight in group A was 3057 g (\pm 95% CI 2927,9 -3186,2 g), and 3488 g (\pm 95% CI 3362,1-3614,6 g, $t = 4,79$, $P = 0.0006$) in the comparison group. Furthermore, 44% of children in group A had intrauterine growth retardation (IUGR). Only 6% of infants from the group B had IUGR ($\chi^2 = 19,2$, $P=0,001$). Blood viscosity at this shear rate (25 s⁻¹) in group A was equal to 10.46 ± 2.55 centipoise (cP), which was 2 times higher than in the comparison group (5.21 ± 1.75 cP, $t = 4,80$, $p = 0.005$). Blood viscosity at the high shear rate (250 s⁻¹) marks the flow properties of the blood in the great vessels. The results that we have obtained indicate that the viscosity at a shear rate of 250 s⁻¹ is not different for both groups – group A and group B, and is respectively 1.85 ± 0.21 cP and $1.54 \pm 0,09$ cP. These results demonstrate the regularities inherent in non-Newtonian fluids. Conclusions: Women not showing sufficient physiological hemodilution in the second trimester of pregnancy are highly probable to give birth to a child with low birth weight and intrauterine growth retardation. Increase in viscosity of the blood vessels of small calibre and in uteroplacental link may be considered as one of the reasons that lead to it.

Disclosure of Interest: None Declared

B14 NON-INVASIVE PRENATAL TESTING FOR ANEUPLOIDIES IN POLICLINIC SUNCE - SARAJEVO

Aida Zujovic-Ajanovic

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Problem Statement: Prenatal testing is completely changed by the arrival of non-invasive prenatal tests / NiPt-Noninvasive Prenatal Test / .They are based on the analysis of fetal DNA, which enables accurate detection of fetal aneuploidy .NIPT can detect the most common trisomies of chromosomes, fetal sex, sexual chromosomal aneuploidy and chromosomal deletions This compares with the previous, also non-invasive screening tests has significantly higher accuracy. Methods: We tested 82 patients from May 2014. to March 2016. Samples were taken at the gestational age of 10 to 18 weeks of pregnancy. 80 women were pregnant with one child,2 of them carry twins. Conventional previous screening tests were not performed on all participants. 42 pregnant women had a first assessment of the risk in the first quarter, on the basis of age (35 and over) and nuchal translucency. 19 women have developed combined screening, based on age, fetal nuchal translucency and biochemistry in the 1st quarter (cut-off 1/300). In addition, some pregnant women (21) without high risk factors decided for NiPt on personal request. Before giving a blood sample / 10 mL of venous blood-which is used for testing the T21, T13, T18, and sexual aneuploidy / all patients are informed about NIPT testing and signed the consent of the same. Questionnaire is completed online about previous and current pregnancy. Samples were analyzed in the relevant diagnostic laboratories. Pregnant women with high risk results NiPt were sent to amniocentesis (invasive diagnostic procedures). Pregnant women with low-risk results had the usual antenatal care. Results: The youngest tested patient was 25, and the oldest was 51 years / donated egg /. The average age of age tested 30,6 years. Results of testing have been wait since 8-14 days. Test was repeated in 4 cases. Only in one case was detected high-risk for T21, confirmed by amniocentesis, and in 3 cases due fDNA with concentration less than 3%. Repeated analysis showed low risk. There were no false positive neither false negative results. Conclusions: NIPT is used as both first and second line screening test for aneuploidy. Unfortunately, this would depend on one's financial resources instead of medical indication, entirely. NIPT in routine clinical practice could significantly reduce the number of unnecessary diagnostic invasive procedures that could cause fetal loss.

Disclosure of Interest: None Declared

B15 THE LINK BETWEEN HUMAN PAPILLOMA VIRUS INFECTION WITH AN ABNORMAL PAP TEST RESULT

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Problem Statement: Every two minutes across the world one woman dies of cervical cancer.Cervical cancer is the second most common in women younger than 45.On year around 600.000 women are affected by cervical cancer, and about 270.000 die. While in BiH there are no accurate data on the number of women who have a problem with this disease, the number of patients is about 24 per 100.000 women. Aim is to show the presence of different HPV oncogenic types in patient's polyclinic "Sunce" Sarajevo which are in cytology diagnosed with cervical dysplasia of varying degrees and cervical cancer. Methods: Between January 2013.- December 2015. 867 patients,with varying degrees of dysplasia were treated for gynecological, colposcopy, citology and HPV testing.Patients with H-SIL and cervical cancer done hystologically processed. Results: Oncogenes HPV-HR were detected in 229 patients. HPV type 16 in 54, type 18 in 15, type 56 in 22, type 31 in 13, type 52- in 34, type 45 in 11 patients, type 35 in 14, type 68 in 9, type 33 in 24, type 39 in 17 patients, type 58 in 5, type 50 in 3 and type 51 in 8 patients. Conclusions: Based on the results obtained in this research in more than 58% L-SIL was detected HPV low risk. Also, the more than 86% of H-SIL and cervical cancer are present within oncogenes HPV. High HPV oncogenic potential causes of progressive changes so must insist on this type of screening as the basis of a national programs for the prevention of cervical cancer.

Disclosure of Interest: None Declared



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10:20-11:50 TREATING FIBROIDS

Supported by Gedeon Richter/Preglem

Capsule Fibroids are very common and often associated with infertility, the issue of when and how to treat remains controversial. Will new medical treatment change the current paradigm?

Chairperson **Bart C.J.M. Fauser**, The Netherlands

10:20-11:05 Debate: **Intramural fibroid larger than 3 cm should be operated before IVF**

10:20-10:35 Yes: **Jacques Donnez**, Belgium

10:35-10:50 No: **Yacoub Khalaf**, UK

10:50-11:05 Discussion

11:05-11:25 SPRMs mechanism of action on fibroids
Nathalie Chabbert-Buffet, France

11:25-11:50 Medical treatment of fibroids in infertile women
Antonio La Marca, Italy

11:50-12:10 Break



12:10-13:40 CELL-FREE DNA TESTING

Supported by Roche

- Capsule Cell-free DNA (cfDNA) testing is revolutionizing prenatal care by providing a simple, highly accurate, non-invasive screening method for aneuploidy. As demand for cfDNA testing is rising quickly, an increasing number of physicians are offering Non-invasive prenatal testing (NIPT) in their practice. However, questions around clinical implementation, patient counseling and the economic impact remain. What do you and your patients need to know about cfDNA testing? What are the economic implications of including cfDNA testing into clinical practice?
- Chairperson **Dick Oepkes**, The Netherlands
- 12:10-12:40 What patients need to know about NIPT
Dick Oepkes, The Netherlands
- 12:40-13:10 CfDNA testing technology and biology: The scientific basics for your practice
Maria del Mar Gil, Spain
- 13:10-13:40 Budget impact analysis of non-invasive first-trimester testing: Implementing primary trisomy (21, 18 and 13) screening in The Netherlands
Katalin Ersek, The Netherlands
- 13:40-14:30 Lunch break



12:10-13:40 METHODS FOR EMBRYO SELECTION: TOWARDS SET FOR ALL

Capsule Better selection methods might affect the rate of adoption of SET for IVF treatment however current methods to assess the preimplantation embryos like morphology, time lapse, PGS or markers are alone far from perfection. Can a combination of methods secure a better selection and implantation rate?

Chairpersons **Rene Frydman**, France
Jean Michel Foidart, France

12:10-12:30 Time-Lapse: Improved culture or just an expensive toy?
Thomas Ebner, Austria

12:30-12:55 What to do with embryos with reversed cleavage?
Diana Stein, Israel

12:55-13:20 Clinical aspects of Diafert
Jean Michel Foidart, France
Supported by Allergan

13:20-13:40 The pros and Cons of Embryo selection
Thorir Hardarson, Sweden



14:30-16:00 INNOVATIVE DIAGNOSTIC SOLUTIONS FOR WOMEN'S HEALTH

Supported by Cepheid

Chairperson **Gian Carlo Di Renzo**, Italy

14:30-15:00 Intrapartum GBS screening can save consistent inappropriate antibiotic prophylaxis
Gian Carlo Di Renzo, Italy

15:00-15:30 Can rapid molecular diagnostics tests for STIs revolutionize patient care?
Francoise Jaureguy, France

15:30-16:00 Opportunities and challenges in cervical cancer screening: A gynecologist perspective
Peter Hillemans, Germany

16:00-16:30 Coffee break



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References:

1. Strowitzki T, Kuczynski W, Mueller A, Bias P. Randomized, active controlled, comparative phase 3 efficacy and safety equivalence trial of Ovaleap® (recombinant human follicle-stimulating hormone) in infertile women using assisted reproduction technology (ART). *Reprod Biol Endocrinol.* 2016;14:1. 2. Ovaleap® Summary of product characteristics. Teva Pharmaceuticals Europe BV.

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Esco Medical is the IVF business unit of Esco Group, a global life science tools provider. Esco Medical delivers innovative solutions for fertility clinics and laboratories.

Esco Medical is the leading manufacturer and innovator of high-quality equipment such as long-term embryo incubators, ART workstations, anti-vibration table, time-lapse incubator and is continuously developing advanced technologies to meet the increasing demand of the IVF industry.

Most of our products are designed in Denmark and made in the EU. The primary focus of this division is to increase pregnancy success rates and patient satisfaction.

For more information, please visit www.medical.escoglobal.com



A moving birth experience

Now mothers-to-be can enjoy the freedom to stand, sit, walk around, shower or bathe during labor and delivery, while being continuously monitored. The Philips Avalon CL cableless fetal and maternal monitoring system eliminates restrictive cables. Mothers are free to move as they please which contributes to a pleasant birthing experience.

innovation  you

For more information, visit www.philips.com/avalon

PHILIPS

Ferring

www.ferring.com

Ferring is a biopharmaceutical company dedicated to the development of innovative treatments that make a real difference in people's lives all over the world. Active in the areas of reproductive Health, urology, gastroenterology, endocrinology and orthopaedics, we develop medicine on the body's own terms. We believe in the power of people and research – and go where ideas and research take us.

Finox Biotech

www.finoxbiotech.com

Finox Biotech was founded 2007 in Switzerland. Our vision is to provide high-quality, cost-effective and easy-to-use fertility products that can help patients achieve their goal of becoming parents.

The first medicine introduced by Finox Biotech is Bemfola® a recombinant-human Follicle-Stimulating Hormone (r-FSH) developed as a biosimilar to Gonal-f®. We intend to build a complete portfolio for reproductive medicine and to become the pharmaceutical partner of choice in fertility treatments. Gedeon Richter Plc. acquired Finox Holding in June 2016. The transaction allows Richter to establish its presence in the female fertility therapeutic area and further expand its Women's Healthcare portfolio.

Fotona

www.fotona.com

With 50 years of experience, Fotona is a world-leading medical laser manufacturer recognized for its innovative, award-winning laser systems for applications in gynecology, surgery, aesthetics & dermatology and dentistry.

Fotona's combined Er:YAG and Nd:YAG laser systems are proven to be less invasive and highly effective for clinical and aesthetic gynecology treatments. We are proud to be the first manufacturer to introduce SMOOTH® mode technology for a range of non-invasive laser vaginal treatments.

Our global distribution network spans across more than 60 countries, ensuring comprehensive support and service for Fotona laser users, including clinical training, workshops and practical hands-on demonstrations.

Gedeon Richter / PregLem S.A.

www.richter.hu and www.preglem.com

Gedeon Richter Plc. (Hungary), is an innovation-driven specialty pharmaceutical company. The company is engaged in pharmaceutical manufacturing, research & development, sales and marketing. Richter markets its products in over 100 countries worldwide, through its own marketing network. PregLem is a Swiss-based subsidiary of the Richter group and is a specialty biopharmaceutical company dedicated to the development and commercialisation of innovative drugs for women's reproductive medicine. The company was founded in Geneva in June 2006 and acquired by Richter in 2010. It is supported by a Scientific Advisory Board comprising of heads of reproductive medicine departments from major European academic institutions.

Gonadosan Distribution GmbH

www.fertilovit.com

Austrian-based Gonadosan Distribution GmbH is dedicated to the development and ongoing research of state-of-the-art nutraceuticals meeting the specific nutritional needs of men and women planning for pregnancy. The Fertilovit® range of supplements is based on the latest scientific data, tested in cooperation with big European ART centers and has been shown to support fertility treatment effectively. A variety of patent-protected preparations offer highly specific solutions for different male and female fertility patients, ranging from mature patients to patients with thyroid autoimmunity, endometriosis, PCOS, or idiopathic OAT.

Hologic

www.hologic.com

As a leader in molecular diagnostic solutions, Hologic thoughtfully blends engineering and science. Our innovative Aptima® assays and advanced automation platforms work together to give laboratories the power to quickly and accurately detect and monitor infectious diseases.

As part of our portfolio, Hologic offers flexible cervical health screening solutions that adapt to your clinical algorithms and deliver the quality, efficiency and sample safety you expect. Our single ThinPrep® vial delivers powerful liquid-based cytology and HPV test options enhanced by highly efficient and flexible workflow automation.

IBSA Institut Biochimique SA

www.ibsa-international.com

IBSA is an international pharmaceutical company with headquarters in Lugano, Switzerland.

IBSA has developed an entirely new purification process in order to obtain a full range of highly purified, human gonadotrophins (hFSH, hMG and hCG). This patented process ensures both a high level of purity and the full respect of the natural glycosylation of these molecules.

Recently IBSA has marketed a novel ingenious system to deliver progesterone subcutaneously in an aqueous solution.

IBSA has managed to guarantee the highest quality of its products over the years due to the advantages of having a complete in-house manufacturing process in company-owned plants and thanks to a global quality system.

The company's other franchises include osteoarthritis, pain-management, dermatology and thyroid diseases.



Don't just sense
a presence.
Sense a threat.

The next generation in HPV testing.

Run the CE Marked Aptima[®] HPV assay and the Aptima HPV genotype assay with full sample-to-result automation on the Panther[®] system.

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- Excellent sensitivity
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- Detects viral activity

*Compared to DNA-based HPV tests.



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KARL STORZ

www.karlstorz.com

KARL STORZ is a renowned manufacturer that is well established in all fields of endoscopy and can be considered as market leader in rigid endoscopy. The still family held company was founded in 1945 in Tuttlingen, Germany, and has grown to one with a worldwide presence and 7100 employees. KARL STORZ offers a range of both rigid and flexible endoscopes for a broad variety of applications. Today's product range also includes fully integrated concepts for the OR and servicing.

Kitazato

www.kitazato.co.jp

www.kitazato-dibimed.com

Kitazato is a Japanese Corporation involved in both the research and development of new devices in the IVF and ART fields and the manufacture of medical and biotechnological media for reproduction. Its wide product range includes Oocyte Retrieval Needles, Embryo Transfer Catheters, CRYOTOP®, Vitrification and Culture Media, Warm Plates and more.

Dibimed is Kitazato's exclusive distributor for Europe, Africa, India, and Latin America and it cooperates as well with some of the world's main IVF clinics organizing workshops where doctors and embryologists have the opportunity to learn everything about Kitazato products in order to improve their clinical results.

LG Life Sciences

www.lgls.com

As one of strongly sponsored entrepreneurs from LG group, LG Life Sciences is becoming the leader of pharmaceutical industry, especially along with highly qualified infertility treatment products (Follitrope™, IVF-M™, IVF-M HP™, IVF-C™) over 20 overseas countries by contributing to the better life quality of many infertile couples in globe.

MSD

www.msd.com

For 125 years, MSD (known as Merck & Co., Inc., in the US and Canada) has been a global health care leader working to help the world be well.

Through our prescription medicines, vaccines, biologic therapies, and animal health products, we work with customers and operate in more than 140 countries to deliver innovative health solutions. We also demonstrate our commitment to increasing access to health care through far-reaching policies, programs and partnerships.

One example is our MSD for Mothers initiative which focuses on improving maternal health during pregnancy and childbirth, using our business and scientific expertise around the world.

See more on www.msd.com & www.msdformothers.com or twitter @msdformothers

Mylan

www.mylanbetterhealth.com

Mylan is one of the world's leading global pharmaceutical companies. Our medicines include generic and brand name products in a variety of dosage forms and therapeutic categories. We have innovative research and development capabilities and are one of the world's largest active pharmaceutical ingredient manufacturers. We are committed to setting new standards in healthcare, working together to provide 7 billion people access to high-quality medicines, one person at a time.

Pantarhei Oncology

www.pantarheioncology.nl

Pantarhei Oncology (PRO) in the Netherlands is specialized in drug development in Immunotherapeutic & Endocrine Cancer. The business model is based on internal innovative drug concept discovery, patenting and project management and outsourcing of research & development. The current pipeline includes estetrol (E4) for breast and prostate cancer and zona pellucida (ZP) immunotherapy for pancreatic and prostate cancer. ZP for ovarian cancer has been sold to HRA Pharma (France) in 2014, whereas the other applications were retained by PRO. All rights on E4 have been sold to Mithra Pharmaceuticals (Belgium) in 2015, whereas PRO has licensed back all oncological applications.

Philips Mother & Child Care

<http://www.philips.co.uk/healthcare/solutions/mother-and-child-care>

Your passion, our commitment.

Philips helps you deliver the next generation of care for mother and child, right from the start and through every stage of the journey. During pregnancy, Philips ultrasound and fetal and maternal monitoring solutions help you pinpoint anomalies early, so you can act quickly. In the hospital, our breakthrough monitoring, positioning and soothing solutions, jaundice management, medical consumables, and clinical information systems help you make informed clinical decisions, work efficiently, and deliver personalized care when it matters most. When it's time to go home, Philips is there with nursing, feeding, soothing, and monitoring solutions to help mothers, babies, and their families get off to a healthy start.



Taking comfort from knowledge

Cancer. Just the thought of it can be scary. But when it comes to cervical cancer, the correct, early diagnosis of pre-cancerous cells in the cervix is an important step in identifying treatment options, well before serious conditions arise.

As respected leaders in cervical cancer research, we are at the forefront in creating solutions for the diagnosis of cervical cancer.

The inclusion of sophisticated molecular technologies in our cervical cancer testing solution, gives healthcare professionals unprecedented information as an aid to diagnosis and treatment planning.

From the knowledge that we have and the solutions that we provide, comes the comfort of knowing that the right decisions can be made.

REPROLIFE

www.cryotech-japan.jp

Established as the expertise in Vitrification of human oocytes and embryos developed in 2012 by Dr. Masashige Kuwayama, Cryotech Japan, has changed our name to REPROLIFE. We continuously aim to be the leader to support reproduction for all of our patients in bringing happiness and babies into their lives.

Roche Diagnostics International Ltd

www.cobas.com

Roche is a leader in research-focused healthcare with combined strengths in pharmaceuticals and diagnostics. Roche is the world's largest biotech company, with truly differentiated medicines in oncology, immunology, infectious diseases, ophthalmology and neuroscience. Roche is also the world leader in in vitro diagnostics and tissue-based cancer diagnostics, and a frontrunner in diabetes management.

In 2014, the Roche Group employed 88,500 people worldwide, invested 8.9 billion Swiss francs in R&D and posted sales of 47.5 billion Swiss francs.

Genentech, in the United States, is a wholly owned member of the Roche Group. Roche is the majority shareholder in Chugai Pharmaceutical, Japan.

Seegene

www.seegene.com

Seegene is the world's leading developer of multiplex molecular technologies and multiplex clinical molecular diagnostics (M-MDx). Seegene's core enabling technologies -- ACP™, DPO™, READ, TOCE™ and MuDTM -- are the foundation for multiplex molecular diagnostics and companion diagnostic tests that can simultaneously detect, differentiate, detect minority species and quantitate multiple targets with high sensitivity, specificity and reproducibility. Seegene's products detect multi-pathogens with great reliability and throughput, providing the most economical basis for saving time, labor and cost. Seegene's mission is to maintain leadership in molecular diagnostics for infectious diseases, genetics, pharmacogenetics, and oncology using innovative proprietary technologies.

Teva Pharmaceutical Industries Ltd.

www.tevapharm.com

Teva Pharmaceutical Industries Ltd. (NYSE and TASE: TEVA) is a leading global pharmaceutical company that delivers high-quality, patient-centric healthcare solutions to millions of patients every day. Teva is the world's largest generic medicines producer, leveraging its portfolio of more than 1,000 molecules to produce a wide range of generic products. Teva has a world-leading position in innovative treatments for disorders of the central nervous system, including pain, as well as a strong portfolio of respiratory products. Teva integrates its generics and specialty capabilities in its global research and development division to create new ways of addressing unmet patient needs by combining drug development capabilities with devices, services and technologies.

Thermo Fisher Scientific

www.thermoscientific.com

B-R-A-H-M-S GmbH, part of Thermo Fisher Scientific, investigates, develops and manufactures novel diagnostic testing procedures to improve early diagnosis and treatment of life threatening diseases. With high-quality immunodiagnostic tests for prenatal screening, cardiovascular, pulmonary, and cancer disorders as well as particularly for sepsis, the company contributes to the creation of a healthier future – to the greatest advantage for medical professionals and patients.

B-R-A-H-M-S GmbH is leading in specific market places and therapeutic areas. The aim of its basic research is to identify new biomarkers, with support by international co-operations and reputable research institution.

Wisepress Medical Bookshop

www.wisepress.com

Wisepress.com, Europe's leading conference bookseller, has a range of books and journals relevant to the themes of the meeting. In addition to attending 200 conferences per year, Wisepress has a comprehensive medical and scientific bookshop online with great offers. Follow us on Twitter for the latest news @WisepressBooks.



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