

ABSTRACTS
FOR THE 47TH INTERNATIONAL CONGRESS ON
PATHOPHYSIOLOGY OF PREGNANCY

ორსულთა პათოფიზიოლოგია
47-ე საერთაშორისო კონგრესის მასალები

ჟურნალის რედაქცია მიესალება კონგრესის მონაწილეებს და უსურვებს მათ წარმატებებს

Journal “Cardiology and Internal Medicine XXI” hosts 47th International Congress on Pathophysiology of Pregnancy. Editorial Board of the Journal welcomes each participant of the congress and wishes them successful participation.

Date: November 19-21, 2015

Venue: *Radisson Blu Iveria Hotel, Tbilisi, Georgia*

თარიღი: 2015 წლის 19-21 ნოემბერი

ჩატარების ადგილი: სასტუმრო *რადისონ ბლუ ივერია*, თბილისი, საქართველო

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თეზისები განთავსდება კარდიომიოპათიის საზოგადოების ვებ გვერდზე
WWW.GISC.GE და ჟურნალ „კარდიოლოგია და შინაგანი მედიცინა XXI“-ის
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T. BOCHORISHVILI, K. KAPANADZE, I.ISAKADZE

Date: November 19-21, 2015

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ჩატარების ადგილი: სასტუმრო რადისონ ბლუ ივერია, თბილისი, საქართველო



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Welcome Message

Dear Colleagues and Friends,

We welcome you to the 47TH INTERNATIONAL CONGRESS ON PATHOPHYSIOLOGY OF PREGNANCY.

Being founded in 1969 by Professor Ernst Theodor Rippmann (Switzerland), the International Society for Study of the Pathophysiology of Pregnancy (**World Organization Gestosis**) has been held annually as the International (World) Congress on Pathophysiology of Pregnancy

As in previous years, 47th World Congress on Pathophysiology of Pregnancy will be conducted to get acquainted with new challenges in Maternal - Fetal Health, including early screening and prediction of preeclampsia, HELLP syndrome, pathophysiology of preeclampsia / eclampsia, treatment and management of preeclampsia / eclampsia, first trimester screening, MRI in fetal medicine and other topics.

The Congress will have some star-studded speakers delivering the keynote lectures in addition to sessions.

We will be able not only learn new ideas and information in the field of Maternal - Fetal Health, but also interact with scientific presenters and colleagues.

The world-famous and the most extensive Ian Donald Inter-University School of Medical Ultrasound congress workshop is designed to address the needs of clinicians with interest in diagnostic ultrasound, seeking additional knowledge and practice in recent obstetric and gynecologic sonographic developments. Advanced 3D/4D ultrasound will be presented for the participants.

We hope this meeting will be some more step to opportunity for doctors and specialists to be involved in Maternal - Fetal Medicine successful scientific research.

Cultural and social activities as well as traditional Georgian hospitality will provide plenty of opportunities to meet old friends and make the new ones, also will get unforgettable memories of discovering Georgia, including the days of your staying in Tbilisi, capital of Georgia, which represents a unique synthesis of modern and ancient history.

With best wishes and warmest regards,



Alexander Papitashvili
Congress President



Tengiz Asatiani
Chairman of Organizing
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Organization

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Sabaratnam Arulkumaran- *President FIGO , Professor Emeritus of Obstetrics & Gynaecology, St. George's University of London; United Kingdom*

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Asim Kurjak- *Professor, Director of Interuniversity Ian Donald School on Ultrasound in OB&GYN, Member of European and World Academy of Science and Art; Croatia*

Alex Vidaeff - *MD, MPH Professor and Program Director Maternal-Fetal Medicine Fellowship Department of Obstetrics and Gynecology, Baylor College of Medicine; USA*

Aris Antsaklis – *Professor, Past President of World Association of Perinatal Medicine; Greece*

Giovanni Monni – *Director of Ian Donald School for Europe, Vice-President WAPM (World Association of Perinatal Medicine)*

Head of Ob/Gyn Department; Cagliari; Italy

Milan Stanojevic - *President of WAPM, Member of European and World Academy of Science and Art ,Head of the Department of Neonatology at the Department of Obstetrics and Gynecology Medical School University of Zagreb; Croatia*

Hein Odendaal - *Professor of Obstetrics and Gynaecology Faculty of Medicine and Health Science Stellenbosch University; South Africa*

Panos Antsaklis - *MD, PhD , Senior Lecturer University of Athens, Greece, Executive Director Ian Donald School; Greece*

Girija Wagh - *MD, FICOG, Dip Endoscopy Professor and Head, Obstetrics and Gynecology Bharati; India*

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გელა ქობულაძე

ჯონი ჭავჭავანიძე

გიორგი ნეზიერიძე

Venue

Radisson Blu Iveria Hotel, Tbilisi, Georgia

Whether you've arrived for business or pleasure, you'll leave with a sense of the beauty that surrounds the city's central hotel, Radisson Blu Iveria, Tbilisi.

Wander the quaint, winding streets of Tbilisi's Old Town, see the whole city from the top of the imposing Narikala Fortress or find one of the many photo-perfect spots waiting for you throughout Tbilisi.

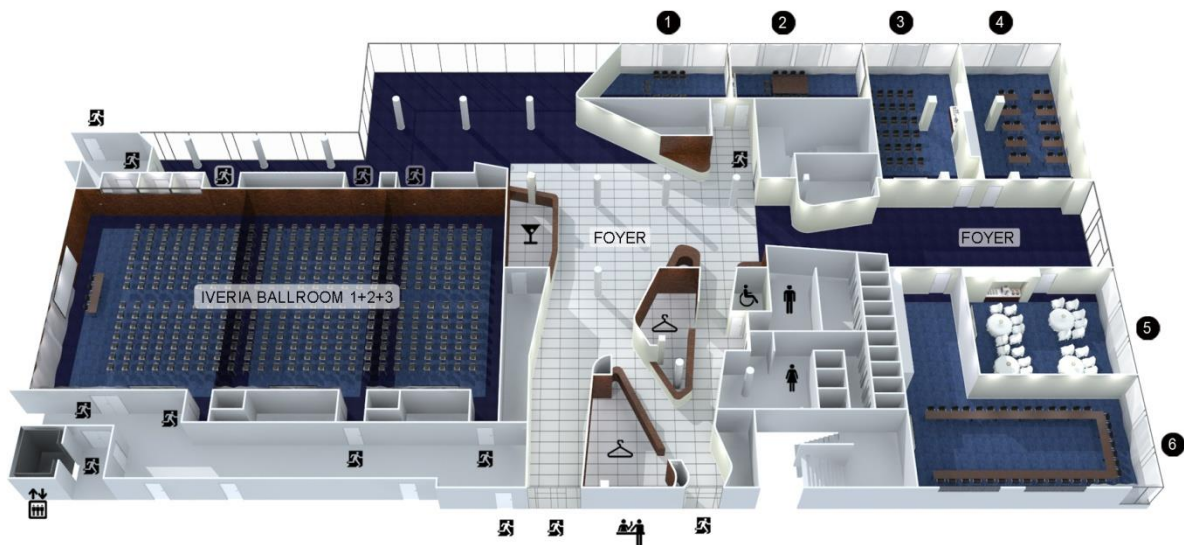
Get anywhere you want to go in Tbilisi from the metro station, which is just 200 meters from the hotel.

NEARBY TRANSPORTATION

- Taxi and limousine service - contact the hotel directly
- Metro station - 300 m
- Tbilisi Railway Station - 5 km
- Tbilisi International Airport - 19 km
-

Hotel Radisson Blu Iveria

Floor Map of the Congress Venue



Meeting Information

Dates and Venue

Dates : November 19 (Thu) to 21(Sat), 2015

Venue: Radisson Blu Iveria Hotel

Address:

Rose Revolution Square,0108,Tbilisi,Georgia

phone: +995 322 402 200 faximile: +995 322 402 201

info.tbilisi@radissonblu.com

web-site: www.radissonblu.com/hotel-tbilisi

Registration Fee

Registration Fees	Until 14th September	From 15th September to 14th October	From 15st October and onsite
Full registration	300€	350€	380€
Residents, Nurses, Students	150€	180€	200€
Low, Lower-middle, Upper-middle income economies countries	200€	220€	250€
Accompanying persons (close relatives)	150€	150€	150€

For on-site registration please note, we accept Georgian Cash in Lari.

Registration desk is open as follows :

November 19 (Thu)- 15.00 ~ 19.30

November 20 (Fri)- 08.00~19.30

November 21(Sat) - 09.00~19.00

Gala Dinner - Banquet

Offered by Congress partner agency **Captain plus**



Congress partner agency **Captain plus**

<http://captain.ge/quest.php>

Address: 10 Chavchavadze Ave.

Address: 2 Mari Brose Street

Tel: +995 32 2250180

Tel: +995 32 2424040

e-mail: captain@captain.ge

e-mail: incoming@captain.ge

Facebook: <http://www.facebook.com/capplus>

Venue: Restaurant: *In the Shadow of Metekhi*

Address: 29 Ketevan Tsamebuli Ave. , Tbilisi

Pick up: In front of **Hotel Radisson Blu Iveria**- 19:45

Pick up: In front of Restaurant *In the Shadow of Metekhi* - 24:00

Date and Time: November 20, 2015 20.00 ~ 24.00

Cost: 96 \$ per person; payment required in Georgian Lari in case it's done on spot, or by Card

Tickets available at Congress registration desk in November 20, 2015 full day.

* Price includes Transfer from/to Hotel Radisson Blu Iveria

Dress code : Informal (Formal Dinner will be served)

Please note that a prior application is necessary.

Get-together cocktail

Venue : Exhibition Hall , **Hotel Radisson Blu Iveria**

Date and Time: November 19 (Thu)- 21.00 ~ 23.00

After the Opening ceremony on November, 19 (free)

Dress code : Informal (A buffet style dinner will be served)

Information for Participants

Visa may be necessary for citizens of certain countries to enter Georgia.

You are requested to refer to your travel agency or local Embassy.

Participants are responsible for making their own **travel arrangements**.

In case there are any question regarding Congress, please contact the Congress Technical Secretariat *at Congress registration desk* (jokhadzethea@gmail.com)

Correspondence

Congress Technical Secretariat:

Address: 48,Rustaveli Ave, Tbilisi, 0103, Georgia

phone :+995 593 205 731; +995 32 299 56 65

telefax: +995 32 2223669

jokhadzethea@gmail.com; tea@mtvi.ge

eurocongressplus@gmail.com

Information for presenters of Oral Presentations

The official language is English

The **Scientific Program Committee** will allot each speaker of Session oral presentation for duration noted inside.

Speakers are requested to keep strictly the **allotted time**.

All speakers are requested to bring their presentation data on USB Flash driver, CD/ DVD disk or their own Computer to PS Preview and to **upload presentation data** at least 40 min before their Session.

*Notes: If you are using your own PC you need your own **power adaptor**.*

*Presenter Tool **displaying your data** on PC monitor at the podium is not available*

You need your own PC in case you create your presentation using a Macintosh/ moving images

*In the **file name** please include author's /presenter's name and presentation number*

(session's date,number and presenter's name).

Application format accepted to sessions is Windows Power Point 2003,2007,2010,2013

Recommended fonts are Arial, Century, Century Gothic, Times New Roman

PC Preview Desk is located in front of Conference Hall and is open:

November 19 (Thu) - 15.00 ~ 19.30

November 20 (Fri) - 08.30 ~ 18.00

November 21(Sat) - 08.30 ~ 15.30

Information for Chairpersons on Sessions

All chairpersons are requested to take the indicated special places 20 min before starting of Session they take part as chairpersons.

Official website of the Congress:

<http://www.prenatalmedicine.ge>

Language of Congress : **english**

(Simultaneous translation from *English* to *Georgian* will be provided)

General Information about Georgia

Passport & Visa

A Visa is required for citizens of countries that do not have visa exemption agreement with Georgia.

The Georgian Ministry of Foreign Affairs establishes some requirements for entry into Georgia for a stay not exceeding ninety days in any six month period.

These requirements can be summarized as:

- Possess a valid travel document allowing him or her to cross borders.
- Possess a Visa when required.
- Show documents justifying the purpose and conditions of the planned stay and have sufficient means to support themselves, both during the period of their planned stay and for their return to their country of origin or passage to a third State where their admittance is guaranteed, or they must be in conditions such that they can legally obtain such means.

Further information regarding these requirements and as well as the Visa issues can be found through: <https://www.geoconsul.gov.ge/en/check/visa> and/or directly through the Georgian Embassies or Consulates whose addresses can be found through: <http://embassy.goabroad.com/embassies-of/georgia>

Insurance

Participants are encouraged to purchase travel insurance before leaving home countries. The organizer of Congress accepts no responsibility for accidents might occur.

Climate

The temperature in Tbilisi during period of the Congress ranges generally between 8 °C and 12°C.

Currency Exchange

Only Georgian Lari is acceptable at regular restaurants and stores. It is possible to buy Lari in a Bank Offices and in a lot of Currency Exchange private Offices located in different place of town.

Credit Cards & Checks

The must of widely used Credit Cards is accepted. Traveler's checks is not popular.

Tipping

Tip are not necessary anywhere, even in hotels and restaurants in Tbilisi.

Electricity

Electric current is uniformly 220 V, 50 cycles(Hz) in Georgia

Shopping

Sales outlets are generally open 7 days weekly from 10.00 to 19.00

Overseas Invited Speakers

Prof. Sir Sabaratnam Arulkumaran ,Past President FIGO, UK

Prof Sanjay Gupte , General Secretary WOG, India

Prof. Asim Kurjak, Director of Interuniversity Ian Donald School on Ultrasound in OB&GYN, Member of European and World Academy of Science and Art; Croatia

Prof. Aris Antsaklis , Past President of World Association of Perinatal Medicine; Greece

Prof. Milan Stanojevic , President of WAPM, Member of European and World Academy of Science and Art Head of the Department of Neonatology at the Department of Obstetrics and Gynecology Medical School University of Zagreb; Croatia

Prof. Giovanni Monni , Director of Ian Donald School for Europe, Head of Ob/Gyn Department, Prenatal and Preimplantation Genetic Diagnosis, Fetal Therapy, Microcitemico Hospital, Cagliari; Vice-President WAPM (World Association of Perinatal Medicine); Italy

Prof. Alex Vidaeff ,MD, MPH, Program Director Maternal-Fetal Medicine Fellowship Department of Obstetrics and Gynecology, Baylor College of Medicine, Texas Children's Hospital, Pavilion for Women; USA

Prof. Wolfgang Holzgreve ,Professor of Obstetrics and Gynaecology, Medical Director and CEO, University Medical Center Bonn, Germany; Society of Perinatal Medicine of Germany President; International Society The Fetus as a Patient Vice-President; Germany

Prof. Ivica Zalud, Professor and Chair, Kosasa Endowed Chair, Department of OB/GYN and Women's Health John A Burns School of Medicine University of Hawaii; USA

Prof. Girija Wagh, MD, FICOG, Dip Endoscopy Professor and Head ,Obstetrics and Gynecology Bharati Vidyapeeth University Medical College; Pune, India

Prof. Hein Odendaal , Emeritus Professor and part-time Researcher Department of Obstetrics and Gynaecology Faculty of Medicine and Health Science Stellenbosch University; South Africa

Prof. Alexander Makatsarya, Professor of Sechenov First Moscow State Medical University, Head of the Dept. of Obstetrics and Gynecology Medical Prophylaxis Faculty; Moscow, Russia

Prof. Apostolos Athanasiadis ,Professor of Obstetrics - Gynecology and Maternal-Fetal Medicine, Medical School of the Aristotle University of Thessaloniki , Visiting Professor at Cornell University, USA, President of the South East European Society of Perinatal Medicine; Thessaloniki, Greece

Prof. Anton Mikhailov, Director and Chief Doctor, Mechnikov NW State Medical University, EAPM Treasurer; St. Petersburg, Russia

Prof. Subhash Nargolkar, Dept. Obstetrics&Gynecology, Pearl Women's Clinic; Past Vice-President, FOGSI; Past President, Pune Ob-Gyn Society (POGS); Pune, India

Prof. Gökhan Göynüner, Director of Perinatology Department, Istanbul Medeniyet University Goztepe Educational and Research Hospital, President of Ultrasound Obstetrics and Gynecology Society of Turkey; Istanbul, Turkey

Prof. Panagiotis Antsaklis, Professor, Senior Lecturer University of Athens, Greece, Executive Director Ian Donald School; Athens, Greece

Prof. Gregory Duncombe, Exosome Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, the University of Queensland; Australia

Prof. Elif Gül Yapar Eyi, Professor in Obstetrics & Gynaecology, Subspecialist in Perinatology, Zekai Tahir Burak Women's Health Education & Research Hospital; Ankara, Turkey

Prof. Tatyana Znamenska, Professor, Doctor of Medical Sciences, President of Association of Neonatology of Ukraine, Deputy Director for Perinatal Medicine and Chair of the Department of Neonatology SI «Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine»; Kiev, Ukraine

Prof. Elene Grechanina, General Director of Kharkov Specialised Medical-Genetic Centre, Profecor of Department of Medical Genetics Kharkiv National Medical University (KhNMU), Director of Ukrainian Institute of Clinical Genetics of (KhNMU); Kharkov, Ukraine

Prof. Georgi G. Okoev, Head of the Department of Obstetrics and Gynecology of the faculty of postgraduate and continuing education of the Medical University after M. Geraci, Head of the Research Center of Maternal and Child Health Care; Yerevan, Armenia

Prof. Mykola Aryayev, Head of Dept. of Pediatrics, Odessa National Medical University; Odessa, Ukraine

Prof. Victoria Bitsadze, Professor of Sechenov First Moscow State Medical University, Department of Obstetrics and Gynecology Medical Prophylaxis Faculty; Moscow, Russia

Prof. Valery Pohilko, Doctor of Medical Sciences, Professor, Chief of the Department of Pediatrics and Neonatology, Ukrainian Medical Stomatological Academy; Poltava, Ukraine

Prof. Svitlana Zhuk, Professor, Head of the Department of Obstetrics, Gynecology and Fetal Medicine of PL Shupyk National Medical Academy of Postgraduate Education, Honored Doctor of Ukraine; Kiev, Ukraine

Prof. Irina Vovk, Professor, Head of Family Planning SI Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine, Honored Worker of Science and Technology; Kiev, Ukraine

Prof. Iryna Zhabchenko, SI Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine; Kiev, Ukraine

Prof. Olga Yablon, Professor, Head of Department of Pediatrics №1 Vinnitsya National Pirogov Medical University; Vinnitsya, Ukraine

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Iryna Kondratova, Director of the Regional Perinatal Center; Kharkiv, Ukraine

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Eugenia Zbrozhik, psychologist, scientist, Dept. of Neonatology, SI “Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine”; Kiev, Ukraine

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Svetlana Beletskaya , Head of the Department of Oncology Genetic Counseling of Kharkov Specialised Mediko-Genetic Centre, Assistant of the Department of Medical Genetics KhNMU; Kharkov, Ukraine

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Sergey Laponog, Head of Dept. of Neonatology Zhitomir Regional Perinatal Center; Zhitomir, Ukraine

Yuriy Melnik , Head, Department of Prenatal Diagnostics Kiev City Center Reproductive and Perinatal Medicine; Kiev, Ukraine

საზღვარგარეთიდან მოწვეული მომხსენებლები

პროფესორი Sir საბარატნამ არულკუმარანი, ლონდონის უნივერსიტეტის სენტ-ჯორჯის ჰოსპიტალის ემერიტუს პროფესორი მეანობა-გინეკოლოგიაში; მეან-გიონეკოლოგთა მსოფლიო ფედერაციის „ფიგო-FIGO“ პრეზიდენტი 2011-2015 წწ, დიდი ბრიტანეთი

პროფესორი სანჯაი გუპტე, გესტოზების მსოფლიო ორგანიზაციის გენერალური მდივანი; გუპტე ჰოსპიტალისა და რეპროდუქციის სამეცნიერო ცენტრის დირექტორი; ნაციონალური ეკლამპსიის რეგისტრის ნაციონალური კოორდინატორი; ბჯ მედიცინის კოლეჯის ექს ასოცირებული პროფესორი, ინდოეთი

პროფესორი ასიმ კურიაკ, უნივერსიტეტთაშორისო იან დონალდის სახ.მეანობა-გინეკოლოგიაში ულტრასონოგრაფიის საერთაშორისო სკოლის დირექტორი; ხორვატია

პროფესორი არის ანტსაკლისი, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი 2012-2015 წწ; საბერძნეთი

პროფესორი მილან სტანოჯევიჩ, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი, ნეონატოლოგიის დეპარტამენტის უფროსი, ზაგრების უნივერსიტეტის სამედიცინო სკოლის მეანობა- გინეკოლოგიის დეპარტამენტი; ხორვატია.

პროფესორი ჯოვანი მონნი, პერინატალური მედიცინის მსოფლიო ასოციაციის ვიცე - პრეზიდენტი, კაგლიარის პრენატალური და პრემპლანტაციური გენეტიკური დიაგნოსტიკის, ნაყოფის თერაპიის, მიკროციტემიკო ჰოსპიტალის მეანობა-გინეკოლოგიის დეპარტამენტის უფროსი; იტალია

პროფესორი ალექს ვიდაევ, პროფესორი, ტეხასის ბავშვთა ჰოსპიტალის სამედიცინო ბაილორ კოლეჯის მეანობა- გინეკოლოგიის დეპარტამენტის და ქალთა განყოფილების დედა-ნაყოფის პროგრამების დირექტორი, საზოგადოებრივი ჯანდაცვის მაგისტრი, აშშ.

პროფესორი ვოლფგანგ ჰოლცგრევე, ნაყოფი, როგორც პაციენტი საერთაშორისო საზოგადოების ვიცე-პრეზიდენტი, გერმანიის პერინატალური მედიცინის საზოგადოების პრეზიდენტი, ბონის უნივერსიტეტის სამედიცინო დირექტორი და მეანობა-გინეკოლოგიის სამედიცინო ცენტრის პროფესორი; გერმანია

პროფესორი ივიკა ზალუდ , ჰავაის უნივერსიტეტის ჯონ ბიორნსის სამედიცინო სკოლის უფროსი, კოსავა ენდოქელის მეანობა-გინეკოლოგიის და ქალთა ჯანმრთელობის დეპარტამენტის პროფესორი; აშშ

პროფესორი გირჯია ვაგჰ , ბჰარატი ვიდიპეთ უნივერსიტეტის სამედიცინო კოლეჯის მეანობა -გინეკოლოგიის დეპარტამენტის უფროსი, ენდოსკოპიის დეპარტამენტის უფროსი და პროფესორი; ინდოეთი

პროფესორი ჰაინ ოდენდაალ , სტელენბომ უნივერსიტეტის მედიცინის და სამედიცინო მეცნიერების ფაკულტეტის მეანობა- გინეკოლოგიის დეპარტამენტის ემერიტუს პროფესორი და მკვლევარი; სამხრეთ აფრიკა

პროფესორი ალექსანდრე მაქაცარია, სეჩენოვის სახ. მოსკოვის პირველი სამედიცინო უნივერსიტეტის სამედიცინო პროფილაქტიკის ფაკულტეტის მეანობა -გინეკოლოგიის დეპარტამენტის უფროსი; მოსკოვი, რუსეთი

პროფესორი აპოსტოლის ათანასიადის, სამხრეთ -აღმოსავლეთ ევროპის პერინატალური მედიცინის საზოგადოების არჩეული პრეზიდენტი, თესალონიკის უნივერსიტეტის არისტოთელეს სამედიცინო სკოლის მეანობა -გინეკოლოგიისა და დედა-ნაყოფის

მედიცინის დეპარტამენტის უფროსი, აშშ კორნელ უნივერსიტეტის მოწვეული პროფესორი; *საბერძნეთი*

პროფესორი ანტონ მიხაილოვი - დირექტორი და მთავარი ექიმი, ნ.ვ. მეჩნიკოვის სახ. სახელმწიფო უნივერსიტეტი, ევროპის პერინატალოგთა ასოციაციის გამგეობის წევრი, სანკტ-პეტერბურგი, რუსეთი

პროფესორი სუბჰაშ ნარკოლკარ, ინდოეთის მეან-გინეკოლოგთა ფედერაციის ექს-პრეზიდენტი, პუნეს მეან-გინეკოლოგთა საზოგადოების ექს ვიცე-პრეზიდენტი; *ინდოეთი*

პროფესორი გოხან გოინუმერ, თურქეთის მეანობა-გინეკოლოგიაში ულტრაბგერითი დიაგნოსტიკის საზოგადოების პრეზიდენტი, სტამბულის მედენიეთ უნივერსიტეტის გოზტეპე საგანმანათლებლო და კვლევითი ჰოსპიტალის პერინატოლოგიის დეპარტამენტის დირექტორი; *თურქეთი*

პროფესორი პანაგიოტის ანტსაკლის, ათენის უნივერსიტეტის წამყვანი ლექტორი, , იან დონალდის სახ. სკოლის აღმასრულებელი დირექტორი; *საბერძნეთი*

პროფესორი *გრეგორ დუნკომბ* , ექსოზომ ბიოლოგიური ლაბორატორია, ქუისლენდის უნივერსიტეტის სამეფო ბრისბან ჰოსპიტალის ქალთა კლინიკური დიაგნოსტიკის ცენტრი.; *ავსტრალია*

პროფესორი ელიფ გიულ იაპარ ეი, ზეკაი ტაჰირ ბურაკ ქალთა ჯანმრთელობის საგანმანათლებლო და კვლევითი ჰოსპიტალის მეანობა-გინეკოლოგიის პროფესორი, პერინატოლოგიის ქვესპეციალისტი; *ანკარა, თურქეთი*

პროფესორი ტატიანა ზნამენსკაია, მედიცინის მეცნიერებათა დოქტორი, უკრაინის ნეონატოლოგთა ასოციაციის პრეზიდენტი, პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის დირექტორის მოადგილე პერინატალურ მედიცინაში და ნეონატოლოგიის დეპარტამენტის უფროსი; *უკრაინა*

პროფესორი ელენე გრეჩანინა, უკრაინის ნაციონალური მეცნიერებათა აკადემიის წევრ-კორესპონდენტი, ხარკოვის სპეციალიზირებული სამედიცინო გენეტიკის ცენტრის გენერალური დირექტორი, ხარკოვის ნაციონალური სამედიცინო უნივერსიტეტის სამედიცინო გენეტიკის დეპარტამენტის პროფესორი, უკრაინის სამედიცინო გენეტიკის ინსტიტუტის დირექტორი; *ხარკოვი, უკრაინა*

პროფესორი გიორგი ოკოვეი, მ. გერაცის სახელობის სამედიცინო უნივერსიტეტის დიპლომის შემდგომი და უწყვეტი განათლების ფაკულტეტის მეანობა-გინეკოლოგიის დეპარტამენტის უფროსი, დედათა და ბავშვთა ჯანმრთელობის დაცვის სამეცნიერო-კვლევითი ცენტრის დირექტორი; *ერევანი, სომხეთი*

პროფესორი ნიკოლაიო არიაევი, უკრაინის ნაციონალური მეცნიერებათა აკადემიის წევრ-კორესპონდენტი, ოდესის ნაციონალური სამედიცინო უნივერსიტეტის პედიატრიის დეპარტამენტის უფროსი; *უკრაინა*

პროფესორი ვიქტორია ბიწაძე, სეჩენოვის სახელობის მოსკოვის პირველი სახელმწიფო სამედიცინო უნივერსიტეტის პროფილაქტიკური მედიცინის ფაკულტეტის მეანობა-გინეკოლოგიის დეპარტამენტი; *მოსკოვი, რუსეთი*

პროფესორი ვალერი პოხილკო, უკრაინის სახ.სამედიცინო სტომატოლოგიური აკადემიის პედიატრიისა და ნეონატოლოგიის დეპარტამენტის უფროსი, მედიცინის მეცნიერებათა დოქტორი; *პოლტავა, უკრაინა*

პროფესორი სვეტლანა ჟუკ, პ.ლ. სჩუპიკის სახ. დიპლომის შემდგომი და უწყვეტი განათლების ფაკულტეტის ნაციონალური სამედიცინო აკადემიის მეანობა-გინეკოლოგიისა და ნაყოფის მედიცინის დეპარტამენტის უფროსი, უკრაინის საპატიო ექიმი; *კიევი, უკრაინა*

პროფესორი ირინა ვოვკ, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ოჯახის დაგეგმარების ცენტრის უფროსი, მეცნიერებისა და ტექნოლოგიების საპატიო მუშაკი; *კიევი, უკრაინა*

პროფესორი ირინა ჟაბჩენკო, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის განყოფილების გამგე; *კიევი, უკრაინა*

პროფესორი ოლგა იაბლონ, პიროგოვის სახელობის №1 ვინიცას ნაციონალური სამედიცინო უნივერსიტეტის პედიატრიის დეპარტამენტის უფროსი; *ვინიცა, უკრაინა*

პროფესორი ანდრეი პისარევი, მედიცინის მეცნიერება დოქტორი, ასისტენტ - პროფესორი, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ნეონატოლოგიის დეპარტამენტი ; *კიევი, უკრაინა*

ირინა კონდრატოვა, რეგიონალური პერინატალური ცენტრის დირექტორი; *ხარკოვი, უკრაინა*

ტატიანა კურილინა, მედიცინის მეცნიერებათა დოქტორი, წამყვანი მეცნიერ- მუშაკი, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ნეონატოლოგიის დეპარტამენტი; *კიევი, უკრაინა*

ევეგენია ზბროჟიკ, ფსიქოლოგი, მეცნიერ-მუშაკი, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ნეონატოლოგიის დეპარტამენტი; *კიევი, უკრაინა*

სერგეი ბარსევიან, დედათა და ბავშვთა ჯანმრთელობის დაცვის სამეცნიერო-კვლევითი ცენტრის მთავარი ექიმი, ანესთეზიოლოგიის დეპარტამენტის უფროსი; *ერევანი, სომხეთი*

სვეტლანა ბელეცკაია, ხარკოვის სპეციალიზირებული სამედიცინო გენეტიკის ცენტრის ონკოლოგიის დეპარტამენტის და გენეტიური საკონსულტაციო პროგრამების უფროსი , ხარკოვის ნაციონალური სამედიცინო უნივერსიტეტის სამედიცინო გენეტიკის დეპარტამენტის ასისტენტი; *ხარკოვი, უკრაინა*

პაველ მაზმანთან, დედათა და ბავშვთა ჯანმრთელობის დაცვის სამეცნიერო-კვლევითი ცენტრის ნეონატოლოგიის დეპარტამენტის უფროსი; *ერევანი, სომხეთი*

სერგეი ლაპონოვ, ჟიტომირის პერინატალური რეგიონალური ცენტრის ნეონატოლოგიის დეპარტამენტის უფროსი; *ჟიტომირი, უკრაინა*

იური მელნიკ , კიევის ცენტრალური რეპროდუქტიული და პერინატალური მედიცინის ცენტრის პერინატალური დიაგნოსტიკის დეპარტამენტის უფროსი; *კიევი, უკრაინა*

SCIENTIFIC PROGRAM

Thursday, November 19, 2015

Venue: Conference Hall, **Radisson Blu Iveria Hotel**, Tbilisi

47th International Congress on Pathophysiology of Pregnancy

15.00 - 19.30 Registration

20.00 **Opening Ceremony**
Greetings

20.30 **Opening Lecture**

Speaker Sir Sabaratnam Arulkumaran - Past President FIGO; London, United Kingdom

Chairperson Tengiz Asatiani , President GAOG; Tbilisi, Georgia

Intrapartum Surveillance of High Risk Pregnancies

21.00 **Opening Lecture**

Speaker Sanjay Gupte - General Secretary, WOG; Pune, India

Chairperson Tengiz Asatiani, President GAOG; Tbilisi, Georgia

GDM – The Silent Epidemic

21.30 - 23.00 GET-TOGETHER PARTY

Friday, November 20, 2015

Venue: Conference Hall, **Radisson Blu Iveria Hotel**, Tbilisi

08.00 - 08.45 Registration

3rd Georgian, Ian Donald Obstetrics and Gynecology Ultrasound Course

“Advances in Ultrasound in Obstetrics and Gynecology

09.00–12.00

08.45 **Opening Ceremony**

Greetings

Session 1 09.00 – 11.00

Chairpersons **Asim Kurjak, Giovanni Monni, Milan Stanojevic**

Asim Kurjak - Professor, Director of Interuniversity Ian Donald School on Ultrasound in OB&GYN, Member of European and World Academy of Science and Art; Croatia

Advanced Ultrasound and Fetal Syndromes - 20 min

Milan Stanojevic - President of WAPM, Member of European and World Academy of Science and Art, Head of the Department of Neonatology at the Department of Obstetrics and Gynecology Medical School University of Zagreb; Croatia

3D Ultrasound of Neonatal Brain: why is it neglected ? - 20 min

Asim Kurjak - Professor, Director of Interuniversity Ian Donald School on Ultrasound in OB&GYN, Member of European and World Academy of Science and Art; Croatia

Early Human Development studied by 3D HD and Silhouette - 20 min

Giovanni Monni - Director of Ian Donald School for Europe, Head of Ob/Gyn Department, Prenatal and Preimplantation Genetic Diagnosis, Fetal Therapy, Microciternico Hospital, Cagliari; Vice-President WAPM (World Association of Perinatal Medicine); Italy

1st Trimester Screening Tests and Invasive Prenatal Procedures - 20 min

Asim Kurjak - Professor, Director of Interuniversity Ian Donald School on Ultrasound in OB&GYN, Member of European and World Academy of Science and Art; Croatia

3D HD in Obstetrics and Gynecology - 20 min

Aris Antsaklis - Professor, Past President of World Association of Perinatal Medicine; Greece

Prediction of Preterm Labor by Ultrasound - 20 min

11.00 Coffee (15 min)

Session 2 11.15 – 12.00

Chairpersons **Aris Antsaklis, Gökhan Göynüner, Panagiotis Antsaklis**

Asim Kurjak - Professor, Director of Interuniversity Ian Donald School on Ultrasound in OB&GYN, Member of European and World Academy of Science and Art; Croatia

Could We Detect Abnormal Fetal Movements Which Precede Development of Cerebral Palsy - 15 min

Apostolos Athanasiadis - *Professor of Obstetrics - Gynecology and Maternal-Fetal Medicine, Medical School of the Aristotle University of Thessaloniki , Visiting Professor at Cornell University, USA, President of the South East European Society of Perinatal Medicine; Thessaloniki, Greece*

4D – Ultrasonography in Obstetrics. Luxury or Necessity? - 15 min

Gökhan Göynüner - *Professor, Director of Perinatology Department, Istanbul Medeniyet University Goztepe Educational and Research Hospital, President of Ultrasound Obstetrics and Gynecology Society of Turkey; Istanbul, Turkey*

First Trimester Diagnosis of Spina Bifida - 15 min

47th International Congress on Pathophysiology of Pregnancy 12.00-19.00

Session 3 12.00 - 14.20

Chairpersons **Sir Sabaratnam Arulkumaran, Sanjay Gupte, Alex Vidaeff**

Sir Sabaratnam Arulkumaran - *Past President FIGO , Professor Emeritus of Obstetrics & Gynaecology, St.George's University of London; United Kingdom*

Case for Reduction of late Preterm and early Term Elective Deliveries - 20 min

Sanjay Gupte - *Secretary General World Organization Gestosis; Director Gupte Hospital and Center for Research in Reproduction; National Coordinator, National Eclampsia Registry; Ex Hon Associate Professor B J Medical College; Pune, India.*

Thyroid Function Assessment for all - 20 min

Alex Vidaeff - *MD, MPH Professor and Program Director Maternal-Fetal Medicine Fellowship Department of Obstetrics and Gynecology, Baylor College of Medicine, Texas Children's Hospital, Pavilion for Women; USA*

Preeclampsia at the Limit of Viability - 20 min

Sir Sabaratnam Arulkumaran - *Past President FIGO , Professor Emeritus of Obstetrics & Gynaecology, St.George's University of London; United Kingdom*

PPH – Lessons from Confidential Inquiries and Recent Advances - 20 min

Aris Antsaklis - *Professor, Past President of World Association of Perinatal Medicine; Athens, Greece*

Screening for Preeclampsia - 20 min

Sanjay Gupte - *Secretary General World Organization Gestosis; Director Gupte Hospital and Center for Research in Reproduction; National Coordinator, National Eclampsia Registry; Ex Hon Associate Professor B J Medical College; Pune, India.*

Experience of Dengue Fever (Viral Infection) in Pregnancy - 20 min

Panagiotis Antsaklis - *Professor, Senior Lecturer University of Athens, Executive Director Ian Donald School; Athens, Greece*

Epidemiology of Preeclampsia - 15 min

14.20- 15.20 Lunch

ISSPP& OGASH Board Meeting

Session 4 15.20 -17.50

Chairpersons **Hein Odendaal, Alexander Makatsarya, Apostolos Athanasiadis**

Aris Antsaklis - *Professor, Past President of World Association of Perinatal Medicine; Athens, Greece*

Ultrasound and MRI for Assessment of the Fetal CNS Malformations -15 min

Girija Wagh - *MD, FICOG, Dip Endoscopy Professor and Head ,Obstetrics and Gynecology Bharati Vidyapeeth University Medical College; Pune, India*

Severe Preeclampsia Management with Risk Stratification and Prophylactic Magnesium Sulphate a better Approach - 15 min

Alexander Makatsarya -*Professor of Sechenov First Moscow State Medical University, Head of the Dept.of Obstetrics and Gynecology Medical Prophylaxis Faculty; Moscow, Russia*
New Approach for the Pathogenesis of Severe Preeclampsia: the Role of Trombofilly - 15 min

Milan Stanojevic - *President of WAPM , Member of European and World Academy of Science and Art, Head of the Department of Neonatology at the Department of Obstetrics and Gynecology Medical School University of Zagreb; Croatia*

Ethical Issues of the Care for Infants with Severe Congenital Malformations -15 min

Giovanni Monni - *Director of Ian Donald School for Europe, Head of Ob/Gyn Department, Prenatal and Preimplantation Genetic Diagnosis, Fetal Therapy, Microcitamico Hospital, Cagliari; Vice-President WAPM (World Association of Perinatal Medicine); Italy*

Invasive Prenatal Procedures in Multiple Pregnancies - 15 mi

Gregory Duncombe - *Exosome Biology Laboratory, Centre for Clinical Diagnostics, Associate Professor, School of Medicine Department of Obstetrics and Gynaecology, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, the University of Queensland Co-Director Queensland Ultrasound for Women; Gregory E. Rice & Carlos Salomon; Australia*

Current Status of Fetal Therapy in Australia - 15 min

Hein Odendaal - *Emeritus Professor and part-time Researcher Department of Obstetrics and Gynaecology Faculty of Medicine and Health Science Stellenbosch University; South Africa*
Variations in the Maternal Heart Rate in Late Pregnancy - 15 min

Apostolos Athanasiadis - *Professor of Obstetrics - Gynecology and Maternal-Fetal Medicine, Medical School of the Aristotle University of Thessaloniki , Visiting Professor at Cornell University USA, President of the South East European Society of Perinatal Medicine; Thessaloniki, Greece*

Screening for Chromosomal Abnormalities in Prenatal Diagnosis. Up to Date - 15 min

Gregory Duncombe - *Exosome Biology Laboratory, Centre for Clinical Diagnostics, Associate Professor, School of Medicine Department of Obstetrics and Gynaecology, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, the University of Queensland, Co-Director Queensland Ultrasound for Women; Gregory E. Rice & Carlos Salomon; Australia*

Exosomes During Normal and Pregnancy Complications - 15 min

Hein Odendaal - *Emeritus Professor and part-time Researcher Department of Obstetrics and Gynecology Faculty of Medicine and Health Science Stellenbosch University; South Africa*
Developmental Origin of Health and Disease - 15 min

17.50 Coffee (10 min)

Session 5 18.00 -19.50

Chairpersons Wolfgang Holzgreve, Girija Wagh, Avtandil Chkheidze

Wolfgang Holzgreve - *Professor of Obstetrics and Gynaecology, Medical Director and CEO, University Medical Center Bonn, Germany; Society of Perinatal Medicine of Germany, President; International Society The Fetus as a Patient, Vice-President; Germany*
Non-invasive Prenatal Diagnosis from Maternal Blood - finally available in Clinical Practice - 20 min

Milan Stanojevic - *President of WAPM , Member of European and World Academy of Science and Art, Head of the Department of Neonatology at the Department of Obstetrics and Gynecology Medical School University of Zagreb;Croatia*
Mortality in Perinatal Medicine: are Neonates left behind - 15 min

Girija Wagh - *MD, FICOG, Dip Endoscopy Professor and Head, Obstetrics and Gynecology Bharati Vidyapeeth University Medical College; Pune, India*
Preterm Labor Management our Protocol - 15 min

Alexander Makatsarya - *Professor of Sechenov First Moscow State Medical University, Head of the Dept. of Obstetrics and Gynecology Medical Prophylaxis Faculty; Bitsadze V.O., Akinshina S.V., Zhuravleva E.V., Khizroeva J.H., Makatsarya N.A.; Moscow, Russia.*
Trombotic Microangiopathy in the Pathogenesis of Severe Preeclampsia - 15 min

David Davarashvili – *Professor, Head of DD Clinic; Tbilisi, Georgia*
Diagnosis and Treatment of Fetal Anemia - 15 min

Avtandil R.Chkheidze - *Professor, Chairman and President of World OGASH Board, President of OGASH Academy; Chairperson of Steering Committee of the Society for the Study of Pathophysiology of Pregnancy (SSPP), World Organization Gestosis (WOG); Tbilisi, Georgia*

Classification, Nomenclature, Definition and Basic Management of EPH-Gestosis / Rippmann's Syndrome - 15 min

Svetlana Beletskaya - *Head of the Department of Oncology Genetic Counseling of Kharkov Specialised Mediko-Genetic Centre, Assistant of the Department of Medical Genetics KhNMU; Grechanina Y.B, Grechanina O.Ya; Kiev, Ukraine*

Risk Factors during Pregnancy as Potential Triggers in the Development of Autism – 15 min

20.00 - 24.00 Gala Dinner

Saturday, November 21, 2015

Venue: Conference Hall, **Radisson Blu Iveria Hotel**, Tbilisi

3rd Georgian, Ian Donald Obstetrics and Gynecology Ultrasound Course

“Advances in Ultrasound in Obstetrics and Gynecology

09.00–11.45

One-Man Workshop 09.00–10.30

Ultrasound in Obstetrics & Gynecology. Education. The application in obstetrical care.

Speaker

Ivica Zalud - *Professor and Chair, Kosasa Endowed Chair, Department of OB/GYN and Women's Health John A Burns School of Medicine University of Hawaii; USA*

Bloody Business: The role of ultrasound in eliminating catastrophic consequences of potentially hemorrhagic OB and GYN conditions

Leaving the legacy: How trainees should be trained?

Office ultrasound

Fetal biometry: State of the art

IUGR: When should we deliver the baby?

10.30 Coffee (15 min)

Session 6 10.45-11.45

Chairpersons Apostolos Athanasiadis, Anton Mikhailov, Elif Gül Yapar Eyi

Panagiotis Antsaklis - *Professor , Senior Lecturer University of Athens, Executive Director Ian Donald School; Athens, Greece*

Skeletal Dysplasias -15 min

Anton Mikhailov -*Professor ,Director and Chief Doctor, Mechnikov NW State Medical University, EAPM Treasurer; Sergey Potanin, Anna Shlikova; St.Petersburg, Russia*

Conventional Prenatal Diagnosis in Multiple Gestations and Coming NIPT-15 min

David Davarashvili - *Professor, Head of Tbilisi DD Clinic; Tbilisi, Georgia*

TTTS- Diagnostic and Treatment. The Role of Color Doppler and Amniodrenage - 15 min

Elif Gül Yapar Eyi - *Asc. Professor in Obstetrics & Gynaecology, Subspecialist in Perinatology, Zekai Tahir Burak Women's Health Education & Research Hospital; Ankara, Turkey*

Cesarean Scar Pregnancy: Sonographic and Doppler Findings and Management -15 min

Closing Ceremony of 3rd Georgian, Ian Donald Obstetrics and Gynecology Ultrasound Course (15 min)

47th International Congress on Pathophysiology of Pregnancy

12.00-13.00

Session 7 12.00 -13.00

Chairpersons **Elena Grechanina, Victoria Bitsadze, Pavel Mazmanyan**

Elena Grechanina - *General Director of Kharkov Specialised Medical-Genetic Centre, Profeccor of Department of Medical Genetics Kharkiv National Medical University (KhNMU), Director of Ukrainian Institute of Clinical Genetics of (KhNMU); Grechanina Y.B, Matalon R., Gusar V.A, Volobueva I.A.; Kharkov, Ukraine*

Many Years of Experience in Multi-disciplinary Study of the Efficacy of Prenatal Development Programming of the Nervous System from the Position of Epigenetic Mechanisms - 15 min

Victoria Bitsadze - *Professor of Sechenov First Moscow State Medical University, Department of Obstetrics and Gynecology Medical Prophylaxis Faculty; Moscow, Russia*
Clinical Approach to the Pathogenetic Prevention of Preeclampsia - 15 min

Subhash Nargolkar - *Professor of Dept. Obstetrics&Gynecology, Pearl Women's Clinic; Past Vice- President, FOGSI; Past President, Pune Ob-Gyn Society (POGS); Pune, India*
Modern Forceps Design - 15 min

Pavel Mazmanyan - *Head of Neonatal Department, Yerevan State Medical University and Research Center of Maternal and Child Health Care; Yerevan, Armenia*

Non-invasive Respiratory Support in Neonatology: Evidence and Implications for Practice-

15 min

13.00 Coffee (15 min)

3rd International Experts Meeting "TBILISI-2015"

NEW TRENDS IN PRENATAL AND PERINATAL MEDICINE

3-ая Конференция международных экспертов «Тбилиси 2015»

НОВЫЕ НАПРАВЛЕНИЯ В ПРЕНАТАЛЬНОЙ И ПЕРИНАТАЛЬНОЙ МЕДИЦИНЕ

13.15 -19.00

13.15- 14.45

Session 8

FETAL MEDICINE & PERINATOLOGY

Сессия 8

ПЕРИНАТОЛОГИЯ И МЕДИЦИНА ПЛОДА

Chairpersons **Alexander Makatsaria, Georgi G. Okoev, Svitlana Zhuk**

Председатели сессии **Макацария А.Д., Окоев Г.Г., Жук С. И.**

Elena Grechanina - *General Director of Kharkov Specialised Medical-Genetic Centre, Profeccor of Department of Medical Genetics Kharkiv National Medical University (KhNMU), Director of Ukrainian Institute of Clinical Genetics of (KhNMU); Kharkov, Ukraine*
Epigenetic Factors Suffering Prenatal Ontogenesis. Our Experience in Diagnostic and Correction - 20 min

Гречанина Е.Я. - *Генеральный директор Харьковского специализированного медико-генетического центра, д.мед.н., профессор, чл.-корр. НАМН Украины, лауреат Государственной премии Украины в области науки и техники, Заслуженный деятель науки и техники, профессор кафедры медицинской генетики ХНМУ, профессор кафедры педиатрии ХГУ им. Каразина; Харьков, Украина*

Эпигенетические факторы, нарушающие пренатальный онтогенез: опыт диагностики и коррекции - 20 мин

Georgi G. Okoev - *Head of the Department of Obstetrics and Gynecology of the faculty of postgraduate and continuing education of the Medical University after M. Geraci, Head of the Research Center of Maternal and Child Health Care; Yerevan, Armenia*

Capabilities of Fertiloscopy in Gynecology - 15 min

Окоев Г.Г - *Профессор, зав.кафедрой акушерства и гинекологии факультета постдипломного и непрерывного образования Ереванского Медицинского Университета имени М. Гераци, директор НИЦ охраны здоровья матери и ребенка МЗ Армении; Ереван, Армения*

Возможности фертилоскопии в гинекологии - 15 мин

Iryna Zhabchenko - Professor, Head of Dept. of Pathology in Pregnancy and Labor, SI Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine; Victor Oleshko; Kiev, Ukraine

Algorithm of Obstetrical Actions at Isthmico-cervical Insufficiency - 15 min

Жабченко И.А. – Профессор, доктор медицинских наук, зав. научным отделением патологии беременности и родов ГУ «Институт педиатрии, акушерства и гинекологии НАМН Украины»; Олешко В.; Киев, Украина

Алгоритм акушерской тактики при истмико-цервикальной недостаточности - 15 мин

Svitlana Zhuk - Professor, Head of the Department of Obstetrics, Gynecology and Fetal Medicine of PL Shupyk National Medical Academy of Postgraduate Education, Honored Doctor of Ukraine; Kiev, Ukraine

Developing and Functioning of Embriofetal System in early Pregnancy: possible affecting and Up-to-Day Correction - 15 min

Жук С. И.- Профессор, доктор медицинских наук, заведующая кафедрой акушерства, гинекологии и медицины плода Национальной медицинской академии последипломного образования им. П.Л. Шупика, заслуженный врач Украины; Киев, Украина

Формирование и функционирование эмбриофетальной системы в ранние сроки беременности: возможные нарушения и их современная коррекция -15 мин

Irina Vovk - Professor, Head of Family Planning SI Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine ,Honored Worker of Science and Technology; Kiev, Ukraine
Characteristic of Uterine Hemodynamic during early Pregnancy Loss: Current Correction-
15 min

Вовк И. Б. - Профессор, доктор медицинских наук, заслуженный деятель науки и техники Украины, руководитель отдела планирования семьи ГУ Институт педиатрии, акушерства и гинекологии АМН Украины, Киев, Украина

Характеристика маточной гемодинамики при ранних потерях беременности: современная коррекция - 15 мин

Yuriy Melnik - Head, Department of Prenatal Diagnostics Kiev City Center Reproductive and Perinatal Medicine; N.Pehno; Kiev, Ukraine

The Value of the Sonographic Evaluation of Blood Flow in the Ductus Venosus in the Placental Dysfunction and for Birth Predicting -10 min

Мельник Ю.Н. - Зав. отделением пренатальной диагностики Киевского городского центра репродуктивной и перинатальной медицины; Пехньо Н.; Киев, Украина

Значение сонографической оценки кровотока в венозном протоке при плацентарной дисфункции и прогнозировании родов - 10 мин

14.45 - 15.45 Lunch
Ланч

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Компания предлагает высококачественное оборудование для оказания медицинской помощи больным с цереброваскулярной патологией.

«Оксфорд Медикал», эксклюзивный представитель в России компаний производителей медицинского оборудования экспертного класса для неврологии, нейрохирургии, анестезиологии и реаниматологии, функциональной диагностики и кардиологии

- доплеровские системы для исследования транскраниального, экстракраниального и периферического кровотока, длительного двустороннего мониторингования и эмболодетекции;
- систему для неинвазивного мониторинга параметров центральной гемодинамики при проведении ортопроб на вертикализаторе (тилт-тест);
- ЭЭГ, включая видео-ЭЭГ и длительный мониторинг ЭЭГ, ПСГ;
- ЭМГ;
- мультимодальную систему для интраоперационного мониторинга;
- холтер, стресс-тест и прикроватные мониторы.

Предлагаемое оборудование пользуется заслуженным авторитетом у специалистов, благодаря высокому качеству, диагностической достоверности и надежности, техническим и программным возможностям. Авторизованная производителями сервисная служба, информационная поддержка, консультации специалистов, обучение врачей на базе ведущих лечебных учреждений.

15.45-18.25

Session 9
Сессия 9

NEONATOLOGY
НЕОНАТОЛОГИЯ

Chairpersons Tatyana Znamenska, Mykola Ariaev, Valery Pohilko
Председатели сессии Знаменская Т.К., Аряев Н.Л., Похилько В.И.

Tatyana Znamenska - *Professor, Doctor of Medical Sciences, President of Association of Neonatology of Ukraine, Deputy Director for Perinatal Medicine and Chair of the Department of Neonatology SI «Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine»; Andrii Pysariev, Doctor of Medical Sciences, Assistant of Professor, Dept. of Neonatology, SI «Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine»; Kiev, Ukraine*

The Problem of Invasive Mycoses in Neonatology: Approaches to Effective and Safe Prophylaxis and Treatment - 20 min

Знаменская Т.К. - *Профессор, доктор медицинских наук, Президент Ассоциации неонатологов Украины, зам. Директора по перинатальной медицине и руководитель*

отдела неонатологии ГУ «Институт педиатрии, акушерства и гинекологии НАМН Украины»; Писарев А.А., доктор медицинских наук, старший научный сотрудник отдела неонатологии, ГУ «Институт педиатрии, акушерства и гинекологии НАМН Украины»; Киев, Украина

Проблема инвазивных микозов в неонатологии: подходы к эффективной и безопасной профилактике и лечению - 20 мин

Mykola Arayayev - Professor, Head of Dept. of Pediatrics, Odessa National Medical University; Odessa, Ukraine

Bioethics in the Protection and Support of Mother and Child at the Example of Strategy to Counter Perinatal HIV Infection - 20 min

Арязев Н.Л. - Профессор, член-корреспондент НАМН Украины, д.мед.н, заведующий кафедрой педиатрии № 1, неонатологии и биоэтики Одесского национального медицинского университета; Одесса, Украина

Биоэтика в защите и поддержке матери и ребенка на примере стратегии противодействия перинатальной ВИЧ-инфекции - 20 мин

Tatyana Znamenska - Professor, Doctor of Medical Sciences, President of Association of Neonatology of Ukraine, Deputy Director for Perinatal Medicine and Chair of the Department of Neonatology SI «Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine»; Zoia Rossokha, Valery Pohilko, S Kyriachenko, N Gorovenko; Kiev, Ukraine

Follow-up of Newborns with Genetically Determined Changes in Folate Metabolism - 20 min

Знаменская Т.К. - Профессор, доктор медицинских наук, Президент Ассоциации неонатологов Украины, зам. Директора по перинатальной медицине и руководитель отдела неонатологии ГУ «Институт педиатрии, акушерства и гинекологии НАМН Украины»; Россоха З.И., кандидат медицинских наук, директор Государственного учреждения «Референс-центр по молекулярной диагностике МЗ Украины»; Горovenko Н.Г.; Похилько В.И., заведующий кафедрой педиатрии №1 с пропедевтикой и неонатологией ВДНЗУ "Украинская медицинская стоматологическая академия"; Киев, Украина

Катамнестическое наблюдение за новорожденными с генетически обусловленными нарушениями фолатного обмена - 20 мин

Valery Pohilko - Professor, Doctor of Medical Sciences, Chief of the Department of Pediatrics and Neonatology, Ukrainian Medical Stomatological Academy; E Kovaleva, Yu Chernyavskaya, N Artyomowa, O Korobka, Z Rossokha; Poltava, Ukraine

Predictors of Arterial Hypotension Development in Preterm Born Children with a Bacterial Infection in Early Neonatal Period - 20 min

Похилько В.И. - Профессор, доктор медицинских наук, заведующий кафедрой педиатрии №1 с пропедевтикой и неонатологией ВДНЗУ "Украинская медицинская стоматологическая академия"; Ковалева Е.М., Артемова Н.С., Коробка О.В., Россоха З.И.; Полтава, Украина

Предикторы развития артериальной гипотензии в преждевременно рожденных детей с бактериальными инфекциями раннего неонатального периода - 20 мин

Olga Yablon - *Professor, Head of Department of Pediatrics №1 Vinnitsya National Pirogov Medical University; Vinnitsya, Ukraine*

The Role of Innate Immunity in the Pathogenesis of Premature Birth and Formation of the Pathology of Extremely Premature Infants - 20 min

Яблонь О.С. - *Профессор, заведующая кафедрой педиатрии Винницкого национального медицинского университета им. Н.И.Пирогова; Винница, Украина*
Роль врожденного иммунитета в патогенезе преждевременного рождения и формировании патологии экстремально недоношенных детей - 20 мин

Iryna Kondratova - *Director of the Regional Perinatal Center; Kharkiv, Ukraine*
Stabilization and Respiratory Management in Delivery Room - 15 min

Кондратова И. Ю. - *Директор регионального перинатального Центра; Харьков, Украина*
Стабилизация и респираторный менеджмент в родильном зале - 15 мин

Tatiana Kurilina - *Doctor of Medical Sciences, Leading scientist, Dept. of Neonatology, SI «Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine»; Kiev, Ukraine;*

E. Zbrozhik, *psychologist, scientist, Dept. of Neonatology, SI «Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine»; Kiev, Ukraine*

Neurodevelopmental Care in High-Tech Environment - 15 min

Курилина Т.В.- *Ведущий научный сотрудник отдела неонатологии ГУ "Институт педиатрии, акушерства и гинекологии НАМН Украины", доктор медицинских наук; Зброжик Е.В., психолог, научный сотрудник отдела неонатологии ГУ «Институт педиатрии, акушерства и гинекологии НАМН Украины»; Киев, Украина*
Нейроразвивающий уход в условиях высокотехнологичного окружения - 15 мин

Sergey Laponog - *Head of Dept. of Neonatology Zhitomir Regional Perinatal Center; Y Vaysberg, I Sergeyko, L Morenec, V Rizhyk; Zhitomir, Ukraine*

Minimally Invasive Surfactant Treatment (MIST) in Infants Suffering from Respiratory Distress Syndrome (RDS) - 15 min

Лапоног С.П. - *Заведующий отделением интенсивной терапии новорожденных Житомирского областного перинатального центра; Вайсберг Ю, Сергейко И, Моренец Л, Рижник В; Житомир, Украина*

Технологии малоинвазивного введения сурфактанта (MIST) у новорожденных с РДС – 15 мин

Sergey Barsegyan - *Chief Medical Officer, Head of Department of Anesthesiology Research Center of Maternal and Child Health Care; K Chilingaryan; Yerevan, Armenia*

Plasmapheresis in the Comprehensive Treatment of Trombophilia - 15 min

Барсегян С.П.- *Главный врач НИЦ охраны здоровья матери и ребенка МЗ Армении; Чилингарян К.Б.; Ереван, Армения*

Применение плазмафереза в комплексном лечении тромбофилии - 15 мин

18.25-19.00

Closing Ceremony of 47th International Congress on Pathophysiology of Pregnancy

Saturday, November 21 20.00 - 22.15 Visit to the Theater Folk Art of Georgia Theater Performance Nabadi

47-ე საერთაშორისო კონგრესი ორსულობის პათოფიზიოლოგიაში

კონგრესის ჩატარების ადგილი – თბილისი, სასტუმრო „რედისონ ბლუ ივერია“-ს
საკონფერენციო დარბაზი

კონგრესის სამეცნიერო პროგრამა

2015წ 19 ნოემბერი

15.00–19.30 მონაწილეთა რეგისტრაცია სასტუმრო „რედისონ ბლუ ივერია“-ს
საკონფერენციო დარბაზის ფოიეში

20.00 კონგრესის გახსნის ცერემონიალი

მისალმება

20.30-21.30 პლენარული სესია

სესიის თავმჯდომარე : პროფ. თენგიზ ასათიანი, საქართველოს მეან-გინეკოლოგთა
ასოციაციის („სმგა -GAOG“) პრეზიდენტი; თბილისი, საქართველო

20.30 პლენარული ლექცია

პროფ. Sir საბარატნამ არულკუმარანი, მეან-გინეკოლოგთა მსოფლიო
ფედერაციის „ფიგო-FIGO“ პრეზიდენტი 2011-2015 წწ, დიდი ბრიტანეთი

მაღალი რისკის ორსულობის მართვა მშობიარობის დროს

21.00 პლენარული ლექცია

პროფ. სანჯაი გუპტე, გესტოზების მსოფლიო ორგანიზაციის(“გმო-WOG“)
გენერალური მდივანი, ინდოეთი

გესტაციური დიაბეტი – ფარული ეპიდემია

21.30 - 23.00 ფურშეტი სასტუმრო „რედისონ ბლუ ივერიაში“

2015წ 20 ნოემბერი

08.00–09.00 –რეგისტრაცია სასტუმრო „რედისონ ბლუ ივერია“ -ს საკონფერენციო დარბაზის
ფოიეში

იან დონალდის სახელობის საერთაშორისო სკოლის მე-3 სამეცნიერო-
სასწავლო სემინარი პრაქტიკოს ექიმთათვის
”ულტრაბგერითი დიაგნოსტიკა მეანობა-გინეკოლოგიაში”

09.00–12.00

გახსნა

მისალმება

09.00 – 11.00 სესია № 1

თანათავმჯდომარეები: ასიმ კურიაკი, არის ანტსაკლისი, ჯიოვანი მონნი

ასიმ კურიაკი - პროფესორი, იან დონალდის სახელობის მეანობა- გინეკოლოგიაში ულტრაბგერითი დიაგნოსტიკის უნივერსიტეტთაშორისო სკოლის დირექტორი, ევროპის მეცნიერების და ხელოვნების აკადემიის წევრი; *ხორვატია ნაყოფის გაფართოებული სინდრომალური ულტრასონოგრაფია - 20 წუთი*

მილან სტანოჯევიჩი - პროფესორი, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი, ნეონატოლოგიის სექტორის უფროსი, ევროპის მეცნიერების და ხელოვნების აკადემიის წევრი, ზაგრების უნივერსიტეტის სამედიცინო სკოლის მეანობა- გინეკოლოგიის დეპარტამენტი; *ხორვატია.*

რატომ არ უნდა უარყოთ ახალშობილის თავის ტვინის შესწავლა 3D ულტრაბგერითი გამოკვლევით - 20 წუთი

ასიმ კურიაკი - პროფესორი, იან დონალდის სახელობის მეანობა- გინეკოლოგიაში ულტრაბგერითი დიაგნოსტიკის უნივერსიტეტთაშორისო სკოლის დირექტორი, ევროპის მეცნიერების და ხელოვნების აკადემიის წევრი; *ხორვატია ნაყოფის ადრეული განვითარების შესწავლა 3D HD და Silhouette ფორმატში -20 წუთი*

ჯიოვანი მონნი - ევროპის იან დონალდის სკოლის დირექტორი, პერინატალური მედიცინის მსოფლიო ასოციაციის ვიცე - პრეზიდენტი, კაგლიარის პრენატალური და პრეიმპლანტაციური გენეტიკური დიაგნოსტიკის, ნაყოფის თერაპიის, *მიცროციტემიკო ჰოსპიტალის მეანობა- გინეკოლოგიის დეპარტამენტის უფროსი; იტალია 1 ტრიმესტრის სკრინინგ ტესტები და პრენატალური ინვაზიური პროცედურები-20 წუთი*

ასიმ კურიაკი - პროფესორი, იან დონალდის სახელობის მეანობა- გინეკოლოგიაში ულტრაბგერითი დიაგნოსტიკის უნივერსიტეტთაშორისო სკოლის დირექტორი, ევროპის მეცნიერების და ხელოვნების აკადემიის წევრი; *ხორვატია 3D HD ეხოსკოპიის ფორმატი მეანობა- გინეკოლოგიაში - 20 წუთი*

არის ანტსაკლისი - პროფესორი, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი 2012-2015 წწ; *საბერძნეთი ნაადრევი მშობიარობის პროგნოზირება ულტრაბგერითი გამოკვლევით - 20 წუთი*

11.15 – 12.00 სესია № 2

თანათავმჯდომარეები: არის ანტსაკლისი, გოხან გოინუმერი, პანოს ანტსაკლისი

ასიმ კურიაკი - პროფესორი, იან დონალდის სახელობის მეანობა- გინეკოლოგიაში ულტრაბგერითი დიაგნოსტიკის უნივერსიტეტთაშორისო სკოლის დირექტორი, ევროპის მეცნიერების და ხელოვნების აკადემიის წევრი; *ხორვატია ნაყოფის თავის ტვინის ადრული დაზიანებისთვის დამახასიათებელი ანომალური მოძრაობები - 20 წუთი*

აპოსტოლოს ათანასიადისი - პროფესორი, სამხრეთ - აღმოსავლეთ ევროპის პერინატალური მედიცინის საზოგადოების არჩეული პრეზიდენტი, თესალონიკის უნივერსიტეტის არისტოთელეს სამედიცინო სკოლის მეანობა-გინეკოლოგიისა და დედა-ნაყოფის მედიცინის დეპარტამენტის უფროსი, აშშ კორნელ უნივერსიტეტის მოწვეული პროფესორი; *საბერძნეთი*

4D - ულტრასონოგრაფია ფუფუნებაა თუ აუცილებლობა ? - 15 min

გოხან გოინუმერი- პროფესორი, თურქეთის მეანობა-გინეკოლოგიაში ულტრაბგერითი დიაგნოსტიკის საზოგადოების პრეზიდენტი, სტამბულის მედენიეთ უნივერსიტეტის გოზტეპე საგანმანათლებლო და კვლევითი ჰოსპიტალის პერინატოლოგიის დეპარტამენტის დირექტორი; *თურქეთი*
Spina Bifida -ს დიაგნოსტიკა ორსულობის პირველ ტრიმესტრში - 15 წუთი

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47-ე საერთაშორისო კონგრესი ორსულობის პათოფიზიოლოგიაში
12.00–19.00

12.00 - 14.20 სესია №3

თანათავმჯდომარეები: Sir საბარატნამ არულკუმარანი, სანჯაი გუპტე, ალექს ვიდაევი

Sir საბარატნამ არულკუმარანი - ლონდონის უნივერსიტეტის სენტ-ჯორჯის ჰოსპიტალის ემერიტუს პროფესორი მეანობა-გინეკოლოგიაში; მეან-გინეკოლოგთა მსოფლიო ფედერაციის „ფიგო-FIGO“ პრეზიდენტი 2011-2015 წწ, *დიდი ბრიტანეთი*
ნაადრევი მშობიარობის რედუქცია ორსულობის მე-3 ტრიმესტრის ბოლოში - რა ღონისძიებები საჭიროა გატარდეს ამისათვის ? - 20 წუთი

სანჯაი გუპტე - გესტოზების მსოფლიო ორგანიზაციის გენერალური მდივანი; გუპტე ჰოსპიტალისა და რეპროდუქციის სამეცნიერო ცენტრის დირექტორი; ნაციონალური ეკლამპსიის რეგისტრის ნაციონალური კოორდინატორი; პუნეს ბჯ მედიცინის კოლეჯის ექს ასოცირებული პროფესორი; *ინდოეთი*
ფართო სპექტრის თირეოიდეული ფუნქციის შეფასება - 20 წუთი

ალექს ვიდაევი - პროფესორი, ტეხასის ბავშვთა ჰოსპიტალის სამედიცინო ბაილორ კოლეჯის მეანობა- გინეკოლოგიის დეპარტამენტის და ქალთა განყოფილების დედა-ნაყოფის პროგრამების დირექტორი, საზოგადოებრივი ჯანდაცვის მაგისტრი; *აშშ*

პრეკლამფსია სიცოცხლისუნარიანობის ზღვარზე - 20 წუთი

Sir საბარატნამ არულკუმარანი - პროფესორი, ლონდონის უნივერსიტეტის სენტ-ჯორჯის ჰოსპიტალის ემერიტუს პროფესორი მეანობა-გინეკოლოგიაში; მეან-გინეკოლოგთა მსოფლიო ფედერაციის „ფიგო-FIGO“ პრეზიდენტი 2011-2015 წწ; დიდი ბრიტანეთი

PPH - არსებული მეთოდების შეფასება და უახლესი მიღწევები - 20 წუთი

არის ანტსაკლისი - პროფესორი, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი 2012-2015 წწ; *საბერძნე*

პრეკლამფსიის სკრინინგი - 20 წუთი

სანჯაი გუპტე - პროფესორი, გესტოზების მსოფლიო ორგანიზაციის გენერალური მდივანი; გუპტე ჰოსპიტალისა და რეპროდუქციის სამეცნიერო ცენტრის დირექტორი; ნაციონალური ეკლამპსიის რეგისტრის ნაციონალური კოორდინატორი; პუნეს ზჯ მედიცინის კოლეჯის ექს- ასოცირებული პროფესორი; *ინდოეთი*
ვირუსული ინფექცია - დენგეს ცივეცხელება ორსულობის დროს - 20 წუთი

პანაგიოტის ანტსაკლისი - პროფესორი, ათენის უნივერსიტეტის წამყვანი ლექტორი; იან დონალდის სახ.სკოლის აღმასრულებელი დირექტორი; *საბერძნეთი*

პრეკლამფსიის ეპიდემიოლოგია - 15 წუთი

14.20-15.20 შესვენება

ISSPP& OGASH გამგეობის სხდომა

15.20 -17.50 სესია № 4

თანათავმჯდომარეები: ჰეინ ოდენდაალი, ალექსანდრე მაქაცარია, აპოსტოლოს ათანასიადისი

არის ანტსაკლისი - პროფესორი, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი 2012-2015 წწ; *საბერძნეთი*

ნაყოფის ცენტრალური ნერვული სისტემის მანკების გამოვლინება მაგნიტურ-რეზონანსული ტომოგრაფიით და ულტრაბგერითი გამოკვლევით - 15 წუთი

გირიჯა ვაგჰი - პროფესორი, ბჰარატი ვიდიპეთ უნივერსიტეტის სამედიცინო კოლეჯის მეანობა-გინეკოლოგის დეპარტამენტის უფროსი, ენდოსკოპიის დეპარტამენტის უფროსი; *ინდოეთი*

მძიმე ფორმის პრეკლამფსიის მართვა რისკის სტრატეგიკაციით და პროფილაქტიკით მაგნიუმ სულფატის უკეთესი გამოყენების გზით - 15 წუთი

ალექსანდრე მაქაცარია - პროფესორი, სეჩენოვის სახელობის მოსკოვის 1 სამედიცინო უნივერსიტეტის სამედიცინო პროფილაქტიკის ფაკულტეტის მეანობა გინეკოლოგიის დეპარტამენტის უფროსი; *მოსკოვი, რუსეთი*

თრომბოფილის როლი მძიმე ფორმის პრეეკლამფსიის პათოგენეზში. ახალი მიდგომა – 15 წუთი

მილან სტანოჯევიჩი - პროფესორი, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი, ნეონატოლოგიის სექტორის უფროსი, ზაგრების უნივერსიტეტის სამედიცინო სკოლის მეანობა- გინეკოლოგიის დეპარტამენტი; ევროპის მეცნიერების და ხელოვნების აკადემიის წევრი; *ხორვატია*

ეთიკური საკითხები მძიმე თანდაყოლილი მანკებით დაზარებულ ჩვილებზე ზრუნვის დროს – 15 წუთი

ჯოვანი მონი - ევროპის დონალდ სკოლის დირექტორი, პროფესორი, პერინატალური მედიცინის მსოფლიო ასოციაციის ვიცე -პრეზიდენტი, კაგლიარის პრენატალური და პრეიმპლანტაციური გენეტიკური დიაგნოსტიკის, ნაყოფის თერაპიის, *მიცროციტემიკო* ჰოსპიტალის მეანობა- გინეკოლოგიის დეპარტამენტის უფროსი; *იტალია*

პრენატალური ინვაზიური პროცედურები მრავალნაყოფიანი ორსულობის დროს - 15 წუთი

გრეგორ დანკომბ - პროფესორი, ექზოსომ ბიოლოგიური ლაბორატორია; ქუისლენდის უნივერსიტეტის სამეფო ბრისბან ჰოსპიტალის ქალთა კლინიკური დიაგნოსტიკის ცენტრი, გრეგორი ი. რაისი & კარლოს სალომონი; *ავსტრალია*
ნაყოფის თანამედროვე თერაპია ავსტრალიაში - 15 წუთი

ჰაინ ოდენდაალ -პროფესორი, სტელენბომ უნივერსიტეტის მედიცინის და სამედიცინო მეცნიერების ფაკულტეტის მეანობა- გინეკოლოგიის დეპარტამენტის ემერიტუს პროფესორი და მკვლევარი; *სამხრეთ აფრიკა*
ორსულის გულისცემის სიხშირის ცვლილებები ორსულობის ბოლოს - 15 წუთი

აპოსტოლოს ათანასიადის - პროფესორი, სამხრეთ -აღმოსავლეთ ევროპის პერინატალური მედიცინის საზოგადოების პრეზიდენტი, თესალონიკის უნივერსიტეტის არისტოთელეს სამედიცინო სკოლის მეანობა -გინეკოლოგიისა და დედა-ნაყოფის მედიცინის დეპარტამენტის უფროსი, აშშ კორნელ უნივერსიტეტის მოწვეული პროფესორი; *საბერძნეთი*

ქრომოსომული ანომალიების პრენატალური სკრინინგული დიაგნოსტიკა-უახლესი მეთოდები - 15 წუთი

გრეგორ დანკომბ - პროფესორი, ექზოსომ ბიოლოგიური ლაბორატორია; ქუისლენდის უნივერსიტეტის სამეფო ბრისბან ჰოსპიტალის ქალთა კლინიკური დიაგნოსტიკის ცენტრი; გრეგორი ი. რაისი & კარლოს სალომონი; *ავსტრალია*
ექზოსომები ნორმალურ და გართულებულ ორსულობაში“ - 15 წუთი

ჰაინ ოდენდაალ -პროფესორი, სტელენბომ უნივერსიტეტის მედიცინის და სამედიცინო მეცნიერების ფაკულტეტის მეანობა- გინეკოლოგიის დეპარტამენტის ემერიტუს პროფესორი და მკვლევარი; *სამხრეთ აფრიკა*

17.50–18.00 შესვენება (ყავა)

18.00 -19.50 სესია № 5

თანათავმჯდომარეები: ვოლფგანგ ჰოლცგრევე, გირიჯა ვაგჰი, ავთანდილ ჩხეიძე

ვოლფგანგ ჰოლცგრევე - პროფესორი, *ნაყოფი, როგორც პაციენტი* საერთაშორისო საზოგადოების ვიცე-პრეზიდენტი, გერმანიის პერინატალური მედიცინის საზოგადოების პრეზიდენტი, ბონის უნივერსიტეტის სამედიცინო დირექტორი და მეანობა-გინეკოლოგიის სამედიცინო ცენტრის პროფესორი; *გერმანია არაინვაზიური პრენატალური დიაგნოსტიკა ორსულის სისხლის შესწავლით: ბოლო მონაცემები და მიღწევები* - 15 წუთი

მილან სტანოჯევიჩ - პროფესორი, პერინატალური მედიცინის მსოფლიო ასოციაციის პრეზიდენტი, ნეონატოლოგიის სექტორის უფროსი, ზაგრების უნივერსიტეტის სამედიცინო სკოლის მეანობა- გინეკოლოგიის დეპარტამენტი; *ხორვატია. სიკვდილიანობა პერინატალურ მედიცინაში: ახალშობილთა წვლილი* - 15 წუთი

გირიჯა ვაგჰი - პროფესორი, ბჰარატი ვიდეაპეთ უნივერსიტეტის სამედიცინო კოლეჯის მეანობა -გინეკოლოგიის დეპარტამენტის უფროსი, ენდოსკოპიის დეპარტამენტის უფროსი; *ინდოეთი ნაადრევი მშობიარობის მართვა: ჩვენი გამოცდილება და მიდგომები* - 15 წუთი

ალექსანდრე მაქაცარია - პროფესორი, სეჩენოვის სახელობის მოსკოვის 1 სამედიცინო უნივერსიტეტის სამედიცინო პროფილაქტიკის ფაკულტეტის მეანობა გინეკოლოგიის დეპარტამენტის უფროსი; ბიწაძე ვ.ო., აკინშინა ს.ვ., ჟურავლიოვა ე.ვ., ხიზროვა ჯ.ჰ., მაქაცარია ნ.ა; *მოსკოვი, რუსეთი თრომბული მიკროანგიოპათიის როლი მძიმე ფორმის პრეეკლამფსიის პათოგენეზში* -15 წუთი

დავიდ დავარაშვილი -პროფესორი, დდ კლინიკის ხელმძღვანელი; თბილისი, საქართველო *ნაყოფის ანემიის დიაგნოსტიკა და მკურნალობა* - 15 წუთი

ავთანდილ ჩხეიძე - პროფესორი, „ოგაშ- OGASH“ მსოფლიო ბორდის თავმჯდომარე და პრეზიდენტი, „ოგაშ- OGASH“ მსოფლიო აკადემიის პრეზიდენტი, ორსულობის პათოფიზიოლოგიის შესწავლის საზოგადოების და გესტოზის მსოფლიო ორგანიზაციის (“ისპპ/ვოგ - SSPP/ WOG“) მმართველი კომიტეტის თავმჯდომარე; *თბილისი, საქართველო EPH –გესტოზის/რიპმანის სინდრომის კლასიფიკაცია, ნომენკლატურა, განმარტება და საფუძვლიანი მართვა* - 15 წუთი

სვეტლანა ბელეცაია - ხარკოვის სპეციალიზირებული სამედიცინო გენეტიკის ცენტრის ონკოლოგიის დეპარტამენტის და გენეტიკური საკონსულტაციო პროგრამების

უფროსი, ხარკოვის ნაციონალური სამედიცინო უნივერსიტეტის სამედიცინო გენეტიკის დეპარტამენტის ასისტენტი; ხარკოვი, უკრაინა
ორსულობის რისკ-ფაქტორები, როგორც აუტიზმის განვითარების პოტენციალური ტრიგერები - 15 წუთი

20.00–24.00 ბანკეტი

2015წ 21 ნოემბერი

იან დონალდის სახელობის საერთაშორისო სკოლის მე-3 სამეცნიერო-სასწავლო კურსები პრაქტიკოს ექიმთათვის

”ულტრაბგერითი დიაგნოსტიკა მეანობა-გინეკოლოგიაში”

09.00–11.45

09.00–10.30 სპეციალური სემინარი

”თანამედროვე ულტრაბგერითი გამოკვლევა მეანობა-გინეკოლოგიაში. პრაქტიკული ჩვენების კლინიკური გამოყენება. სპეციალისტთა მომზადება”

წამყვანი - ივიკა ზალუდ, პროფესორი, ჰავაის უნივერსიტეტის ჯონ ბიორნსის სამედიცინო სკოლის უფროსი, კოსაგა ენდოწელის მეანობა-გინეკოლოგიის და ქალთა ჯანმრთელობის დეპარტამენტი; აშშ

განსახილველი თემები:

- ულტრაბგერითი დიაგნოსტიკის როლი მეანობა-გინეკოლოგიაში მოსალოდნელი სისხლისდენების კატასტროფული შედეგების აცილებაში
- ულტრაბგერითი გამოკვლევის სტანდარტები ყოველდღიურ კლინიკურ პრაქტიკაში
- ნაყოფის ბიომეტრია: რა არის მთავარი დღეს
- ნაყოფის რეტარდაცია: როგორ დავადგინოთ თუ როდის უნდა ვამშობიაროთ ქალი?
- დავემშვიდობოთ ძველ მემკვიდრეობას: როგორ უნდა იყოს მომზადებული მსმენელი-სპეციალისტი

10.30–10.45 შესვენება (ყავა)

10.45 -11.45 სესია № 6

თანათავმჯდომარეები: აპოსტოლოს ათანასიადის, ანტონ მიხაილოვი, ელიფგიულ იაფარ ეი

პანაგიოტის ანტსაკლის - პროფესორი, ათენის უნივერსიტეტის წამყვანი ლექტორი, იან დონალდის სახ. სკოლის აღმასრულებელი დირექტორი; საბერძნეთი
ნაყოფის ჩონჩხის დისპლაზიები -15 წუთი

ანტონ მიხაილოვი - პროფესორი, დირექტორი და მთავარი ექიმი, ნ.ვ. მეჩნიკოვის სახ. სახელმწიფო სამედიცინო უნივერსიტეტი, ევროპის პერიონატოლოგთა ასოციაციის გამგეობის წევრი; *სანკტ-პეტერბურგი, რუსეთი*
რუტინული პრენატალური დიაგნოზი და მომდევნო არაინვაზიური პრენატალური ტესტირება მრავალნაყოფიანი ორსულობის დროს - 15 წუთი

დავიდ დავარაშვილი -- პროფესორი, დედ კლინიკის ხელმძღვანელი; *თბილისი, საქართველო*
TTTS- დიაგნოსტიკა და მკურნალობა. ფერადი დოპლერის და ამნიოდრენაჟის როლი - 15 წუთი

ელიფგიულ იაფარ ეი - პროფესორი, ზეკაი ტაჰირ ბურაკ ქალთა ჯანმრთელობის საგანმანათლებლო და კვლევითი ჰოსპიტალის მეანობა-გინეკოლოგიის პროფესორი, პერიონატოლოგიის ქვესპეციალისტი; *ანკარა, თურქეთი*
ორსულობა საკეისრო კვეთის შემდეგ: ულტრაბგერითი რუტინული და დოპლერ გამოკვლევების გამოყენება ნაწიბურის მდგომარეობის შეფასებისათვის - 15 წუთი

11.45 -12.00 **იან დონალდოის სახელობის მე-3 საერთაშორისო სკოლა-სემინარის დახურვის ცერემონიალი**

47-ე საერთაშორისო კონგრესი ორსულობის პათოფიზიოლოგიაში
12.00–13.00

12.00–13.00 სესია № 7

თანათავმჯდომარეები: ელენა გრეჩანინა, ვიკტორია ბიწაძე, პავლე მაზმანიან

ელენე გრეჩანინა - პროფესორი, უკრაინის ნაციონალური მეცნიერებათა აკადემიის წევრ-კორესპონდენტი, ხარკოვის სპეციალიზირებული სამედიცინო გენეტიკის ცენტრის გენერალური დირექტორი, ხარკოვის ნაციონალური სამედიცინო უნივერსიტეტის სამედიცინო გენეტიკის დეპარტამენტის პროფესორი, უკრაინის სამედიცინო გენეტიკის ინსტიტუტის დირექტორი; *ხარკოვი, უკრაინა*
ეპიგენეტიური მექანიზმის მოქმედების პოზიციიდან გამომდინარე, ნერვული სისტემის პრენატალური განვითარების პროგრამირების ეფექტურობის მულტიდისციპლინარული შესწავლის მრავალწლიანი გამოცდილება - 15 წუთი

ვიკტორია ბიწაძე - პროფესორი, სეჩენოვის სახელობის მოსკოვის პირველი სახელმწიფო სამედიცინო უნივერსიტეტის მედიცინის პროფილაქტიკის ფაკულტეტის მეანობა- გინეკოლოგიის კათედრა; *მოსკოვი, რუსეთი*
პრეეკლამპსიის პათოგენეზური პრევენციის კლინიკური მეთოდები - 15 წუთი

სუბჰაშ ნარგოლკარ - პროფესორი, ინდოეთის მეან-გინეკოლოგთა ფედერაციის ექს-პრეზიდენტი, პუნეს მეან-გინეკოლოგთა საზოგადოების ექს ვიცე-პრეზიდენტი, პუნეს პეარლ წალთა კლინიკა; *ინდოეთი*
თანამედროვე სამეანო მამა - 15 წუთი

პავლე მაზმანიან - დედათა და და ბავშვთა ჯანმრთელობის დაცვის სამეცნიერო-კვლევითი ცენტრის ნეონატოლოგიის დეპარტამენტის უფროსი; *ერევანი, სომხეთი*

საერთაშორისო ექსპერტთა მე-3 სამეცნიერო-პრაქტიკული კონფერენცია
"თბილისი -2015 "

"პრენატალური და პერინატალური მედიცინის თანამედროვე
მიღწევები და ტექნოლოგიები"

13.15-19.00

13.15-14.15 პერინატოლოგია და ნაყოფის მედიცინა

სესია № 8

თანათავმჯდომარეები: ალექსანდრე მაქაცარია, გიორგი გ. ოკოევი, სვეტლანა ჟუკ

ელენა გრეჩანინა - პროფესორი, უკრაინის ნაციონალური მეცნიერებათა აკადემიის წევრ-კორესპონდენტი, ხარკოვის სპეციალიზირებული სამედიცინო გენეტიკის ცენტრის გენერალური დირექტორი, ხარკოვის ნაციონალური სამედიცინო უნივერსიტეტის სამედიცინო გენეტიკის დეპარტამენტის პროფესორი, უკრაინის სამედიცინო გენეტიკის ინსტიტუტის დირექტორი; *ხარკოვი, უკრაინა*
პრენატალური ონტოგენეზის დამრღვევი ეპიგენეტიური ფაქტორები - დიაგნოსტიკისა და კორექციის მრავალწლიანი გამოცდილება - 15 წუთი

გიორგი გ. ოკოევი - პროფესორი, მ. გერაცის სახელობის სამედიცინო უნივერსიტეტის დიპლომის შემდგომი და უწყვეტი განათლების ფაკულტეტის მეანობა-გინეკოლოგიის დეპარტამენტის უფროსი, დედათა და ბავშვთა ჯანმრთელობის დაცვის სამეცნიერო-კვლევითი ცენტრის დირექტორი; *ერევანი, სომხეთი*
ფერტილობის შესაძლებლობები გინეკოლოგიაში -15 წუთ

ირინა ჟაბჩენკო - პროფესორი, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის განყოფილების გამგე; *კიევი, უკრაინა*
სამეანო ტაქტიკის ალგორითმი ისთმიკო-ცერვიკალური უკმარისობის დროს -15 წუთი

სვეტლანა ჟუკ - პროფესორი, პ.ლ. სჩუპიკის სახ. დიპლომის შემდგომი და უწყვეტი განათლების ფაკულტეტის ნაციონალური სამედიცინო აკადემიის მეანობა-გინეკოლოგიისა და ნაყოფის მედიცინის დეპარტამენტის უფროსი, უკრაინის საპატიო ექიმი; *კიევი, უკრაინა*
ემბრიონალური სისტემის ჩამოყალიბება და ფუნქციონირება ორსულობის ადრეულ პერიოდში; შესაძლო გართულებები და თანამედროვე კორექცია -15 წუთი

ირინა ვოვკ - პროფესორი, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ოჯახის დაგეგმარების ცენტრის უფროსი, მეცნიერებისა და ტექნოლოგიების საპატიო მუშაკი; *კიევი, უკრაინა*
საშვილოსნოს ჰემოდინამიკის მაჩვენებლები ნაადრევად შეწყვეტილი ორსულობის დროს - 15 წუთი

იური მელნიკ - კიევის ცენტრალური რეპროდუქტიული და პერინატალური მედიცინის ცენტრის პერინატალური დიაგნოსტიკის დეპარტამენტის უფროსი; ნ.პეიჰნო; *კიევი, უკრაინა*
ნაყოფის ვენოზურ სადინარში სისხლის მიმოქცევის შეფასების მნიშვნელობა პლაცენტარული დისფუნქციის და ორსულობის პროგნოზირების დროს - 10 წუთი

14.45–15.45 შესვენება

15.45–18.25

ნეონატოლოგია

სესია № 9

თანათავმჯდომარეები: **ტატიანა ზნამენსკაია, ნიკოლაი არიაევი, ვალერი პოჰილკო**

ტატიანა ზნამენსკაია - პროფესორი, მედიცინის მეცნიერებათა დოქტორი, უკრაინის ნეონატოლოგთა ასოციაციის პრეზიდენტი, პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის დირექტორის მოადგილე პერინატალურ მედიცინაში და ნეონატოლოგიის დეპარტამენტის უფროსი; ა.ა.პისარევი, პროფესორი, მედიცინის მეცნიერებათა დოქტორი, პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ნეონატოლოგიის დეპარტამენტის უფროსი მეცნიერ მუშაკი; *კიევი, უკრაინა*
ინვაზიური მიკოზების პრობლემა ნეონატოლოგიაში, პროფილაქტიკისა და მკურნალობის ეფექტური და უსაფრთხო მიდგომები - 20 წუთი

ნიკოლაი არიაევი, პროფესორი, უკრაინის ნაციონალური მეცნიერებათა აკადემიის წევრ-კორესპონდენტი, ოდესის ნაციონალური სამედიცინო უნივერსიტეტის პედიატრიის დეპარტამენტის უფროსი; *ოდესა, უკრაინა*
ღედის და ბავშვის დაცვის და დახმარების ბიოეთიკა - პერინატალური აივ ინფექციის საწინააღმდეგო სტრატეგიის მოქმედების მაგალითი - 20 წუთი

ტატიანა ზნამენსკაია - პროფესორი, მედიცინის მეცნიერებათა დოქტორი, უკრაინის ნეონატოლოგთა ასოციაციის პრეზიდენტი, პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის დირექტორის მოადგილე პერინატალურ მედიცინაში და ნეონატოლოგიის დეპარტამენტის უფროსი; *კიევი, უკრაინა*

ახალშობილების კატამნეზური დაკვირვება ნივთიერებათა ცვლაში გენეტიურად განპირობებული ფოლიუმის მჟავის დარღვევების დროს - 20 წუთი

ვალერი პოხილკო - პროფესორი, უკრაინის სახ.სამედიცინო სტომატოლოგიური აკადემიის პედიატრიისა და ნეონატოლოგიის დეპარტამენტის უფროსი, მედიცინის მეცნიერებათა დოქტორი; კოვალიოვა ე.მ.; ჩერნიავსკაია იუ; არტიომოვა ნ; კორობკა ო; როსსოკხა ზ; *პოლტავა, უკრაინა*

ადრეულ ნეონატალურ პერიოდში არტერიული ჰიპოტენზიის განვითარების პრედიქტორები ბაქტერიული ინფექციის მქონე ნაადრევად დაბადებულ ბავშვებში - 20 წუთი

ოლღა იაბლონ - პროფესორი, ნ.პიროგოვის სახელობის №1 ვინიცას ნაციონალური სამედიცინო უნივერსიტეტის პედიატრიის დეპარტამენტის უფროსი; *ვინიცა, უკრაინა*
ექსტრემალურად დაბნელებულ ბავშვებში თანდაყოლილი იმუნიტეტის როლი ნაადრევი მშობიარობის პათოგენეზსა და ახალშობილთა პათოლოგიის ჩამოყალიბებაში - 20 წუთი

ირინა კონდრატოვა - რეგიონალური პერინატალური ცენტრის დირექტორი; *ხარკოვი, უკრაინა*
სტაბილიზაცია და რესპირატორული მენეჯმენტი სამშობიარო დარბაზში -15 წუთი

ტატიანა კურილინა - მედიცინის მეცნიერებათა დოქტორი, წამყვანი მეცნიერ მუშაკი, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ნეონატოლოგიის დეპარტამენტი; ევგენია ზბროჟიკ, ფსიქოლოგი, მეცნიერ მუშაკი, უკრაინის პედიატრიის და მეანობა-გინეკოლოგიის ნაციონალური ს/კ ინსტიტუტის ნეონატოლოგიის დეპარტამენტი; *კიევი, უკრაინა*
ნეიროგანვითარების ხელშეწყობი ახალშობილთა მოვლა მაღალტექნოლოგიურ გარემოში -15 წუთი

სერგეი ლაპონოვ - ჟიტომირის პერინატალური რეგიონალური ცენტრის ნეონატოლოგიის დეპარტამენტის უფროსი; *ვაიბერგ იუ; სერგეიკო ი; მორენეც ლ; რიჟნიკ ვ.; ჟიტომირი, უკრაინა*
რესპირატორული დისტრეს - სინდრომის მქონე ახალშობილებში სურფაქტანტ MIST-ს გამოყენების მცირედ ინვაზიური ტექნოლოგია -15 წუთი

სერგეი ბარსეგან - დედათა და ბავშვთა ჯანმრთელობის დაცვის სამეცნიერო-კვლევითი ცენტრის მთავარი ექიმი, ანესთეზიოლოგიის დეპარტამენტის უფროსი; *კ.ჩილინგარიან; ერევანი, სომხეთი*
პლაზმაფერეზის გამოყენება თრომბოცილოზის კომპლექსურ მკურნალობაში -15 წუთი

18.25–19.00 **ორსულობის პათოფიზიოლოგიაში 47-ე საერთაშორისო კონგრესის დახურვის ცერემონიალი**

2015წ 21 ნოემბერი

20.00 **თეატრი**

Abstracts and Biographical Sketches

(The authors list is arranged according on the submission time of the information and not subjected to correction/reduction)

თეზისები და ავტორთა მოკლე ბიოგრაფიული მონაცემები

Prof. Sir Sabaratnam Arulkumaran, Past President FIGO, UK



Professor Emeritus of O& G, St George's, University of London

Past-President of the International Federation of Obstetrics & Gynaecology (FIGO)

Past President of the British Medical Association ('13-'14) & Royal College of Obstetricians and Gynaecologists ('07-'10)

Knight Bachelor in recognition of Services to Medicine & Health Services by Her Majesty the Queen - Birthday Honours List – June 2009

Case for Reduction of late Preterm and early Term Elective Deliveries

The risk of adverse outcomes in late preterm (34 0/7 to 36 6/7 weeks gestation) and early term (37 0/7 to 38 6/7 weeks gestation) births is greater compared to delivery at 39 weeks gestation. Each week of gestation until full term lowers risk for neonatal and infant mortality as well as risk of neonatal morbidity. Studies demonstrate that these morbidities present a continuum largely determined by gestational age, with the higher rates in the late preterm period and the lowest rates at 39 to 40 weeks gestation. Short-term neonatal morbidity associated with delivery before 39 wks include: Increased rates of NICU admission; Respiratory problems (RDS, transient tachypnea of the newborn), Increased ventilator support, Hypoglycemia. In addition, late preterm infants are also at increased risk for other medical complications such as hypothermia, jaundice and apnea. Studies demonstrate that these short-term morbidities present a continuum largely determined by gestational age: A population-based

French study of over 150,000 live-born infants found that the rate of severe respiratory disorders (i.e., treated by mechanical ventilation and/or nasal continuous positive airway pressure) decreased

from 19.8% at 34 weeks gestation to 0.28% at 39-41 weeks gestation, with each additional week between 34 and 38 weeks showing a reduction in relative risk of severe respiratory disorders by a factor of 2 to 3. (Gouyon et al., *Int J Epidemiol* 2010). A retrospective analysis of births at a single U.S. institution found that the rate of neonatal morbidity such as respiratory, infectious, central nervous system and NICU admission were inversely proportional to gestational age. (Melamed et al., *Obstet Gynecol* 2009). Studies have found that late preterm infants have incomplete brain development compared to term infants: The negative impact of prematurity is observed in neuronal complexity and function when delivery is prior to 39 weeks gestation. Although late preterm infants are considered to be at higher risk than early term infants for complications, early term infants are also at higher risk for morbidities compared to term infants, including increased admission to the NICU, respiratory distress syndrome, and persistent pulmonary hypertension. A retrospective study comparing women with singleton uncomplicated pregnancies who delivered babies with mature lung profiles at 36 to 38 weeks found that delivery before 39 weeks, even with confirmed fetal lung maturity, was associated with increased neonatal morbidity when compared to delivery at 39 to 40 weeks. (Bates et al., *Am J O&G* 2009). A growing body of evidence suggests some long-term morbidity associated with late preterm and early term births such as neurodevelopmental problems. A large population-based study of late preterm infants found an increased risk for developmental delay and adverse early school-age outcomes in late preterm infants compared with term infants, such as a 36% higher risk for developmental delay between birth and 3 years of age and 10% higher risk for special educational services in Kindergarten. (Morse et al., *Pediatrics* 2009). A Scottish study examining special education need for school-aged children found that gestational age at delivery (24 to 40 weeks gestation) had a dose-dependent relationship with special education need extending to early term births. (MacKay et al., *PLoS Med* 2010). The risk of late preterm and early term births are under estimated and we should be sensitive to this issue in managing cases with hypertensive disease in pregnancy.

Intrapartum Surveillance of high Risk Pregnancies

The fetus receives its oxygen and nutrition through the umbilical cord (from the placenta) that floats in the amniotic fluid. The placenta receives oxygen from the maternal blood. Uterine contractions of labour reduce or intermittently cut off the blood perfusion into the retroplacental area thus reducing the exchange of gases and essential nutrition to the fetus. Pregnancies known to be at high risk have continuous observation of the fetal heart rate (FHR) and uterine contractions i.e. cardiotocography (CTG) electronically (EFM). Electronic fetal monitoring by CTG are fraught with problems of high sensitivity but low specificity. Monitoring by CTG is by pattern recognition. This ends in unnecessary operative deliveries if interpreted without the understanding of the pathophysiology. At times the fetuses that are acidotic are missed. Fetal scalp blood sampling (FBS) increases the specificity and reduces un-necessary operative delivery rates. FBS is an intermittent measure and failure to get adequate samples is not uncommon. The value of FBS has been challenged.

The CTG at term should have a baseline rate between 110 to 160 bpm – however a rise in the baseline of a particular fetus of its own baseline within the normal range is of significance and may suggest hypoxia or infection. The presence of accelerations suggest a non acidotic fetus and is considered to reflect the integrity of the somatic nervous system. The baseline variability reflects the integrity of the autonomic nervous system (sympathetic and parasympathetic) and a normal baseline variability (BLV) of 5 to 25 beats reflect a small chance of acidosis. Reduction of BLV of < 5 bpm especially when associated with decelerations increases the chance of acidosis and the absence of variability with decelerations needs intervention in the form of changing position, hydration, stopping oxytocin, fetal scalp blood sampling or delivery of the fetus. The worsening pattern is reflected by the increase in baseline rate with catecholamine surge, absence of accelerations, increase in depth and duration of

decelerations, reduction of time spent at the baseline rate and reduction and finally absent baseline variability (i.e. gradually developing hypoxia). With this progression and absent variability action should be to deliver the fetus unless spontaneous delivery is imminent or the situation of stress can be

reduced or reversed. In the late first and second stage of labour at times the decelerations could last 90 to 120 seconds with the FHR being at the baseline rate for <60 seconds and mostly with salutatory variability (>25 bpm) reflecting hypoxia and over reaction by the autonomic nervous system. Intervention within 30 to 40 minutes is recommended to prevent sub-acute hypoxia leading to acidosis. A prolonged deceleration of <80 bpm is likely to lead to acidosis at a rate of 0.01 every minute and delivery within 15 minutes should help to avoid asphyxia. Some foetuses may be already partially compromised and present with absent or minimal baseline variability and shallow decelerations. They usually present a clinical history of meconium, infection, bleeding or absent fetal movements. These foetuses are best delivered early to avoid increasing hypoxia.

PPH – Lessons from Confidential Inquiries and recent Advances

The stepwise rapid succession of medical followed by surgical interventions can stop or minimize the bleeding and correct the blood loss and prevent the cascade of events that lead to massive blood loss, hysterectomy, admission to ICU and deaths. ‘Too little, too late’ has been highlighted in successive confidential enquiries into maternal deaths in the UK; and is tackled by the use of the mnemonic ‘HAEMOSTASIS’. Give oxygen, adequate fluids, blood and blood products. No response to oxytocin or, ergometrine warrants infusion of oxytocin to keep the uterus contracted to allow clotting of uterine vessels. Next step is bimanual uterine massage and prostaglandins (parenteral PGF or misoprostol PG E1 orally or sublingually). Blood loss could be about 70 ml/min when the uterus relaxes and hence a 14 Gauge needle to give fluids rapidly should be used X 2 lines. Tranexamic acid, an antithrombolytic prevents the clot from lysing. An antishock garment, which squeezes the blood into the circulation and also has a compressive effect on the uterus, could be tried. Consumptive coagulopathy, lack of clotting factors, activation of fibrinolysis, large volumes of fluids, metabolic acidosis and hypothermia aggravates the situation and is controlled by fibrinogen and clotting factors. Shock is proportionate to blood loss - mild 15%, moderate 30%, and severe 45%. Transfusion of one unit packed red blood cells to unit plasma as opposed to four packed cells to one unit plasma results in a 60 to 70% reduction in mortality in war injury victims -same principle after blood loss of > 2L of blood loss is useful. Freeze dried fibrinogen concentrate that can be reconstituted may be an alternative. Platelet transfusion may be needed but this is rare. Failure to arrest haemorrhage by medical therapy should be followed by a ‘Tamponade Test’. It will only work when there is no coagulopathy. Sengstaken, Rusche, or Cooke’s catheter can be inserted into the

uterus and filled with warm saline/ water bleeding completely stops. If bleeding stops the balloon can be taken out in 6 hours. Patient should have broad-spectrum antibiotics and an oxytocin infusion. Vital parameters, fundal height and bleeding per vagina should be monitored. If the test is going to be effective it will be known within 5 minutes. If the tamponade fails to stop the bleeding, a laparotomy should be performed and compression sutures (B- lynch or 2 to 5 vertical) should be employed. Failure of compression sutures should lead to systematic devascularisation by tying the infundibulopelvic and uterine vessels and/or anterior branch of the internal iliacs. Arterial embolisation using radiological guidance can be tried where facilities exist. Failure to arrest haemorrhage or deterioration of general condition of the patient should prompt sub-total or total hysterectomy. The recent research -WOMAN trial consisting of 20,000 women may inform us that the use of a clot stabilizer Tranexamic acid would be useful in reducing hysterectomies and maternal deaths. The long acting heat stable duratocin (half life approx. 80 minutes) may be better than syntocinon that has a half-life of 4 mins. The CHAMPION trial that would recruit 30,000 women may revolutionize the medications we may give. If blood transfusion is needed, one packed cells to one plasma compared with four red cells to plasma may help to save many lives and reduce morbidity. The management of placenta accrete may be best with a ‘Triple P procedure’ pioneered at St George’s hospital may find more acceptance as it excises the placenta with part of myometrium and allows reconstruction and retention of the uterus.

New regime of drugs and simple technology may help many women to survive and retain their uterus and reduce over all morbidity.



Director – Gupte Hospital of Accurate Diagnostic (P) Ltd.

Trustee – Asmita Medical Foundation Trust

Professional Qualifications:

- D.G.O. December 1976 – 1st in Pune University.
- M.D. (Gynecology and Obstetrics) December 1977-1st in Pune University.
- F.I.C.O.G. Fellow of the Indian College of Obstetrics and Gynecology 1998.
- L.L.B. (Bachelor of Law) in 1994 with Distinction.
- F.R.C.O.G. (Honoris causa) by the RCOG (London) November 2010.

Professional Achievements:

- President FOGSI (2010) Federation of Obstetrics and Gynecological Societies of India.)
- President DIPSI 2013 (Diabetes in Pregnancy Study Group-India)
- President Organization Gestosis (2010)
- Secretary General Organization Gestosis
- FOGSI representative to AOFOG 2014-15
- Convener “Save the Mother & Newborn National Initiative”
- Elected Member of Maharashtra Medical Council
- Invited Member of National Commission on Population under chairmanship of Hon’ble Prime Minister of India
- Member of Ethics Committee, Medical Council India
- Chairman of Ethics Committee, State Medical Council
- Chairman of ICMR Technical Research Committee
- Awarded many national prizes for his various presentations

Professional Positions Held:

- Honorary Professor and Post-Graduate Teacher at B.J. Medical College and Sassoon
- Honorary General Secretary, The Indian College of Obstetricians and Gynecologists

Interests:

- Reproductive Endocrinology
- Post-Graduate Teaching
- High Risk Obstetrics

He has published more than 60 national & International research papers

He has written books & chapters in many textbooks

He has given oration & guests lectures in more than 100 societies all over India & across the world

Experience of Dengue Fever (Viral Infection) in Pregnancy

Dengue fever is a viral disease caused by any of the four closely related serotypes of Flavivirus (RNA virus) Aedes mosquitoes, particularly Aegyptiis a vector transmitting it to human. Most of the states in India are Dengue endemic.

40% of world’s population lives in Dengue prone zone. WHO estimates at least 100 million infections occur every year including 500,000 Dengue Hemorrhagic fever cases and nearly 22000 deaths.

A well manage front- line response saves the lives of Dengue patients. Obstetrician being front line physician for pregnant women should shoulder the responsibility of identifying and managing cases of DF in pregnancy. Dengue fever can lead to severe thrombocytopenia followed by hemorrhagic shock and death if not treated in time. Early detection and access to proper medical care reduces fatality from 20% to below 1%. We would like to present our experience with these cases.

GDM – The Silent Epidemic

Gestational diabetes has become a silent epidemic all over the world. Global data shows that 8.3% of the world population suffers with diabetes. 79% people with diabetes live in the middle and low income countries. Between 2 and 10 % of expectant mothers develop this condition, making it one of the most common health problems of pregnancy.

Asian and particularly Indian women are ethnically more prone to developing gestational diabetes. Indian women have a two-fold increased risk as compared to other women around the world. 16 out of every 100 pregnancies are diagnosed with diabetes. With this kind of increase in recent years, it has become extremely important to screen every single pregnant woman for diabetes. Various screening tests are available.

We have screened 5520 patients from June 2012 to Jan 2015 for Gestational Diabetes with newly recommended test called as DIPSI test which is a one-step procedure for screening and diagnosis of gestational diabetes mellitus. By this test we have found 547 (9.95%) patients to be having GDM and in addition 858 (15.16%) patients to have GGI (Gestational glucose intolerance). These figures are very significant and show the need for universal screening for GDM in pregnancy.

Furthermore we have managed these patients in a “DIP” clinic i.e. Diabetes In Pregnancy clinic which includes Diabetologist, Nutritionist & Counselors apart from Obstetricians which leads to better management of this condition and we would like to recommend it for universal use.

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Prof. Asim Kurjak, Director of Interuniversity Ian Donald School on Ultrasound in OB&GYN, Member of European and World Academy of Science and Art, Croatia



EDUCATION: in 1966 MD degree at the University of Zagreb; from 1971-1972 as a British scholar, research assistant at the Institute of Obstetrics and Gynecology, University of London; in 1974 specialist in obstetrics and gynecology; in 1977 PhD degree.

PRESENT POSITION: professor of obstetrics and gynecology, Medical School Universities of Zagreb and Sarajevo.

PUBLICATIONS: peer review articles – more than 400; books (written or edited) - 111; invited lectures at major international meetings - more than 700; MSc thesis supervisor - 52; PhD thesis supervisor - 28. His papers have been cited more than 5.350 times in Science Citation Index.

AWARDS, HONORS AND ACHIEVEMENTS: National Prize for Young Scientists (1971); Croatian national award "Rudjer Boskovic" for scientific work (1985); "Josip Juraj Strossmayer" Prize of Academy of Science and Arts of the Republic of Croatia for the scientific book (1990); The Prize of Academy of Science and Art of the Republic of Croatia for the achievements in medical science (1994); Prize "Europski krug" given by European Movement - Croatia (1996), Prize "William Liley" for the best scientific paper from fetal diagnostics and therapy (1998); "Maternity Prize" given by European Association of Perinatal Medicine (2000), and Presidential

decoration "The Order of the Croatian Starr with the Effigy of Rudjer Boskovic" (2001); "Pavao Culumovic" Prize of Croatian Medical Association (2003), Erich Saling Perinatal Prize (2011).

He is a regular member of European Academy of Sciences and Art, International Academy for Human Reproduction, Italian Academy of Science and Art of Reggio Puglia, Academy of Medical Sciences of Catalonia; honorary member of American Institute of Ultrasound in Medicine and Biology; foreign member of Russian Academy of Medical Sciences; Regular Fellow of Russian Academy of Science.

Presently, he is Past President of World Association of Perinatal Medicine; coordinator of Educational Committee of World Association of Perinatal Medicine; vice-president of International Academy of Perinatal Medicine and Fellow of World Academy of Art and Science; Fellow of Academy of Science and Art of Bosnia and Herzegovina; director of Ian Donald Inter-University School of Medical Ultrasound.

Editor-in-chief of Donald School Journal of Ultrasound in Obstetrics and Gynecology.

He has been awarded doctor honoris causa from Semmelweis University in Budapest, Hungary; University of Athens, Greece; Carol Davila University of Medicine, Bucharest, Romania; University of The Republic, Montevideo, Uruguay; Siberian State University, Tomsk, Russia; University of Buenos Aires, Argentina; Ott Scientific Research University of Obstetrics and Gynecology, St Petersburg; Pirogov Russian National Research Medical University, Moscow and Center for Obstetrics, Gynecology and Perinatology, Moscow; University of Tirana, Albania.

He is honorary member of 15 international societies. Member of Editorial board or editor in chief of several international journals.

Advanced Ultrasound and Fetal Syndromes

From piece to a full puzzle

A dysmorphic feature is a difference of body structure. It can be an isolated finding, part of normal human variation in an otherwise normal individual, or it can be related to a congenital disorder, birth defect or genetic syndrome.

Dysmorphic features can vary from isolated, mild anomalies and minor cosmetic imperfections (such as polydactyly) to severe congenital anomalies (such as holoprosencephaly).

In some cases, dysmorphic features are part of a larger clinical picture, sometimes known as a sequence, association or syndrome.

A syndrome is a pattern of multiple anomalies thought to be pathologically related, particular combination of major (essential) and minor (may be absent) criteria.

So, why searching for fetal syndromes?

Early diagnosis is very important especially in the delineation of best care for the patient, prognosis, likelihood of other abnormalities, identifying correct recurrence risk and the best approach to monitor future pregnancies.

Being able to provide as clear information as possible is of great importance to avoid confusion in parents as well as healthcare providers, to make a management plan and to put everything in the perspective.

Recognizing the patterns of fetal malformations is extremely useful for sonologist, practitioners providing prenatal diagnosis.

Ultrasound findings of abnormalities and patterns of more common fetal syndromes as well as some less common fetal syndromes are lined up in this presentation.

Technological advances in ultrasonography, particularly the introduction of high definition 3D and 4D ultrasound allowed us to study fetal anatomy in great detail in very early stages of fetal life, which on their hand helped us to detect fetal abnormalities easier and even earlier than ever before.

Beside fetal anatomy, we are now even able to study a function of some systems and fetal behavior. Fetal behavioral patterns are directly reflecting development and maturational process of fetal CNS. KANET test is the first method that attempted to use 4D US in order to asses and combine different parameters of fetal behavior and form a scoring system in order to determine their neurological status. So, now we are beeing able to detect not only structural abnormalities, but also their functional and behavioral abnormality patterns related to a fetal syndrome in era of prenatal diagnosis.

Could We Detect Abnormal Fetal Movements Which Precede Development of Cerebral Palsy

Fetal behavior refers to the fetal activities observed or recorded with ultrasonographic equipment. Behavior can be spontaneous, generated by the fetus itself, or elicited in response to external stimulus such as vibroacoustic stimulation. Analysis of the fetal dynamics in comparison with morphological studies has led to the conclusion that fetal behavioral patterns directly reflect developmental and maturational processes of the fetal central nervous system (CNS). In addition, there is a carryover effect of movements from prenatal to postnatal life. There were no movements observed in fetal life that were not present in neonatal life. Furthermore, prenatal-neonatal continuity exists even in subtle, fine movements such as facial mimics. Altered quality of fetal movements might reveal the structural or functional impairment of the fetal central nervous system. Improvement of four dimensional (4D) technology enabled introduction of Kurjak Antenatal Neurological Test (KANET), scoring test for the assessment of the fetal behavior. Our preliminary results have confirmed the usefulness of this test in fetal behavior assessment. The KANET test has potential to detect and discriminate normal from borderline and abnormal fetal behavior in normal and in high-risk pregnancies, which means that it could become a valuable diagnostic tool for fetal neurological assessment. Over 100 fetuses from pregnancies with threatened preterm labor have been studied using KANET in our multicentric program. Recently study with the largest number of fetuses (620 fetuses) where prenatal KANET test has been applied was published. Among the fetuses with abnormal KANET score, most frequently presented were fetuses from the threatened preterm delivery group. Preterm labor accounts for 75% of perinatal mortality and over 50% of perinatal morbidity. Although preterm survives, they are at increased risk of neurodevelopmental impairment. It has been shown that fetal behavior differs in preterm than term infants. Further, fetal behavior differs in neurologically compromised compared to normal fetuses. There are developmental differences between fetuses threatening to deliver early and other high risk fetuses. Preterm infants are at higher risk for cerebral palsy due to prematurity, intrauterine growth restriction, infection or multiple pregnancy. Pediatricians know that they need to wait until the age of 6 months postnatally to diagnose a severe CP and at least 24 months or even longer for a minor non-disabling CP. KANET test and behavioral assessment give new hope in the attempt of early diagnosis of cerebral palsy and provide identification of fetuses at neurological risk from pregnancies with threatened preterm labor.

Different Advanced Ultrasonic Methods in the Assessment of early Human Development

OBJECTIVE: To evaluate the role of 3D, 4D and color Doppler ultrasound in the assessment of early human development.

MATERIAL AND METHODS: three hundred eighty women with uncomplicated early pregnancy between 5 and 14 weeks were evaluated by 3D, 4D and color Doppler ultrasound.

RESULTS: Regression analysis revealed exponential rise of the gestational sac volume with gestational age throughout the first trimester. An exponential rise of the yolk sac volume was noticed between gestational weeks 5 and 8, followed by gradual increase of the yolk sac volume between 8 and 10 weeks. After reaching the plateau from 10 to 11 weeks, yolk sac volume started to decrease. Three-dimensional ultrasound was used to study nuchal translucency in 120 patients between 10 and 14 weeks of gestation. Multiplanar imaging allowed appropriate mid-sagittal section of the fetus and clear distinction of the nuchal region from the amniotic membrane in all the examined patients. This enabled us to obtain nuchal translucency measurements in 100% of cases. Rotation of the embryo and close scrutiny of the volume allowed systematic review of anatomic structures such as cord insertion, limb buds, cerebral cavities, stomach and bladder.

CONCLUSIONS: Three-dimensional ultrasound is advantageous for studying normal embryonic and/or fetal development, as well as providing information for families at risk for specific congenital anomalies by confirming normality. Three-dimensional ultrasound imaging complements pathologic and histological evaluation of the developing embryo rising a new term: 3D sonoembryology. It is expected that interesting data on fetal behavior will be collected with introduction of 4D sonography.



Professor of Obstetrics and Gynecology.

Personal data: Born in Kalamata, Greece. Married to Zetta Mamali. Father of two daughters Marina (1980) and Alexia (1981)

Training: After graduation from high school he studied medicine (MD degree 1969) at Athens University. He was trained as an Obstetrician Gynecologist (1970-1974) in the University of Athens 2nd Department of Obstetrics and Gynecology. In 1974 he defended his MD thesis "Amniotic fluid immunoglobulin IgG IgM IgE

in normal and high risk pregnancies" of the University of Athens. In the 1975 he was a Council of Europe research fellow and honorary lectures at the Department of Obstetrics and Gynecology of the University College Hospital, University of London with

Professor D. V. Fair-weather and in 1976 at the Department of Obstetrics and Gynecology at Yale University with Professor Hobbins and R. Berkowitz. In 1981, he defended his PhD thesis "Fetoscopy and fetal blood sampling for prenatal diagnosis in twins" at University of Athens. In 1993 he spend a short period with K. Nicolaides at Kings College Hospital. In 1996 he attended the intensive Course on Screening for Down's Syndrome in Wolfson institute of Preventive Medicine London (Prof. N. Wald)

In 1977, Dr. Antsaklis was appointed senior registrar of Obstetrics and Gynecology and in 1982 as an assistant Professor of Obstetrics and Gynecology and Deputy director of Maternal Fetal Medicine Division of the 1st Department of Obstetrics and Gynecology, University of Athens.

In 1993, Dr. Antsaklis was appointed associate Professor of Obstetrics and Gynecology and Deputy director of Maternal Fetal Medicine. In 2002, he was appointed Professor of Obstetrics and Gynecology and Maternal Fetal Medicine in the University of Athens at the 1st Department of Obstetrics and Gynecology. He was the Director of the Maternal Fatal Medicine Division. He was involved in the teaching program for the medical students, the junior staff members of the Department and the residents of the 1st Dept. of Obstetrics and Gynecology, University of Athens. In September 2005 Prof. Antsaklis was appointed Chairman of the 1st Department of Obstetrics and Gynecology, University of Athens.

Membership: At the national level he is a founder member, executive board member and President of several bodies in the field of Obstetrics and Gynecology, Perinatal Medicine, Ultrasounds and Fetal Medicine such as the Hellenic Society of Obstetrics and Gynecology for several years member of the

Board, Gen. Secretary and now President of the Society

since 2009, the Hellenic Society of Perinatal Medicine (President for several years and member of the Board), the Hellenic Society of Prenatal Diagnosis and Fetal Therapy (Founder and President since 1984), the Hellenic Society of Ultrasound in Obstetrics and Gynecology (Founder and President since), the Hellenic Society of Maternal Fetal Medicine (Member of the Executive Board), the Hellenic Society of Medical Studies (Member of the Executive Board). He participates in several committees of the Hellenic Health Council of Perinatal Medicine since 1990 and on Ultrasound in Obstetrics since 1995, and since 2004 he is the President of the Committee for examinations in obstetrical and gynecological ultrasound. He is member of the Editorial Board and Editor in Chief of several Greek Medical Journals.

At the international level, he is a member of the Executive Board (1996-2000) of the European Association of Perinatal Medicine (EAPM) and became President elect (2000-2004) and President (2004-2006). He is a member of the Scientific Committee of the World Association of Perinatal Medicine (WAPM) and founder, Vice President 2009-2011, member of the Board of the International Society: "The fetus as a patient" and he is a founding member of the Fetoscopy Working Group and from 2004 he is Vice President of the "International Academy of Perinatal Medicine". He is member of the following societies and bodies: American Institute of Ultrasound in Medicine (AIUM), 2005 Award from Serbian and Montenegro association for Perinatal Medicine for popularization of perinatal medicine and developing connection among countries. 2007 Fellow of the World Academy of Art and Science. 2009 Letter of

Appreciation for the help and guidance in establishing Ian Donald School at Kathmandu, Nepal.

International Society at ultrasound in Obstetrics and Gynecology (ISUOG), the International Society of Doppler (ISDS). In 2004 Founding member of the Mediterranean Association for Ultrasound in Obstetrics and Gynecology. He is member of the expert advisory Panel on Maternal and Perinatal Health and Obstetrics FIGO, since 1997. He is founding member and served as President of the South East Europe Society of Perinatal Medicine and he is the Director of the Greek branch of the Ian Donald Inter-University School of Medical Ultrasound. He is the member of the editorial Board at the European Journal of Obstetrics and Gynecology and Reproductive Biology (1997-2003), Archives in Perinatal Medicine (POL) (1997).

Awards: 1977 Fellow of the International College of Surgeons in Obstetrics and Gynecology. 1998 Appreciation Award by the Indian Society for Perinatal Diagnosis and Therapy-Calcuta 1999 1999 Honorable member by Romanian Association of Perinatal Medicine for his contribution to the development of Perinatal Medicine 2003

Soranos Award by the Turkish and Hellenic Soranos awards committees for his contribution in the field of Perinatal Medicine 2005 Sir William Liley award by the International Society "The Fetus as a patient". 2009 Elected honorary member of the Croatian Association of Perinatal Medicine for his outstanding contribution to the development of world perinatal medicine. 2010 Maternity Prize, EAPM (European Association of Perinatal Medicine) for 2010. 2011 George Papanicolaou Award by the Hellenic Medical Society of New York, in recognition of his contribution to women's health. 2011 Honored member of the Russian Association of Perinatal Medicine in recognition of his great contribution to the Russian Association of Perinatal Medicine.

Professional and research interests:

Prof. Antsaklis is very much interested in the organization and quality of Perinatal care, application of screening tests for Prenatal Diagnosis of congenital malformations, and of Ultrasound in Obstetrics and Gynaecology. He organizes several National and International Conferences and Meetings on Prenatal Diagnosis, Perinatal Medicine and Ultrasound in Obstetrics and Gynecology, to mention the 4th International Conference on Chorionic Villus Sampling and Early Prenatal Diagnosis (Athens, May 28th-29th, 1988) and the 19th European Congress of Perinatal Medicine (Athens, October 13th-16th 2004) and every two years (the next is

taking place in Athens, Oct. 2011). He also organizes the Ian Donald Course every second year (the next in Athens 10-11 Dec, 2011) and the Hellenic Congress on Ultrasound in Ob/Gyn. His contribution to Perinatal Medicine was great both in Greece and worldwide. The Hellenic Society of Perinatal Medicine was always happy to sponsor and follow his initiatives. He was a member of the committee that in 1998 advised the Central Council for Health on the use of the Ultrasound in Obstetrics (1998-2005), and the organization of Prenatal Diagnosis on Hereditary Hemoglobinopathies. He participated in many European Community concerted action projects: "New methods for Perinatal surveillance", "European network for prenatal transport (EUROPET, EURAIL, EUROPOP), research projects on different subjects and acted as referee for other PhD thesis. He is a visiting Professor at the European Summer and Winter School of Perinatal Medicine since 1998. His current research lies mainly in the field of Prenatal Diagnosis and Therapy (embryoscopy on the 1st trimester of pregnancy), Twin-to-twin transfusion syndrome, fetal therapy, Ultrasound in Obstetrics and Gynecology (3D Ultrasonography diagnosis of fetal malformation early in pregnancy) and Perinatal Medicine. \

He gave lectures as invited Professor in several Universities in Greece, Europe and USA and as invited speaker in International Meetings, Symposia and Congresses

Prof. A. Antsaklis supervised PhD theses.

He has participated in more than 260 Greek (208 as an invited speaker) and more than 250 International (180

as an invited speaker) Congresses, symposia and seminars.

Publications: Prof. Antsaklis was the author and coauthor

of more than 400 papers in International and Hellenic pre-reviewed journals and has written 15 chapters in International and 15 chapters in Greek medical books. He published Greek book of Obstetrics and Gynecology for the students of several medical Schools in Greece and for the residents and doctors.

abstracts

Prof. Milan Stanojevic , President of WAPM, Zagreb, Croatia



Head of the Department of Neonatology at the Department of Obstetrics and Gynecology Medical School University of Zagreb, "Sveti Duh" Clinical Hospital, Zagreb, Croatia from 2007. Actively participating in the teaching for the graduate and postgraduate medical students of the Medical School University of Zagreb (Obstetrics and Gynecology, Basic Course on Ultrasonography in Croatian and English, Fetal and neonatal neurophysiology, fetal behavior). Associate professor at Dubrovnik International University from 2011. Assistant professor of pediatrics at The Faculty of Teacher's Education University of Zagreb from 2013. Member and from 2007 to 2011 Secretary General of the World Association of Perinatal Medicine, vice-president of WAPM from 2011, and president elect from 2013. Board member of the Fetus as the Patient Society from 2008. From 2008 associate fellow of the International Academy of Perinatal Medicine (IAPM) and from 2014 regular fellow of IAPM. Fellow of the European Academy of Sciences and Arts from 2014. Member of the Board of Croatian Perinatal Association. Involved as a member of the organizing committees, vice – president and member of scientific committees of national and international meetings. Awarded with William Liley Medal by Fetus as a Patient Society in 2011 and „Ladislav Rakovac“ Award by Croatian Medical Association in 2008. Visiting professor at the Weill Cornell Medical University, New York, USA. Honorary professor of the Pirogov Russian National Research Medical University, Medical Institute of State University in Surgut, Russia, and Kuban State Medical University, Russia. Published 253 papers (108 journal and 145 conference papers), more that 40 conference papers without publication as invited speaker, with more than 800 citations and H index 15 (15 papers cited at least 15 times). Wrote 42 chapters in the books and edited 5 books. Member of editorial board of two journals and reviewer in ten. Participating in several research scientific projects (follow up of high risk infants, fetal hypoxia, fetal neurology). Recently participating as the senior researcher in the scientific project «Cerebro-Umbilical Ratio and Motor Parameters in Prevention of Perinatal Brain Damage» led by prof. Aida Salihagic-Kadic from Medical School University of Zagreb. National coordinator for education at the UNICEF Office for Croatia involved already twenty years in the project "Baby Friendly Hospital Initiative".

Ethical Aspects of the Care for Infants with severe Congenital Malformations

Scope of the problem: Modern medicine is facing the problem of increasing possibility to extend the life of many newborns with virtually lethal congenital malformations or other rare diseases. The potential of modern medicine to preserve life of the sickest newborns should not be overestimated, because it raises many ethical issues, which are, compared to technical possibilities, still waiting to be solved.

Definitions: The terms 'congenital anomalies', 'birth defects', and 'congenital malformations' are all used to describe developmental defects that are present at birth. Congenital malformations can be at least classified according to the type, cause and pathogenesis. Some lethal congenital malformations fulfill the criteria for rare diseases. The European Commission on Public Health defines rare diseases as "life-threatening or chronically debilitating diseases which are of such low prevalence that special combined efforts are needed to address them". The term low prevalence is defined as less than 1 in 2,000 people.

Diseases that are statistically rare, but not also life-threatening, chronically debilitating, or adequately treated, are excluded from the definition. Sometimes rare diseases are diagnosed in neonatal period and some of them might be life threatening without adequate treatment.

Epidemiology: Estimates of the prevalence of congenital anomalies vary between 2 to 6 per cent of births. The prevalence may vary considerably depending on the definition and criteria used to include or exclude minor malformations, the time period of follow-up after birth and ethnicity. Major structural congenital anomalies are commonly reported to be present in 2 to 3 per cent of births. In European Network of Congenital Anomaly Registries (EUROCAT) centers the prevalence of congenital anomalies (including major structural defects, chromosomal abnormalities, some inborn errors of metabolism, and genetic syndromes) was 2.16 per cent between 2008 and 2012, varying from 0.99 to 3.61 in individual centers.

It is estimated that about 20 to 30 per cent of neonatal deaths could be attributed to major congenital malformations. Major congenital anomalies are abnormalities which are severe enough to reduce life expectancy or compromise normal function. If major malformations cause stillbirth or infant death in more than 50 per cent of cases, they are considered lethal. If newborn infant with major congenital malformation can not survive without medical intervention, than malformation is considered severe.

Counselling: During pregnancy the prospective parents anticipate a normal child, although many have lingering fear that the infant may be malformed. In many cases diagnosis of severe congenital malformation is made prenatally, and it would be much easier for the infant, parents and health care provider to begin counselling before birth. The aim of communication between parents and health care provider is:

- to make parents understand the condition of the child,
- to inform them about the possibilities of the treatment,
- to provide them with the information about the prognosis and outcome.

It is always the question what is late outcome of children treated for severe congenital anomalies. The meanings of “late” and “outcomes” have historically been from the perspective of the physician and rarely from the perspective of the patient or parent. Usually “late” outcome studies in the literature for severe congenital malformations span a decade or less, certainly not how a parent (or a child) would envision a truly long term result. Parents of children with severe congenital malformations are asking for predictions that span a lifetime and exactly how long that lifetime will be. For most of the severe congenital malformations these data are very rarely available. In addition, “outcome” studies most commonly deal with early functional or surgical outcome, mortality and, occasionally, long term treatment or late neurodevelopmental outcomes.

Conclusions: Parents are always expecting healthy child and dealing with difficult situation of having malformed infant with incurable state is distressing and emotionally exhausting either the diagnosis is made pre- or postnatally. In the situations when the infant is severely malformed, there is a difficulty to distinguish between parents' and babies' interests and medical professionals are faced with the responsibility to prolong a life with the prospective of severe disability. Appropriate management plan for the child and sincere care for the family and counseling are the most important for the parents and the family, which has been often very exhausting for the medical staff. Appropriate medical knowledge and effective, empathic communication is an essential skill of medical staff caring for infants with life threatening congenital malformations and their families. The guidelines for newborn end-of-life decisions should follow at least the same moral criteria used for older patients.

Three Dimensional Ultrasound (3D US) of Neonatal Brain: why is it Neglected?

Introduction: Brain ultrasound has become the most widely used technique for evaluation of brain morphology and cerebral lesions in neonates. It can identify not only the presence of lesions but also their type and extent. 3D brain ultrasonography is safe and low-risk procedure, but still it is not widely used due to a limited availability of equipment.

Significance of brain ultrasonography in neonates: A good correlation was found between ultrasound findings and signs of neurological impairment in the neonatal period and later in childhood. Cranial ultrasound can be a good predictor of disabling and non disabling cerebral palsy (CP) at the age of two years

in low birth weight infants and it can be in relation with impaired motor function in five year-old children. Improving survival of very low birth weight infants contributed to the increased incidence of CP despite introduction of sophisticated treatments of intensive care. Brain lesions of the white matter diagnosed by ultrasound were found to be a powerful predictor of disabling CP.

Diagnosis of the most common brain pathology in neonates by ultrasound: The prevalence of intracranial hemorrhage in very low birth weight (VLBW) premature infants has had decreasing tendency in the last twenty years from as high as 60% at the beginning of 1980s, to 25% in 1990s, and 2 to 16% recently. In apparently normal full-term newborns intracranial hemorrhage can be detected in 3.5%. Some new concepts in the pathogenesis of germinal matrix intraparenchymal hemorrhages in premature infants enabled better understanding of pathological events and their prevention.

The prevalence of periventricular leukomalacia (PVL) in VLBW infants is 9.2% to 14.9%, while the incidence of cystic PVL is 4.3% to 15.7% in preterm infants between 23 and 30 weeks of gestation. The ultrasonic finding of transient hyperechogenicities of white matter or so called "flares" is transient, resolving spontaneously without any consecutive developmental problems, while cystic PVL is often associated with an up to 50% risk of CP.

Among neuroimaging diagnostic procedures 3D US has an important role in the detection and follow up of neonatal TORCH infections and meningitis. Regardless of its etiology, meningitis in VLBW infants is often caused by nosocomial agents. The role of postnatal inflammation in the pathogenesis of the brain damage in VLBW infants is undoubted.

Although application of different neuroimaging modalities, among which ultrasound is the most suitable from the practical point of view, has enabled prenatal and postnatal detection of hydrocephalus. Congenital hydrocephalus is one of the most common CNS pathologies with an incidence of 0.3 to 0.8 per 1000 births.

Ventriculomegaly, defined as an enlargement of the ventricular atrium with a width of greater than 1 cm, is often associated with numerous etiologies ranged from the underdevelopment or atrophy of intracranial structures affecting the normal flow of cerebrospinal fluid through the ventricular system to disorders of Mendelian inheritance. In one third ventriculomegaly is connected with additional intracranial lesions, while two thirds have extracranial anomalies.

3D US studies of fetal CNS development improved prenatal diagnosis of malformations and other conditions with the sensitivity of up to 80%. Nevertheless, postnatal ultrasound still remains important for the detection of prenatally unrecognized conditions and for the postnatal follow-up. Incidence of CNS anomalies is estimated to be 0.2%. The incidence of some common CNS anomalies like agenesis of corpus callosum is 2% to 3% of developmentally disabled individuals. In 57% agenesis of corpus callosum is connected with coexisting anomalies, while in 10% of cases it is complicated by chromosomal aberrations. Choroid plexus cysts have incidence of 1% to 2% in general population. Cysts above 5 mm in diameter have a higher rate of aneuploidy in comparison with cysts between 2 and 5 mm.

There is a need for an easy and accurate clinical method to assess the gestational age in newborns. From the 24th to the 34th week of gestation there are important identifiable changes in the cerebral surface, and principal sulci develop and alter in complexity each week. After 34 weeks, as the gyri increase in complexity, distinctive changes are less easy to identify. Ultrasound is a non invasive method of studying changes in the development of neonatal brain with scoring system enabling determination of gestational age.

Comparison of 3D brain ultrasound and other neuroimaging methods: In comparison with other neuroimaging methods like magnetic resonance imaging (MRI), 3D US has potential as a suitable and easy to perform screening method in the neonatal intensive care unit (NICU), without necessity of transportation of very sick neonates. However, for the diagnostic purposes especially of the white matter injury and functional tests of the brain, MRI remains the method of choice.

Conclusion: 3D neurosonography of neonatal CNS has been considered a significant improvement compared to the conventional 2D sonography. Some of the improvements are: shorter time of data acquisition in three orthogonal planes with unlimited number of planes, possibility of comprehensive and thorough analysis of obtained data set, volume rendering, volumetric studies, color and power Doppler studies, tomographic ultrasound imaging (TUI). Although it is recently not widely used in neonatology, 3D US should become a standard diagnostic modality especially in NICU due to the possibility for "off-line" analysis, shorter time of data acquisition and less stress for critically sick newborns.

Mortality in Perinatal Medicine: Are Neonates left behind?

Introduction: If one would be asked what the greatest problem facing mankind is, what would be the answer? Inequality is certainly one of the greatest problems of mankind. Among them the health issues of the mothers

and newborns could be considered as the greatest inequality. The most vulnerable population with the highest mortality rate among humans are neonates. Nearly 8000 newborns die every day which means that around three million of them die every year. Most of neonatal deaths (98%) occur in low- and middle income countries. Decline in neonatal death rates are one third slower than in other groups of children, which means that more should be done globally to improve neonatal health.

Epidemiology and statistics: Number of deaths of children under five years of age dropped from 16 million per year in 1970 to 7.7 million per year in 2010 which is reduction of 51.9% or 1.3% per year. Of those 7.7 million there are 3.1 million of neonatal deaths (40.3%), 2.3 million of postneonatal deaths and 2.3 million of deaths of children from 1 to 4 years of age. In order to reach the United Nations Millennium Developmental Goal 4 target, there should be reduction of 4.2% per year till the year 2015 of all of previously mentioned mortalities to reach their reduction by two thirds. Unfortunately, in developed regions of the world only 5 out of 7 regions reached the target of decreasing neonatal mortality by 4.2% per year, while that target has not been reached in neither of 7 regions of developing countries, which means that the burden of the mortality is mostly born by the poor. While under 5 mortality rate of children decreased in the period from 1990 to 2012 for 3.6%, maternal mortality decreased for 2.6%, neonatal mortality decreased for only 2.0% per year, which is much below the target of 4.2% per year. Time for each region to reach the same chance of neonatal survival as in 2012 for newborn babies born in high-income countries, based on average annual rate of reduction from 2000–12 is as follows: Sub-Saharan Africa 110 years, South Asia 99 years, South-East Asia 66 years, Caucasus and Central Asia 48 years, North Africa and West Asia 37 years, Latin America and Caribbean 29 years and East Asia 14 years. In the period from 2000 to 2010 number of livebirths in 193 countries increased for 2.7%, maternal deaths decreased for 20.4% (451.000 to 359.000 per year), stillbirths decreased for 7.0%, under-five deaths for 25.1%, and neonatal deaths for 16.5%, but neonatal deaths as a share of under-five deaths increased for 11.1% (from 36% to 40%). Of those 40% of neonatal deaths 15% are caused by preterm birth, 9% are intrapartum related, 5% are sepsis related, 4% are due to congenital malformations, 4% due to pneumonia, 1% due to tetanus, 1% due to diarrhea and 2% due to other causes. In high neonatal mortality countries there are 84.6% of neonatal deaths, and they have 149 times less midwives and 219 times less medical doctors than low mortality countries, and they are spending 224 times less money per capita on health. There were some positive trends observed in neonatal mortality, because number of the countries with neonatal mortality below rates 5 per 1000 increased from 33 in 2000 to 49 in 2012, and those with the neonatal mortality from 5 to 15 per 1000 increased from 59 to 71. On the other hand there are still 48.5 million out 137 million births per year not registered in the first year after delivery. Out of 48.5 million births 23.1 were in South Asia, 20.7 million in Sub-Saharan Africa, 2.9 million in South East Asia, 1.1 million in Latin America and Caribbean, 1.0 million in North Africa and West Asia and 1.0 million in the rest of the world.

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Director of Department Obstetrics/Gynecology, Prenatal and Preimplantation Genetic Diagnosis, Fetal Therapy at Microcitemico Hospital, Cagliari, Italy.

He is a Vice President of the World Association of Perinatal Medicine, a Member of the Executive Board of International Fetoscopy Working Group since 1984, a Member of the Executive Board of International Society The Fetus as a Patient since 2000.

He is also a Director of the Italian branch of the Ian Donald International University School of Medical Ultrasound as well as its Regional Director for Europe.

He is a former President of the Italian Society of Ultrasound in Obstetrics and Gynecology (2000/2002), President of AOGOI (Italian Hospital Gynecologists Obstetrics Association) (2008/2010).

He is a Member of Honour of many Ultrasound and Perinatal Societies as well as an Editorial Board member of many national and international journals.

He has published more than 400 papers in national and international scientific journals and books.

In 2006 he received the William Liley Prize from the International Society The Fetus as a Patient and in 2012 was named Honorary Professor of Buenos Aires Public University. He is also a Professor at Dubrovnik International University and a Visiting Professor at Cornell University, New York.

Dr. Monni is currently invited at the Italian Parliament and Health Government as expert in Perinatology and ART.

First trimester screening tests and invasive prenatal procedures

Giovanni Monni, Ambra Iuculano, Federica Mulas

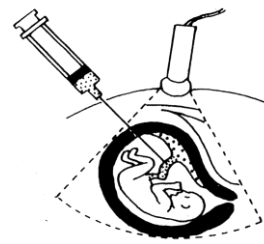
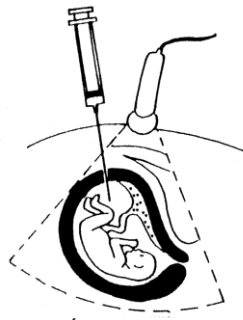
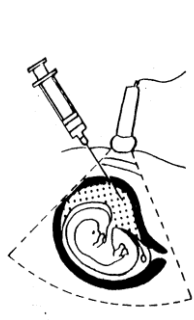
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The screening of cromosomopathies can be performed by ultrasound and biochemical tests either in the first trimester or in the second trimester of pregnancy.

In the first trimester we use the measurements of fetal nuchal translucency by ultrasound, the nasal bone visualization and the biochemical markers free beta and PAPP-A. If nuchal translucency is altered we add the study of the ductus venosus and mitral Doppler tricuspid regurgitation evaluation as well.

To high risk patients for chromosomal abnormalities is offered fetal karyotyping by invasive prenatal diagnosis, performing chorionic villous sampling in the 1st trimester from 11 weeks on or amniocentesis in few cases, in the 2nd trimester, from 15 weeks on. In the past 10 years there has been an increase in the demand of chorionic villus sampling compared to amniocentesis. In fact, when the chorionic villi are performed by experienced operators the risk of fetal loss does not differ from that of amniocentesis with the advantage that, in cases of ascertained failure, patients may resort to the interruption of pregnancy in an early stage, before the 13 weeks thus reducing both the psychological distress and the obstetric complications. Moreover the use of transabdominal rather than transcervical mode of sampling, reduces the discomfort of the patient and complications such as vaginal bleeding.

With the spread of non-invasive screening techniques such as free fetal cell DNA, which has a high specificity and sensitivity, the application of invasive procedures will slowly be reduced. The experience of the operators will decline resulting in the centralization of samples in a few reference centers.



References:

CVS	AMNIOCENTESIS	CORDOCENTESIS
(>10 weeks)	(>15 weeks)	(>18 weeks)
Fetal loss 0,3 – 0,5 %	Fetal loss 0,3 – 0,5 %	Fetal loss 2 – 3 %

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Invasive Prenatal Procedures In Multiple Pregnancies

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Prenatal invasive diagnosis in multiples is associated to higher obstetrics risks and higher rate of misdiagnosis caused by possible maternal-fetal cell contamination. Chorionic Villous Sampling, Amniocentesis, Fetal blood Sampling by Cordocentesis or Intrahaepathic Vein Puncture are invasive procedures that can be used for fetal karyotype analysis.

In order to choose the best procedure to perform it is mandatory to distinguish the twins or the multiple pregnancy as early as possible by ultrasound. It is necessary to diagnose correctly the number of fetuses, their zygosity and chorionicity.

The chorionic villus sampling is the technique that can be applied at an earlier stage of pregnancy but it presents several potentially problematic issues: obtaining separate samples from each fetus, avoiding fetus-to-fetus contamination, attributing the sample correctly to the corresponding fetus in order to identify the specific fetus sampled at the time of the diagnostic result in case of discordant result and following selective feticide.

However, 1st trimester CVS offers the possibility of early selective feticide in case of early abnormal genetic results in one of the fetuses so it is the most appropriate prenatal diagnosis procedure. Therefore, we can consider the chorionic villus sampling the technique of choice for dichorionic pregnancies.

When monochorionic monozygotic twins are detected, amniocentesis should be taken into account. The need to perform a double sample can come up when discordant anomalies are detected (discrepancy of NT, CRL, fetal malformations, etc.) because the heterokariotipia phenomenon can occur.

Amniocentesis in multiple pregnancies has a 2,3% risk of fetal loss if performed before 20 weeks of gestation and 3,7% after 28 weeks.

In our centre we performed 543 CVS e 661 Amniocenteses in multiple pregnancy cases. There was 1 analysis failure in both techniques, no contamination was found and fetal loss rate was 2.5% for CVS and 1,6 % for amniocentesis. We performed also 6 Fetal Blood Samplings, 5 by cordocentesis and 1 by intrahepatic vein puncture.

The necessity of performing prenatal diagnosis before or after the reduction of one or more fetuses should be considered in the case of women at high risk of chromosomal abnormalities. Two options should be taken into consideration: to perform CVS or Amniocentesis before or after fetal reduction. CVS before multifetal pregnancy reduction is important in carriers of recessive or dominant genetic disorders with an extremely high risk (25-50%) of having an affected child; it does not increase with the risk of miscarriage or early delivery (compared to reduction without CVS).

Amniocentesis after multifetal pregnancy reduction does not seem to significantly increase the rate of fetal loss but is associated with an increased risk of preterm delivery at 25-28 weeks.

In conclusion, both CVS and Amniocentesis are safe and accurate techniques applied in multiple pregnancies.

CVS is the procedure of choice in high genetic risk patients in case of following selective feticide in first trimester of pregnancy.

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A native of Romania, Dr. Alex Vidaeff received his MD degree from the University of Bucharest in 1977. He then received training as an intern and resident in surgery and ob/gyn until 1981. In 1983, he was accepted into the United States as a political refugee and resumed training initially in pathology at Lenox Hill Hospital in New York, and then in ob/gyn. He graduated from the ob/gyn Department of Ob/Gyn at Brigham & Women's Hospital and Harvard Medical School. After 10 years as Clinical Instructor and then Assistant Clinical Professor at Harvard Medical School, he decided to strengthen his academic pursuits by completing a Maternal-Fetal Medicine fellowship at the University of Texas – Houston Medical School. It was during this fellowship that Dr. Vidaeff also obtained a master degree in public health (MPH) at the University of Texas, Houston School of Public Health. Upon completion of his fellowship in 2003, he was invited to stay on at the University of Texas Houston Medical School as full-time faculty and moved up the academic ranks to full Professor of Ob/Gyn. In 2011, Professor Vidaeff joined the Ob/Gyn faculty at Baylor College of Medicine in Houston, one of the most prominent medical residency at Temple University in Philadelphia in 1991 and subsequently moved to Boston to join the schools in the United States. In 2015, he became the Program Director for the Maternal-Fetal Medicine Fellowship at Baylor College of Medicine.

He is board certified in both Ob/Gyn (1993) and Maternal-Fetal Medicine (2005).

Research: In addition to a sizeable clinical and teaching schedule, Dr. Vidaeff has proved to be a successful independent investigator in both clinical and basic science research and has been very productive as a scholar. He has published fairly extensively and has made significant and original contributions to the field of obstetrics and gynecology, particularly as it relates to maternal-fetal medicine. Perhaps his greatest contributions to date have been the series of papers published on antenatal corticosteroids. During the past ten years, he has authored thirty-four (34) refereed journal articles, on twenty-two (22) of them as first author, twenty-nine (29) invited journal articles, being lead author on the vast majority of them, and sixteen (16) book chapters, serving as first author on thirteen (13). The fact that he has published in several of the field's leading journals, demonstrates the quality of his scholarship.

Educational:

Dr. Vidaeff is a respected and sought after speaker locally, nationally, and internationally. Locally, he has presented at forty-nine (49) meetings and symposia. Nationally, he has spoken at twenty-one (21) conferences and meetings, including the American Institute of Ultrasound National Meeting, the Society for Maternal-Fetal Medicine Annual Meeting, and the American College of Obstetricians and Gynecologists Annual Meeting.

Internationally he presented at twenty-one (21) conferences and meetings in Austria, Croatia, Egypt, Germany, Greece, India, Indonesia, Japan, Romania, Singapore, Turkey, and the United Arab Emirates.

Most Recent Peer-Reviewed Publications

1. **Vidaeff AC**, Kerrigan AJ, Monga M. Cross-cultural barriers to health care. *Southern Med J* 2015;108:1-4
2. Fonseca L, Alcorn JL, Ramin SA, **Vidaeff AC**. Comparison of the effects of betamethasone and dexamethasone on surfactant protein A mRNA expression in human lung cells. *J Matern Fetal Neonatal Med.* 2014 Aug 27:1-5 [Epub ahead of print]

3. Hoskovec J, Sinacori M, **Vidaeff AC**. A foot path to diagnosis: Prenatal sonographic identification of dorsal foot edema suggests Turner syndrome. *Am J Obstet Gynecol* 2013;209:155.e1-2
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Ongoing Research

1. Metabolic assessment of human fetal brain after antenatal corticosteroid administration in conditions of severe fetal growth restriction using magnetic resonance imaging and spectroscopy (IRB approved)
2. Adrenomedullin2 (ADM2) in amniotic fluid and association with preeclampsia (ongoing laboratory study)
3. Complement activation in amniotic fluid and development of preeclampsia (ongoing laboratory study)
4. Anxiety impact on latency period after premature rupture of membranes (clinical study IRB approved)

Management of Severe Preeclampsia at the Threshold of Viability

As long as preventing preeclampsia remains an unachievable goal and delivery continues to be the only curative modality, the practice of perinatal medicine in preeclampsia management represents a balancing act between maternal safety and fetal benefit. At the heart of the controversy is the decision to initiate or forgo expectant management for extremely premature pregnancies. Available observational evidence and limited randomized data appear to support the expectant management of well selected cases of pregnancy complicated by severe preeclampsia between 24 and 34 weeks' gestation.

Should severe preeclampsia occurring before the limit of viability be also treated expectantly? The consensus used to be that before 24 weeks' gestation, maternal complications clearly outweigh the chances of a take home baby and prolongation of pregnancy should not be attempted.

The purpose of this review is to discuss the recent apparent shift in the limit of viability from 24 to 23 weeks' gestation. We will review and challenge current concepts surrounding these developments and will outline why the shift is not applicable to pregnancies complicated by severe preeclampsia.

The limit of viability is not absolute; there may be mitigating factors that will affect the potential for survival and therefore the determination of viability.

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Date of birth: 10/15/1955 **Nationality:** German, **Marital status:** Married, two adult children

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Training and prev.positions: School of Medicine, Münster, Germany and Univ of California at Berkeley (1976: Master of Science), 1976-1982: Residency in Ob/Gyn in Münster, Germany; 1982-1984: Fellowship in Reproductive Genetics at the Univ. of California SF; 1984-1986: Med Faculty, Univ Münster; 1987-1991 Tenured Professorship ; 1995-2008 Chair of the Dep and Chief of Service, Dep. Ob/Gyn, University of Basel, Switzerland

Publications: More than 600 art. incl. NEJM Lancet, AJOG, JAMA, Ob and Gyn, Pren Dg., Am J Med Gen, Am J Rep Im, Mol. Hum. Reprod., Nucl. Acid Res., Clin Chem, 250 book chapters and 16 books, 780 abstracts at scientific meetings, 600 oral presentations at postgraduate courses.

Editorial board member (past or present, selection): Mol Hum Repr; Pren. Dg; Int J Ultras Ob Gyn; Expert Rev Mol Dg; Am J Med Gen; Ultras Ob Gyn; Mol Hum Repr; Pren Neon Med; J Perin Med, Gebh.Frauenheilkunde,

Editor (past or present): Fetal Dg and Ther. (Chief Editor), Am. J. Obst. Gynecol. (Intern. Editor), , International Journ of Gyn and Ob (Associate Editor), Official FIGO journal

Grants: NIH for „Non invasive prenatal diagnosis“(1,8 Mio); Swiss and German Science Foundation, EU-Projects

Patents: CVS Aspiration Catheter; „Non-inv proc for prenatal dg of gen anom“ (No. 0597068); Europ Pat 018112664: „Hum Mitochondr DNA, Nucleot as Gen Markers in Transf Med , Pat 02405033.8: „Meth for Dg of Chrom or Genc Abnor“

Prizes/Honors: Prize of the Europ Assoc of Perin Med; 1989, Prize of the Drs. Haackert-Foundation for the Advancem of Pren Med, 1993 Prize of the Germ Soc for Perin Med „Maternité“; 1994 Aw Boon Haw Visiting Prof Univ of Hong Kong; 2000 Hon Prof at the Yonsei Med Research Center, Seoul; Mem of the Nat Germ Acad Leopoldina, 2001 Liley Medal; 2005 Corresponding mem of the Austrian Soc of Perin Med, Francic Crick Medal, Found memb Int Acad of Perin Med; Erich Saling Prize of the World Assoc of Perin Med; 2008 Gold Med of Charles Univ Prag;

2010 Fifth Honorary Doctor's Degree, 2014 Health Media Award for modern concepts in patients' education.

Membership/Presidencies of Scientific and Med Assoc: Soc for Gyn Investig (SGI); Soc for Perin Ob (SMFM); Germ Soc of Gyn and Ob (Board Mem); Germ Soc of Perin Med (President); Swiss Soc of Chairs in Dep of Ob and Gyn (President); Swiss.Soc. Ob/Gyn (President), Europ Soc of Perinl Med (Board Mem); Intern Soc „The Fetus as a Patient“ (Vice-President); Germ Soc of Reproductive Med (President); World Fed of Perin Med (Chairm, Scientific Commitee); Previously Prev. Secretary Gen and Treasurer of the Europ Board and College of Ob and Gyn –EBCOG, FIGO treasurer

Positions offered (not accepted): Professorships at the Univ of Munich, Münster, Hannover (Germany), Northw Univ, Stanford Univ; Univ of Utah; Pittsburgh; UCSF, St. Louis Univ; Univ of Manchester, UK (Chairmanship)

International/national act.: 1998 Board „Swisscord“ for stem cell transf. from cord blood; 1999 Organizer of Symp „Mol Med“ of „Swiss Acad Med Sci“; 2000 ICollab on the „Encycl of the Hum Genome“ of Nature Publ Group ; Collab EU proj „ Eurograpp“:Genetic screening in Europe; NICHD conference on „Biological implications of bidirectional fetomaternal cell trafficking“, Contract in EU proj „Europ NetworkFet Transpl“ (ENFET); 2001 NFP46 of Swiss Nat Sci Found on „In utero transpl of hematopoetic stem cells; President Sci Com 5th World Congr on Perina Med; 2002 Pres 26th Three Country Meeting of German-speaking countr on ultrasound; 2003 Moderator of NIH conf „Sharpening the tools, Current, status and future directions for the use of fet cells and DNA from matern blood for pren dgs“, Co-organizer of conf „The Future of Transpl of Cells, Tissues and Organs. Med, Ethics, Law of the NFP Proj 46“Co-author of pos paper on „The Use of Stem Cells, View of the Europ Board and College of Ob and Gyn“; 2004 Lecturer and Discussant at „Dialogue Ethical Questions related to Embryonic Human Stem Cell Research“ at World Economic Forum, Davos, 1/2004 ; Price Oration at Am Ob and Gyn Soc (AGOS) meeting; 2007 Consultant to Sultanate of Oman Ministry of Health ; Memb Scientific Progr Com IFFS 2010; SMFM Com Mem on „Nuchal Translucency“; Pres. of Scientific Com of EBCOG Congress Lisboa; 2008 Local Organizing Com, 19th World Congr in Ob/Gyn, Hamburg; Loc Organ Com, 20th World Congr Fert/Steri, Munich ; 2009 Pres of Organizing Com of Study of Hypertention in Pregnancy (ISSHP) Intern Meeting, Geneva 2012, 2014 Chair of the Strategy Circle Management Conference, Chair of Fertility Comm. Of German National Academy of Sciences 2015

FIGO activities (selection) 2000 Mem of the FIGO Expert Adv Panel on Pren and Preimplantation Gen, Diagn and Ther; 07/04 Host of the FIGO Exec Board 50 Year Anniversary Meeting, Geneva, 2008: Consultation fwth FIGO Presid at Papal Acad, Rome; 2009: Accredited Representative. of FIGO Geneva for United Nations and WHO; FIGO Repr at the Meeting "Role of the WHO in Diagnostic Imaging" Geneva; Swiss Repr. to FIGO; Chair, FIGO Publications Committee, Honoraray Treasurer of FIGO for the past 6 years.

Noninvasive prenatal diagnosis from cell free DNA is finally available in clinical practice after 20 years of research

Since every invasive procedure such as amniocentesis and CVS is associated with a risk of up to 1% for losing the pregnancy, it is an old dream to have a risk-free procedure available for the same indications. Originally from 20 years ago the efforts were concentrated on identifying fetal cells such as lymphocytes, trophoblast cells and especially nucleated erythrocytes in the circulation of pregnant women, but this approach did not produce results which were reliable enough for prenatal diagnosis. The work with fetal cells in the maternal circulation, however, revealed fascinating new insights into the importance of microchimerism of some women's diseases as well as the etiology of preeclampsia. When it was found by Dennis Lo et al. In 1997 that cell-free DNA from the fetus is present in the blood of pregnant women it became possible to identify the Rhesus factor non-invasively, to identify the y-chromosome as an approach to X-linked diseases and to diagnose autosomal dominant diseases if the mutation came from the paternal side and compound heterozygotes in couples at risk for autosomal recessive diseases such as beta thalassemia.

Recently the non-invasive diagnosis of aneuploidies was performed in more than a hundred thousand pregnancies, and the accuracy has been proven to be in the range of 99% for trisomy 21, and very good also for trisomies 18 and 13. There are issues still to be resolved regarding the patent situation and the performance, but the most important requirement for offering this long desired technology in clinical practice is that it is embedded in the proper counselling which clearly outlines the chances and restrictions, the limitations but also the excellent performance in experienced hands.

In the future it will be possible to diagnose the whole genome non-invasively, and this non-invasive diagnostic approach therefore become a paradigm shift in prenatal diagnosis after 25 years of sometimes frustrating but finally very successful research.

Learning objectives

1. What are the approaches to identify fetal material in the circulation of pregnant women?
2. Is the identification of the rhesus factor possible ?
3. What is the accuracy of the detection of fetal trisomy 21 from maternal blood?

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Graduated from the University of Zagreb School of Medicine in his native Croatia. He completed OB/GYN residency at the Winthrop University Hospital in Mineola, New York and fellowship in maternal fetal medicine at the Georgetown University in Washington, DC. He is certified by the American Board of Obstetrics and Gynecology in general OB/GYN and

maternal fetal medicine. He is elected fellow of the American College of Obstetricians and Gynecologists and the American Institute of Ultrasound in Medicine. Currently, he is a professor and endowed chair of OB/GYN Department the John A Burns School of Medicine, University of Hawaii in Honolulu. Dr. Zalud is executive director of the Ian Donald Inter-University School of Medical Ultrasound, co-editor in the Donald School Journal of Ultrasound in OB/GYN, secretary general of the World Association of Perinatal Medicine and a vice-president of “The Fetus as a Patient” International Society. He has published 236 peer-reviewed papers, book chapters and abstracts. His clinical and research interests include Doppler ultrasound, prenatal diagnosis and ultrasound applications in postmenopausal patients.

Bloody Business: The role of ultrasound in eliminating catastrophic consequences of potentially hemorrhagic OB and GYN conditions

More than any other diagnostic modality, ultrasound has made dramatic imprints on diagnosis of pregnancy, fetal wellbeing, detection of anomalies and aneuploidy, fetal surgery and intrauterine interventions, and early detection of pelvic masses and uterine anomalies. Continuous ultrasound education is needed to provide health care professionals the proper environment to make sound clinical judgments, accurate diagnosis and management plans. As medical technology becomes more sophisticated, new medical training will evolve. The medical educators' responsibility is to ensure that new technology will be used properly to improve and maintain the health of patients.

This is a review article on obstetrics and gynecology ultrasound education in the United States of America with specific focus on Hawaii experience.

IUGR: When should we deliver the baby?

This review aims to provide an update on the present and potential clinical applications of Doppler ultrasound in perinatal medicine including most recent evidence of cerebroplacental ratio (CPR) importance in the evaluation of fetal well being. Umbilical artery Doppler plays an important role in the management of intrauterine growth restriction (IUGR) and preeclampsia and aids in twin-to-twin transfusion syndrome management. Middle cerebral artery Doppler reliably detects fetal anemia and may be useful in the assessment of IUGR and fetal well being as well. CPR should be considered as an assessment tool in fetuses undergoing third trimester ultrasound examination, irrespective of the findings of the individual umbilical artery and MCA measurements. In addition, CPR is also an earlier predictor of adverse outcome than biophysical profile, umbilical artery or MCA Doppler. 3D power Doppler allows better small vessel visualization that is not affected by angle of insonation and has been used to diagnose placental and cord abnormalities. Greater sensitivity of 3D Doppler ultrasound to macro- and microvascular flow has provided improved anatomic and physiologic assessment throughout pregnancy. The rapid development of these new ultrasound techniques will continue to enlarge the scope of clinical applications in placental studies. As clinical experience with these new technologies increase and as the technology improves further, it is reasonable to expect that 3D Doppler and 4D ultrasound will be complementary addition to well established traditional Doppler ultrasound imaging.

Fetal biometry: State of the art

It is important to understand some definitions applied to fetal biometry. Conceptional age is the age of the fetus from the fertilization day. In obstetrics we conventionally use the term gestational age as the fetal age. However, gestational age is the conceptional age plus fourteen days and it is also called menstrual age. For clinical and ultrasound purposes we use the term gestational age when referring to the measurements of the embryo or fetus. Ultrasound permits an accurate determination of gestational age and also is an important tool for assessment of fetal growth and diagnosis of fetal growth disorders. When the gestational age is established the pregnancy should not be redated. Accurate dating is essential for the proper timing of chorionic villi sampling and nuchal translucency assessment in the first trimester, amniocentesis in the second trimester, as well as relating the various maternal blood serum levels to risk factors, and timing for elective caesarean section.

The application of fetal biometric measurements in routine obstetrical care has definitely become part of the standard of care. Ultrasound evaluation is essential to confirm or establish gestational age. In the first trimester its use has optimized the establishment of an accurate pregnancy dating and also as an important tool in the screening for chromosomal anomalies. Later in gestation the biometric measurements of a fetus help to estimate fetal weight and follow the growth. The use of customized growth curves appropriate for local population may help improve the accuracy of the biometric estimates for the fetus

Leaving the legacy: How trainees should be trained?

More than any other diagnostic modality, ultrasound has made dramatic imprints on diagnosis of pregnancy, fetal wellbeing, detection of anomalies and aneuploidy, fetal surgery and intrauterine interventions, and early detection of pelvic masses and uterine anomalies. Continuous ultrasound education is needed to provide health care professionals the proper environment to make sound clinical judgments, accurate diagnosis and management plans. As medical technology becomes more sophisticated, new medical training will evolve. The medical educators' responsibility is to ensure that new technology will be used properly to improve and maintain the health of patients.

This is a review article on obstetrics and gynecology ultrasound education in the United States of America with specific focus on Hawaii experience.

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Prof. Girija Wagh, MD, FICOG, Dip Endoscopy Professor and Head of the Obstetrics and Gynecology at the Bharati Vidyapeeth University Medical College, Pune India, (MCI recognized institution and NAAC reaccredited Grade A university), Pune, India



Member of the Steering Committee of the World Organization Gestosis an international body for preeclampsia and is the Vice President of the Indian Chapter of the Organisation Gestosis.

Chairman of the Medical Disorders in Pregnancy Committee of FOGSI and is the member of the Governing Council of the Indian College of Obstetrics and gynecology. Editor of the National Eclampsia registry Newsletter and is the Associate coordinator of the FOGSI-ICOG National Eclampsia Registry. the Joint Secretary ,FOGSI 2010 and contributed to the 'Reaching the Unreached Initiative' of FOGSI and is the Associate coordinator of the 'Save the Mother and Newborn Initiative of FOGSI'. She also has contributed to the formulations of the Good Clinical Practice Recommendations of the FOGSI to help members in day to day practice She has conducted many training workshops and sessions for practitioners such as "Helping Mothers Survivereaching the roots" wherein she has trained medical officers in the district of Pune and Nandurbar for safe delivery practices to reduce maternal deaths. Workshops for gynecologists such as "Helping Mothers Survive", 'FOGSI –Gestosis Certificate course', 'Gestational Diabetes certificate course" "Focus on First trimester as every pregnancy is precious" have been designed and conducted by her .the member of the Ethics Committee of the FOGSI

Scientific collaborator and principal investigator for many projects in affiliation with the Interactive Research School of Health Affairs (IRSHA),BharatiVidyapeeth with a focused research related to micronutrients in conjunction with preeclampsia ,preterm delivery , infertility and metabolic disorders.

Invited member of the Central Supervisory Board of the PCPNDT Act of the GOI ,as an advisory to the Union Health Minister. State level advisor to the government for the implementation of the NRHM for reducing maternal mortality .Her series of write-ups in Maharashtra Times regarding womens' Health issues especially regarding alternatives to hysterectomy received huge readership .She has also written for many public health magazines and materials for training the health care providers .

Areas of interest include High risk Obstetrics ,Gynecology endoscopy ,Infertility and teaching She is in Practice for the past 24 years and is the Director of Girija Hospital and Fertility Centre Kothrud and Consultant Cloudnine ,Pune

Invited speaker nationally and internationally to deliberate on issues pertaining to endoscopy and high risk obstetrics to countries such a Serbia , Germany ,Istanbul, Indonesia,Greece,Malaysia,Tokyo etc.Many national and international publications are to her credit has authored several chapters to well acclaimed publications.

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Severe Preclampsia management with risk stratification and prophylactic magnesium sulphate a better approach

Severe preclampsia is the commonest medical disorder of pregnancy that we encounter in our tertiary care center with an incidence of 21 % seen over the past 5 years . We define severe preclampsia as proteinuric hypertension after 20 weeks of gestation associated with BP ≥ 150 mmHg systolic and/or ≥ 100 mmHg diastolic (on 2 occasions at least 6 hours apart, while the patient is on bed rest),proteinuria of ≥ 5 g/24 hrs or $\geq 3+$ (on 2 random urine samples, collected at least 4 hrs apart),oliguria < 500 ml/24 hrs, cerebral or visual disturbances, pulmonary oedema or cyanosis, epigastric or right upper quadrant pain, impaired liver function and thrombocytopenia. Immediate hospitalization,laboratory investigations ,imaging ,fetal monitoring , risk assessment for maternal as well as fetal condition are swiftly done and treatment planned . We use 4 grams

intravenous magnesium sulphate in all women with severe preclampsia and nifedepine orally in titrating or slow release dose schedule. Injectable labetalol is used if no response to nifedepine seen within half an hour. All mothers less than 34 weeks are administered steroids. Some women needed repetition of the magnesium sulphate and effective temporization could be achieved. Neonatal outcomes were satisfactory. All the women presenting had inadequate or no antenatal care. Poor nutrition especially proteins and anemia was found to be a prevalent risk factor. HELLP syndrome was found in about 35 % of the mothers. We conclude that risk stratification, prophylactic magnesium sulfate and appropriate antihypertensives is associated with better perinatal outcome.

Preterm Labour management our protocol

Preterm delivery considerably contributes to adverse perinatal outcomes and effective measures for prediction, prevention and amelioration are still desired. Much of this adverse outcome can be reduced by effective diagnosis and management of threatened preterm labour. Appropriate treatment protocol in management of threatened preterm labour can help in improving the outcomes. Threatened preterm labor is defined as regular uterine contractions occurring at the frequency of at least 1 time in 10 minutes with no effacement and dilatation of cervix between 20-37 weeks. The examination was taken for at least 30 minutes. We have devised a protocol based on the available research and is under validation for effectivity. The patient is admitted for inpatient care and offered magnesium sulphate 4G intravenously. 2G magnesium sulphate is repeated after 2 hours intramuscularly if necessary. Nifedepine 20 mg slow release formulation is administered and continued 12 hourly for 72 hours. If necessary more 10mg doses are added. High Vaginal Swab is taken for culture and sensitivity and antimicrobials such as Cefixime 200 mg bid and secnidazole 1 G is given. Dexamethasone 6mg 6

hourly 4 doses are given. Natural progesterone in the dose of 200mg daily vaginally is started and continues till 37 weeks. Recently we have offered our patients the bedside test which evaluates placental alpha microglobulin-1 (PAMG-1) test to predict time to delivery and found it effective. Urinary tract infections and anaemia were significantly associated with preterm delivery in our study group. Syndromic approach in management of threatened preterm labour helps in better outcomes. Magnesium sulphate was found to be effective for tocolysis

Prof. Hein Odendaal, Emeritus Professor and part-time Researcher Department of Obstetrics and Gynaecology Faculty of Medicine and Health Science Stellenbosch University, South Africa



Hein Odendaal studied medicine at the University of Pretoria and specialized in Obstetrics and Gynaecology at Stellenbosch University. Subsequently became fellow of the South African College of

Obstetricians and Gynaecologists and member and later fellow of the Royal College of Obstetricians and Gynaecologists. In 1976 he obtained his MD from Stellenbosch University with his thesis on fetal heart rate monitoring. From 1979 to 1982 he was head of the Department of Obstetrics and Gynaecology at the University of the Free State and from 1983 to 2003 in the same post at Stellenbosch University. In addition, he was Director of the Perinatal Mortality Research Unit of the Medical Research from 1987 to 2002 and President of the South African College of Obstetricians and Gynaecologists from 1995 to 2002.

He has 234 peer review publications and has written numerous chapters in textbooks. In addition, he is on the editorial board of several prestigious journals in obstetrics and gynaecology. His main research interests are fetal heart rate monitoring, Doppler flow velocity of the umbilical artery, pre-eclampsia, abruptio placentae and preterm labour.

At present he has a part-time appointment at Stellenbosch University and is involved in the Safe Passage Study of the PASS Research Network, a multicentered international study on the association of prenatal alcohol use with stillbirths and sudden infant death syndrome. The study is sponsored by the National Institutes of Health.

Developmental Origin of Health and Disease

There is convincing evidence that many common chronic diseases such as ischaemic heart disease (IHD), hypertension and diabetes mellitus have their origin, or at least part of it, during fetal development. These findings highlight the major influence of conditions during fetal development on human health where adverse circumstances in early development may lead to a small size or modified metabolism to ensure later survival.

The fetal alcohol spectrum disorders are a well-known consequences of exposure to a toxic environment during pregnancy. There is also a dose-response relationship, as low birth weight and small for gestational age (SGA) are more associated with the consumption of more than 10 g of pure alcohol per day. In the Western Cape the prevalence fetal alcohol syndrome among certain populations is regarded as the highest in the world.

Smoking during pregnancy is strongly associated with fetal growth restriction and preterm delivery. Exposed to tobacco *in utero* had increased carotid intima media thickness in young adults suggesting permanent damage in the vasculature of offspring of mothers who smoke, thereby increasing their children's risk to develop strokes and heart attacks in adulthood.

Although early precursors of atherosclerosis have been found during childhood and adolescence, it develops silently for decades before clinical events such as myocardial infarction or stroke occur usually in middle aged people. Endothelial dysfunction is recognized as the first step in the development of atherosclerosis. Increased arterial stiffness is an emerging problem associated with maternal alcohol exposure. Children at the age of 9 years have greater arterial stiffness when their mothers drank alcohol in the 2nd trimester of pregnancy compared to those whose mothers abstained. Smoking of more than 10 cigarettes per day by the mothers during pregnancy may cause a significant increase in diastolic blood pressure when their children are 6 years old.

Low birth weight infants have smaller kidneys because of decreased nephron numbers which may be as much as 30–35%. The reduction in nephron numbers leads to a reduction in renal sodium handling, increased filtration pressure and increased glomerular filtration rate (GFR) per glomerulus. High alcohol use during pregnancy may play

In the Safe Passage Study we would have accurately documented alcohol use and cigarette smoking on more than 7000 pregnancies by the end of 2014. Careful follow up of these children is essential to determine how early the cardiovascular and metabolic effects of become apparent.

Variation in the Maternal Heart Rate in Late Pregnancy

Introduction. Various maternal heart rate patterns, as encountered during non-invasive monitoring at 34-38 weeks gestation under resting conditions, will be described.

Because little is known about the effects of maternal position on periodic changes in the maternal heart rate in late pregnancy, a prospective observational study was done at Tygerberg Academic Hospital in Cape Town. Pregnant women admitted for elective Caesarean section were studied to determine the effect of changes in position on the maternal and fetal heart rates and maternal blood pressure.

Material and methods. Continuous transabdominal non-invasive recording of maternal heart rate, fetal heart rate patterns and uterine activity was done for one hour in 119 women, using the AN 24 device from Monica Health Care. Maternal position was changed every 15 minutes from lateral to supine, then to the other lateral and finally supine again. Blood pressure was measured in the left arm and left lower leg three times during each 15-minute period.

Results. Maternal heart rates were four beats per minute slower in the left lateral position when compared to the right lateral position. Periodic maternal heart rate changes were seen in 13 (10.9%) women. Most of these (84.6%) were associated with uterine activity and not with maternal position. No changes in fetal heart rate patterns were observed after position changes.

Conclusions. In a subgroup of pregnant women at term, uterine activity was associated with periodic decelerations of the maternal heart rate. In low risk pregnancies there seems to be no effect on the fetal heart rate pattern. Implications for the compromised fetus have not yet been investigated.

Prof. Alexander Makatsarya, Professor of Sechenov First Moscow State Medical University, Head of the Dept. of Obstetrics and Gynecology Medical Prophylaxis Faculty, Moscow, Russia



MD, PhD Professor, Correspondent Member of the Russian Academy of Sciences. Head of the Chair of Obstetrics and Gynecology of Medical Prophylaxis Faculty of I.M. Sechenov First Moscow State Medical University. Vice-President of Russian Association of Obstetricians and Gynaecologists. Academician of Russian Academy of Medical and Technical Sciences. Academician of International Academy of Clinical and Applied Thrombosis/Hemostasis. Academician of International Higher Education Academy of Sciences. Academician of International Academy of Perinatology. President of Russian Association of Thrombosis and Hemostasis Issues.

Chief Editor of leading Russian medical journal "Obstetrics, gynecology and reproduction".

Postdoctoral training:

1968 to 1973 – resident and fellow, training in operative gynecology of N. V. Sclifosovsky research Institute of Emergency Medicine

1971 to 1980 – Associated Professor of Department of Obstetrics and Gynecology of I.M. Sechenov Moscow Medical Academy.

1980 to 1987 - Head of the Laboratory of Pathology of Hemostasis of the Federal State Institution "Research Center for Obstetrics, Gynecology and Perinatology"

1987 for current time - Professor and Chairman of Department of Obstetrics and Gynecology of I.M.Sechenov First Moscow State Medical University. Vice-president of Society of Obstetrics and Gynecology of Russia. Academician of Russian Academy of Medical and Technical Sciences. Full member of International Academy of Clinical and Applied Thrombosis/Hemostasis. Academician of International Higher Education Academy of Sciences.

Field of scientific interests:

High risk pregnancy, coagulation disorders in obstetrics and gynecology, genetic and acquired thrombophilia, pregnancy outcome, hemorrhagic disorders in obstetrics and gynecology, pre-eclampsia, DIC-syndrome, metabolic syndrome, operative obstetrics, thrombosis in oncogynecology, iatrogenic complications of HRT, heart diseases in pregnant women, multiple pregnancy, anticoagulant therapy.

Publications:

Has 850 articles, 44 books (among them 30 monographs).

- High Risk Pregnancy (2015, 907 p.). Coauthor – professor Frank Chervenak (New York Weil Cornell University).

- Antiphospholipid Syndrome – an immune form of thrombophilia in obstetrics and gynecology. Second edition. (2014, 500 p);

2015

- Thrombohemorrhagic complications in obstetrics and gynecology (2011, 1000 pages);
- Systemic syndromes in Obstetrics and Gynecology (2010, 950p.);
- Antiphospholipid Syndrome – an immune form of thrombophilia in obstetrics and gynecology. First edition. (2007, 450 p);
- Thrombosis and Pulmonary Thromboembolism in obstetrics and gynecology (2007, 950 p);
- Oncologic diseases, thrombophilia and thrombosis (2006, 620)
- Purulent-septic diseases in obstetrics and gynecology (2001, 400 p);
- Hyperhomocysteinemia (2000, 200 p);

Other:

Supervisor of 25 professors and 165 candidates of medical science. Most of them are at the head of clinics of different regions of Russia and republics of former USSR.

Active participant of the largest International Congresses in obstetrics, gynecology, and hemostasiology.

Trombotic Microangiopathy in the Pathogenesis of Severe Preeclampsia

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Purpose: Thrombotic microangiopathy (TMA) is one of the most serious, life-threatening thrombotic complications characterized by microvascular thrombosis in various organs and accompanied by thrombocytopenia and hemolytic anemia, and it is one of the major causes of maternal mortality. Pregnancy presents one of the key triggers to the development of thrombotic microangiopathy. At the same time the

discovery of molecular mechanisms of thrombotic microangiopathy allows for a new research on the field of pathogenesis of thrombotic complications associated with pregnancy, as well as the pathogenesis of so-called placental obstetric complications, including severe preeclampsia (PE). Purpose of our study- evaluate the role of TMA in pathogenesis of severe PE.

Materials and methods: We studied 7 patients with severe PE and syndrome of fetal loss (between 25 and 31 weeks of gestation) in anamnesis.

Lab methods: Examination on thrombophilia (hereditary and acquired), polymorphisms of genes of cytokines, levelsof ADAMTS-13 and inhibitor of ADAMTS-13.

Results:FV Leiden, prothrombin G20210A, protein S, C, antithrombin III deficiency - negative, normal homocystein level, homozygous polymorphism of PAI-1 4G/5G, heterozygous polymorphisms of t-PA I/D, Gp-III 1565 T/C, GpIb α 434 C/T, proinflammatory cytokines IL-1b -31T/C, CD46 5032 C/G, IL-6 -174 G/C , TNF-alfa -308G/A. Repeat testing for antiphospholipid antibodies, anticardiolipins, LA, anti-beta2-glycoprotein was negative.Examination revealed reduction of ADAMTS-13 activity and raising the levels its inhibitor.

5 of 7 patients was conducted prophylactic therapy aimed at preventing recurrent episodes of TMA, which include low molecular weight heparins(LMWH) in therapeutic doses guided by D-dimer. Dynamic control levels of ADAMTS-13 and inhibitor allowing in all cases to reduce the level of the latter and increase the level of activity of metalloprotease (to 34-36 weeks of pregnancy) and in time to make a cesarean section.5 healthy children were bone.

Conclusions:TMA can be regarded as a major factor of pathogenesis of severe PE. All patients with PE in anamnesis need to bestudiedon the activity of ADAMTS13 and its inhibitor. Timely initiated therapy (which include LMWH) prevents recurrent obstetric complications.

abstract

New Approach for the Pathogenesis of Severe Preeclampsia: the Role of Trombofilly

Severe Forms of Preeclampsia and Antiphospholipid Syndrom

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Aim: the evaluation of spectrum of antiphospholipid antibodies (APA) in women with the history of severe preeclampsia (SP).

Materials and methods: ELIZA-method was used to measure IgM/IgA APA screen (includes anticardiolipin, antiphosphatidylethanolamine, antiphosphatidylinositol, antiphosphatidic acid, antiphosphatidylglycerol, antiphosphatidylcholine, and antiphosphatidylserine), anti-b2-glycoprotein I (GPI), antiannexin V, antiprothrombin in 125 women with severe preeclampsia. Control group was consisted of 60 health women.

Results: APA circulation in patients with history of severe preeclampsia was found in 32%. It is interesting that antibodies to b2-GPI were prevailed (31,6%). Antibodies to cardiolipin and antibodies to APA subgroups were respectively 21% and 17%. Lupus anticoagulant circulation was in 15,7%. Antiannexin V – in 5,2%, antiprothrombin – 5,2%. Combination of LA, anti-b2-GPI, anticardiolipin was in 12,1%, LA, anti-annexin V and anti-b2-GPI - in 13,7%, anti-prothrombin and anti-b2-GP I – in 8,9%, LA, annexin V and b2-GPI – in 7,9%. The worst clinical picture was observed in women with combination of different APA.

Further we managed the next pregnancy in 54 of these 125 examined women. Most of them (39) were observed from the fertile cycle. 15 other women admitted already being pregnant. All patients were re-examined for APA circulation. In 3 cases we observed the development of preeclampsia (mild form) and in 1 case – repeated severe preeclampsia in women who applied in III trimester of pregnancy. The development of severe preeclampsia we consider with late admission to the hospital. All women received anticoagulant therapy. No case of severe

preeclampsia development in patients with anticoagulant therapy started from the fertile cycle or I trimester of pregnancy.

Resume: the presence of history of preeclampsia is the indication for the APA-testing and the beginning of the anticoagulant therapy from the moment of preparing for pregnancy.

Antiphospholipid Antibodies Circulation and Fetal Loss Syndrom

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Background: the aim of our study was the evaluation of different antiphospholipid antibodies (APA) in women with a history of fetal loss syndrome.

Materials and methods: lupus anticoagulant circulation and levels of antibodies to cardiolipin, b2-glycoprotein I, annexin V and prothrombin (IgG/IgM) in plasma from 146 women with a history of fetal loss syndrome and 60 age matched healthy pregnant women were analyzed with an ELISA kit following the manufacturer's instructions.

Results: 34% of women with a history of fetal loss were diagnosed antiphospholipid syndrome. In control group circulation of APA was found in 6,6%. The plasma levels of antibodies to cardiolipin (31,5%), to annexin V (31%), b2-GPI (22,6%) were significantly higher compared to the normal pregnancies ($p<0.05$). Among these 146 women 74 were observed from the fertile cycle when they were planning the next pregnancy (I group) and 72 women were admitted from II-III trimesters of pregnancy (II group). APS patients received anticoagulant therapy. In women treated before the pregnancy early miscarriage in the next pregnancy occurred in 1,6%. There was no antenatal death or stillbirth. In II group the frequency of obstetric complications was higher compared with women of I group ($p<0.05$) but still significantly lower compared their history without therapy.

Conclusion: APA play an apparent role in the fetal loss syndrome pathogenesis. It's interesting that determination of antibodies to annexin V seems to be essential in patients with fetal loss history despite the fact that annexin V antibodies are not included in criteria of APS.

Antiphospholipid Antibodies Circulation in Patients Undergoing IVF

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Aim: to evaluate the IVF outcome among APA-positive patients and to determine the relationship between the presence of antiphospholipid antibodies and IVF success.

Materials and methods: since 2008 to 2015 we observed 367 women undergoing IVF. I group composed 228 women with IVF failure (1 to 9 failures) and II group consist of 139 women with IVF success. Control group consist of 60 healthy pregnant women. Serum from all patients were examined for antibodies to cardiolipin, annexin V, b2-glycoprotein I, prothrombin and lupus anticoagulant circulation.

Results: total 42,1% patients of I group had APA circulation. Among them – antibodies to cardiolipin – 8,9%, to b2-GPI – 31,4%, annexin V – 24%, to prothrombin – 13,5%. LA circulation – 19,6%. In II group APS was diagnosed in 19%. In women with successful outcome of IVF in 12.4% we observed subsequent reproductive fetus wastage. No stillbirth or antenatal fetal death. Miscarriage occurred as stagnant pregnancy before 12 weeks of pregnancy. All women with pregnancy after IVF received the therapy (LMWH, antioxidants, folic acid, aspirin, vitamins group B) were delivered at term with alive healthy newborns.

Resume: women with APA circulation demonstrate significantly high IVF failures (42,1%) and worser reproductive outcome compare with the women undergoing IVF protocols but without APA. We consider the presence of antiphospholipid antibodies as temporary contraindication for the IVF programme.

Prof. Apostolos Athanasiadis, Professor of Obstetrics - Gynecology and Maternal-Fetal Medicine, Medical School of the Aristotle University of Thessaloniki, Visiting Professor at Cornell University, USA, President Elect of the South East European Society of Perinatal Medicine



Born in Thessaloniki, Greece. He is elected Professor in Obstetrics - Gynecology and Maternal Fetal Medicine of the Medical School of Aristotle University, Thessaloniki, Greece, from which he graduated in 1980. He specialized in the Maternal Fetal Medicine Unit of the Department of Obstetrics and Gynecology at Yale University, USA.

He participates in the educational programs of Greek medical schools and in postgraduate workshops in Europe and especially in South East Europe. He successfully contributed in organizing many congresses and courses in Europe as president, member of the organizing committees and scientific coordinator.

His scientific contribution accounts for more than 250 scientific papers, presentations, articles and chapters. His papers have been cited more than 1100 times in the Science Citation Index. He has been invited as lecturer and has given more than 280 lectures in international and Greek congresses and meetings.

He envisioned and realized, with the collaboration of other professors and specialists in the field, the creation of the "South East European Society of Perinatal Medicine", which now consists of 13 countries.

He is the Deputy Director of the Editorial Board of the Hellenic scientific journals "Ultrasonography" and "Perinatal and Neonatal Journal" and a member of the Editorial Board of the journal "Gynecology Obstetrics and Reproductive Medicine». He is a peer reviewer in Greek and International scientific journals.

At present, he is the President of the "South East European Society of Perinatal Medicine", President of the "Hellenic Society of Ultrasound in Obstetrics and Gynecology", a member of the Executive Board of the "European Association of Perinatal Medicine". He was the past President of the "Hellenic Society of Perinatal Medicine" (2002-2004). He is a member of the specialized team in Fetal Maternal Medicine of the "Hellenic Society of Obstetrics and Gynecology". He participates in 20 Greek and International scientific societies. He is an Associate Member of the "International Academy of Perinatal Medicine", an Honorary Member of the "Romanian Society of Perinatal Medicine" and has been awarded with the "Soranos 2011" and Ayash Sibani Sifai 2009" scientific awards.

His main scientific interests are fetal medicine, prenatal diagnosis, 3D and 4D ultrasonography, the influence of maternal nutrition in pregnancy and bioethics.

He is married to Frida Athanasiadis and has two children.

4D – Ultrasonography in Obstetrics. Luxury or necessity?

Introduction: The use of three-dimensional ultrasonography (3D) has steadily established itself during the last decade in obstetrics, but has not yet convinced the majority of medical professionals. Proponents argue that 3D forms an integral part of ultrasound imaging in obstetrics and demonstrate powerful arguments such as the possibility of receiving volumes of fetal body in a very short time, the ability to

edit an unlimited number of slices, as well as measuring volumes accurately while providing easily understandable information to both physicians and parents.

However, critics argue that 3D is a luxury, whose sole advantage is the demonstration of the fetal face for commercial purposes, and they highlight the high cost of equipment and the ability to perform the same examination using 2D ultrasonography with comparable results.

In 2005, during the American Institute of Ultrasound in Medicine Congress (AIUM Consensus Conference), a committee for the 3D ultrasound concluded that 3D is an additional tool, which enables the detection of diagnostic problems in specific cases. However, widespread use of 3D can only be achieved through the implementation of multiple factors, including manufacturers, in order to make 3D ultrasound faster and friendlier.

Gonçalves and colleagues presented a meta-analysis of 525 studies, regarding 3D in obstetrics, and reached the conclusion that 3D provides vital additional information in diagnosing abnormalities of the fetal face. Moreover, 3D ultrasound provides additional information for the detection of fetal neural tube defects and various skeletal malformations. However, several studies comparing 2D and 3D ultrasonography in the diagnosis of fetal facial abnormalities have not demonstrated the superiority of the latter ⁽¹⁾.

The following review aims to answer to the following questions regarding 3D:

1. Reliability and diagnostic accuracy, compared with 2D
2. Duration and convenience of examination
3. Comprehension of 3D information by physicians and relatives
4. Future applications of 3D in Obstetrics
5. Teratogenic risks for fetuses from 3D use
6. Maternal emotional reaction from 3D images
7. Clinical value: cost / benefit of using 3D in Obstetrics

1. Reliability and diagnostic accuracy of 3D compared with 2D ultrasonography.

In 2006, a study published by Harvard University analyzed the differences between 2D and 3D in 150 pregnancies between 17-21 weeks, with respect to the examination time and the reliability of diagnosis. Following the level II ultrasound, the same operator was receiving 5 volumes of each fetus including the whole fetal anatomy and then 3 different doctors were assessing separately and consecutively 2D and 3D ultrasound scans ⁽³⁾.

The accuracy of 3D compared to 2D ultrasound in the evaluation of fetal anatomy, apart from the arms and cavum septum pellucidum of the brain was over 94%. In particular, fetal heart, head, limbs and abdomen were acquired in 88%, 90%, 90% and 95% respectively, with no statistically significant difference (Table 1). In another study in 2006 by Wayne State University, USA, 44 fetuses with no anatomical abnormalities and 45 fetuses with a total of 82 birth defects were examined independently with 3D and 2D ultrasound scans by different examiners. In this study, an agreement regarding results in 90.4% of cases was identified. However, 6 abnormalities were not diagnosed and 2 were diagnosed incorrectly with 3D. Similarly, 1 fetal defect was not confirmed by 2D. The conclusions of this study regarding 2D sensitivity was 96.2% and specificity was 72.7%, while the results for 3D were 92.2% and 76.4% respectively ^(1,2).

3D ultrasound seems to be advantageous for the examination of fetal skull regarding the appearance of sagittal, coronal, lambdoidal, and metopic sutures, as well as anterior and posterior fontanelles, but compared to 2D there is no statistically significant difference {sensitivity 3D / 2D (74% / 56%, p = NS)}. In contrast, the examination of the sagittal suture with the use of 3D compared to 2D was statistically significant (3D / 2D: 100% / 70%, p <0.001) ^(4,5).

Moreover, with the use of tomographic imaging (TUI) in 4D ultrasound it is possible to observe the fetal heart anatomy from a single volume as well as the changes that occur during pregnancy, such as the alterations in the angle between the ductus arteriosus and the thoracic aorta. ⁽⁶⁾ (Figure 1). Furthermore, 3D showed that the volume of the fetal brain increases by 10 times from the second trimester of pregnancy until the 32nd week (18 wks = 34cc / 32 wks = 316cc), while the volume of the fetal heart ventricles increases 8 times respectively ^(7,8).

In conclusion, 3D compared with 2D does not seem to be lacking in diagnostic reliability. However, published studies are so far few and with limited number of cases and therefore, large prospective studies are required to prove the afore mentioned statement .

2. Duration and convenience of examination

The duration and convenience of a 3D examination does not appear to be significantly different from that with 2D. From Benacerraf's study mentioned above, it surfaced that the total time required to obtain and review 3D volumes, compared to 2D, was shortened by 10 minutes (Table 2) ⁽³⁾.

In regard to the time and reliability of the measurements of biparietal diameter (BPD), head circumference, abdominal circumference and femoral length with 3D and 2D, a study reports that 64% of the measurements of the femur and 74 % of (BPD), had a difference of only 1mm and the overall time of acquisition of measurements was not statistically significant between them ⁽⁹⁾. The same study demonstrated that 3D reduces the intra- and inter- observer's mistakes significantly⁽⁹⁾.

Finally, fetal measurements obtained by inexperienced operators in 2D and 3D, were reusable and similar to those of experienced operators. It is important to mention that the acquisition time of measurement the BPD, femur length, head and abdominal circumference with 3D was shorter for inexperienced examiners with 3D ultrasound compared with those with 2D. The use of 3D allows faster and more accurate measurements of abdominal circumference compared to 2D⁽¹⁰⁾.

3D compared to 2D does not seem to need more examination time in order to be completed and fetal measurements are not affected by the operator's experience.

3. Comprehension of 3D ultrasound information from physicians and relatives

Over the last years, publications mention the ability to diagnose, with the use of 3D, fetal facial characteristics pathognomonic for skeletal malformations, such as osteogenesis imperfecta, Apert syndrome, thanatophoric dysplasia and other malformations^(11,12) (Figure 2). Moreover, 4D volume acquisitions of fetal heart with the addition of color Doppler improves the sensitivity by 12.5% in terms of checking the anatomy of the four chambers, the anatomy of 5-chambers view and the evaluation of the 3 vessels view of the heart, respectively ^(13, 14, 15).

The advantage of 3D ultrasound in the appearance of fetal face is clearly showcased in a picture with two middle sagittal images between a normal and a facial hypoplasia one, which was used as the logo of the 3D ultrasound meeting held in Thessaloniki last February (Figure 3) and a fetus with posterior angulations of the tibia (Figure 4). Especially for the first case, 3D helped the parents to understand the nature of the lesion and to decide, after consulting with the pediatric and plastic surgeons, for the continuation of the pregnancy.

By today's standards, 3D ultrasound scans can, in some cases, provide a visualization of the pathognomonic characteristics of the disease, without providing however any additional information, compared to 2D.

4. Future applications of 3D in Obstetrics

With the assistance of 3D-4D, an attempt is made to relate the volume of the fetal femur and humerus with neonatal weight. Therefore, sectional volume acquisitions of femur and humerus have improved the diagnosis and monitor of non-growing fetuses. The neonatal body fat is strongly associated with fractional volume of fetal humerus, and measurement of fat tissue in fetal abdomen can be used for calculation of fetal weight ^(16, 17, 18) (Figure 5).

In regard to pulmonary dysplasia, an attempt is made to enable its prediction with the help of 3D. A study of Vergani P., et al. 2010 ⁽¹⁹⁾, where volume of fetal lung was measured, in a total of 35 pregnancies, 3D ultrasound achieved a sensitivity of 92% with 84% specificity in predicting pulmonary dysplasia.

Regarding to brain function and evolution of the fetal behavior during pregnancy, it seems that additional data can be obtained with the help of 4D ⁽²⁰⁾. Many studies assessing the neurophysiology of the embryo, in different trimesters of pregnancy have already been published, comparing the neurological status of newborns after birth ⁽²¹⁾.

A research carried out by the 1st Department of Obstetrics and Gynecology, Aristotle University of Thessaloniki studied fetal neurophysiology and compared the KANET scores in low and high-risk fetuses, where maternal hypertension or diabetes mellitus coexisted. Significant difference was found in scores between the different groups and diseases, especially regarding intrauterine growth restriction (Table 3).

Ultrasound examination of the appearance of the fetal face, which is impossible with 2D, can provide information that may lead to diagnosis of abnormalities in other organs or systems. The fetal face is a "diagnostic window" of fetal diseases and syndromes ⁽²²⁾.

Prof. Anton Mikhailov - Director and Chief Doctor, Mechnikov NW State Medical University, EAPM Treasurer, St.Petersburg, Russia



Born in 1960 in Leningrad, graduated from 1st Leningrad Medical Institute .

Was working in Ott Researche Institute of Obstetrics and Gynecology from 1983 till 2002. From 2003 Director and Chief Doctor of St-Petersburg Maternity Hospital # 17.

In 1990 got a Ph.D and in 1999 degree Doctor of Science in Medicine.

The fields of clinical and scientific interest: perinatal medicine – prenatal diagnostics and treatment of congenital and hereditary diseases , ultrasound diagnosis, fetal state assessment in pregnancy and delivery, intensive care in obstetrics and neonatology, fetal therapy, breech presentation, multiple pregnancy.

Treasure of European Association of Perinatal Medicine.

Board member of International Society “Fetus as a patient”

Fellow of International Academy of Perinatal Medicine.

Member of executive committee of Russian Association Ultrasound Diagnostics in Medicine.

Chair of Executive Board of St-Petersburg Association of Ultrasound Diagnostics in OB/GYN .

Chair of St-Petersburg International School of Perinatal Medicine and Reproductive Health.

Director of the Russian Branch of Ian Donald Inter-University School of Medical Ultrasound.

Member of editorial board of several Russian and international journals.

The author of more than 240 scientific works, 2 monographs, editor of 5 international top books translated to Russian.

Married, three children.

Converntional Prenatal Diagnosis in Multiple Gestations and Coming Nipt

Anton Mikhailov, Sergey Potanin, Anna Shlikova

Mechnikov NW State Medical University, Maternity Clinic #17, St.Petersburg, Russia

During last three decades the rate of multiple pregnancies increased dramatically as more than two times. On the millennium border the extensive increase of the rate of high order multiples identified the introduction of restrictive measures to limit the number of transferred embryos in ART cycles. In consequence of these measures the need for multifetal pregnancy reductions decreased significantly. However, the average frequency of multiple pregnancies in the develop countries population still exceeds 2% and in specialized perinatal centers as our, the frequency of deliveries in multiple pregnancy reaches 5%. Implementation of the concept of "turning the pyramid of perinatal care" in multiple pregnancies is crucially important.

Modern prenatal diagnosis in the first trimester of pregnancy is a complex of clinical, ultrasound, biochemical and high-tech genetic methods those enables to detect fetal congenital and hereditary abnormalities and pregnancy complications with very high probability. However, in multiple

pregnancies and in high order multiples in particularly, the limitations of each method of prenatal diagnosis are significant. In ART treatment not only the rate multiple pregnancies increases but the rate of monozygotic/monochorionic twins and the rate of monozygotic/monochorionic pairs in high order multifetal pregnancies are increased as well. The rate of monochorionic twins combination with “singleton/s” in triplets and high order multiple pregnancies significantly increased. These pregnancies have high rate of such complications as pregnancy loss and prematurity and connect to specific fetal to fetal relationship disorders as TRAP, TTTS and sIUGR. So, the needs of prenatal counseling and comprehensive discussion with the patient about the risks of both conservative and aggressive pregnancy management is an extremely important part of care in specialized perinatal centers.

Prenatal care in high order multiple pregnancy with MFPR is a mirror allows to assess the clinical effectiveness and economic feasibility of applying each of the possible methods of diagnosis, depending on the technical equipment and availability and accessibility, routing of patients, organizational structure and the financial capacity of the health system.

More than three hundred multiple pregnancies underwent MFPR. The basis of perinatal care is still the ultrasound diagnosis at appropriate level. Determination of type of chorionicity and amnionicity, identification and exclusion of markers of chromosomal pathology (NT, nasal bone, blood flow in the tricuspid valve and ductus venosus) and also the identification and exclusion of anatomical abnormalities as a result prevented chromosomal and significant structural abnormality among neonates been born. This result was achieved when invasive prenatal diagnosis (CVS) carried out only in cases when markers of fetal chromosomal pathology were identified.

The data of FR during the first six years (1996-2001) compared with data of FR during the last six years (2008 – 2013).

The number of patients who had FR procedures reduced all most two times from 258 to 137. That could be explained by stricter embryo transfer policy in the last decade. From 234 triplets and high order in first period 220 patients had only “singletons” compound – 94%, and 14 – had monochorionic pairs – 6%. In the second period the frequency of monochorionicity among triplets and high order (109) increased dramatically and reached 27% - 29 out of 109. Last decade the embryo transfer on blastocyst stage of development started to be more spread and this quite possible could influence on the rate of monochorionicity. In all cases except one, the decision of perinatal counseling was - monochorionicity is indication for reduction of MC pair of fetuses. In one cases monochorionic pair was decline from reduction due to present of structural anomaly in “singleton” fetus. Remaining MC pair developed sIUGR and acute CS delivery was performed in early third trimester. In most of cases FR in monochorionic pairs were perform by single insertion technique. In two cases of TRAPs in thoracic injections to “pump” fetuses were perform and that were enough to stop fetal circulation in both monochorionic fetuses. Monochorionic component in FR did not influence on short term and long term outcome compare with results of reduction of the same number of dichorionic fetuses. Monochorionicity is a quite frequent complication of ART, especially in blastocyst embryo transfer technology. Monochorionicity suggested as indication for special counseling for FR.

During last years noninvasive testing broke into investigation on prenatal diagnosis. Several studies have shown that in singleton pregnancies NIPT by massively parallel sequencing could provide high level of sensitivity and specificity in detection of trisomies 13, 18 and 21. But in multiple pregnancy there are additional limitations as needs of not only chorionicity but zygosity assessment, estimation of appropriate lower limit of fetal DNA fractions for aneuploidy detection to minimize a risk of false negative results, and the influence of the method of conception on cfDNA testing should not be ignored.

*Prof. Subhash Madnav Nargolkar - MD DGO FICOG FICMCH
Dept. Obstetrics&Gynecology, Pearl Women's Clinic; Past Vice- President, FOGSI; Past
President, Pune Ob-Gyn Society (POGS), Pune, India*



Author of 'Hay's Obstetric Forceps' a color atlas monograph published by Penham, Manila, Philippines 1991

Past VICE-PRESIDENT, FOGSI

Past PRESIDENT, Pune Ob-Gyn Society (POGS)

Oration to the Pune Ob-Gyn Society, recipient *of Life-time achievement* award for work on the Obstetric Forceps (2007)

Conducted more than 50 workshops in India, Sri Lanka, Singapore and invited orator - speaker abroad.

Sir KEDARNATH DAS ORATION, KOLKATA 2012

The Hay-Nargolkar Design is currently undergoing a multi-centre trial.

Modern Forceps Design

Aim: The objective was to devise an updated version of the Hay's Forceps. This *counter-current research* was undertaken in spite of the constraints of funds, doubtful commercial viability, lack of larger hospital teaching facility, unassured availability for use and assessment by other interested colleagues.

Materials and Methods:

The basis remains the original work done by WB Shute (Canada), D Hay (UK), this author and his collaborators (India and abroad). Progress has been regularly reported in international journals, congresses including many FIGO meetings. *The color atlas monograph "Hay's Forceps" by the author in 1991 includes theory, practice, tuition and reports on use. Unique true size CAD drawings depicting fetomaternal pelvic and forceps relationships have been incorporated.* Subsequent forceps use, in upward of 4000 cases, has established safety, potential and advantage. Over 200 modifications of design and materials were made, tested with safety in the author's private practice over 40 years.

Results: The instrument has been used in all known vaginal presentations and positions from -1 to +5 and paradoxically electively at C-sections for floating, deep or after-coming heads.

The Hay-Nargolkar instrument has everything that the Hay's forceps had....short-long, adaptable parallel-divergent, straight with retro-pelvic curve useful for rotation and at C-section. Many new features have been introduced. The forceps is bendable with a two finger Pajot Manoeuvre for built-in pelvic-axis traction and flexion. It has narrow, short blades, only 14cms to correspond to the mento-vertical diameter. They extend only up to the sub-zygoma, allowing accommodation for caput and moulding. A special feature is a unique spud-in-groove lock for safety and asynclitism correction. The Hay-Nargolkar forceps has incorporated equal anterior-posterior asynclitism correction, better grip smaller handles with finger-rests and open cleaning tracts. The finish is superior. The blades are sturdier and lighter. Special markings for pre-op evaluation, check and recording of ACOG classification are a feature. *This design finally results in, perhaps, the lightest obstetric forceps ever!*

Conclusions: Evaluation of Hay-Nargolkar forceps universally will re-establish forceps use in the 21st century, albeit, with review and modifications.

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*Prof. **Gökhan Göynüner**, Director of Perinatology Department, Istanbul Medeniyet University Goztepe Educational and Research Hospital, President of Ultrasound Obstetrics and Gynecology Society of Turkey*



Director of Perinatology Department Associate Prof. since 2010, President Turkish Society of Ultrasound Obstetrics and Gynecology and a member of executive committee of Turkish Perinatology Society . Current working place at Obstetrics and Gynecology Department of Goztepe Educational and Research Hospital of Istanbul Medeniyet University .

Director of Perinatology Department of Zeynep Kamil Educational and Research Hospital which is the oldest hospital in Anatolian part of Istanbul.

100 published manuscripts. 100 lectures in several meetings.

First Trimester Diagnosis of Spina Bifida

In the first trimester of pregnancy, we can diagnose the spina bifida in the presence of absence or decrease of intracranial translucency, brain stem to brain stem occipital bone ratio >1 , Shortening of the distance between occipital bone and Aqueductus Sylvius at axial plane, shortening of facial degree, smaller BPD, no visualization of the Cisterna Magna

*Prof. **Panos Antsaklis**, MD, PhD , Professor , Senior Lecturer University of Athens, Greece, Executive Director Ian Donald School, Greece*



Senior Lecturer in Fetal & Maternal Medicine

Education

2002 MD degree, Medical School, University of Athens, Greece

2009 PhD degree, Medical School, University of Athens, Greece

- PhD Thesis: “The role of cervical length measurement in the first trimester of pregnancy for the prediction of preterm delivery”

2005-2010 Residency in OB GYN, John Radcliffe Hospital, Oxford, UK

Working Experience

2002-2004 “Alexandra” Maternity Hospital, Medical School, University of Athens, Research Assistant in Fetal Medicine and Obstetrical Ultrasound

2004-2005 Officer in Greek Navy, Athens Naval Hospital

2005-2010 John Radcliffe Hospital, Oxford, UK. Resident in Obstetrics & Gynaecology. Also worked in the High-risk pregnancy unit (“Silver-star” Unit) and Fetal Medicine Unit (FMU)

Present Position:

2010- Teaching Assistant in Fetal & Maternal Medicine and Gynaecological Ultrasound, “Alexandra” Maternity Hospital, University of Athens, Greece

2012 – Executive Director Ian Donald School

2014 – Senior Lecturer Dubrovnik International University

Publications

- Peer reviewed papers 14
- Greek publications 25
- Chapters in books 5
- Abstracts in international conferences 41

Other Experience and Professional Memberships

2012-present: Executive Board, Ian Donald School

2012-present: Member, Hellenic Society for Ultrasound in Medicine and Biology

2009-present: Member, International Society of Ultrasound in Obstetrics & Gynecology

2008-present: Member, Hellenic Society of Perinatal Medicine

2008-present Member, Hellenic Society of Ultrasound in Obstetrics & Gynecology

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abstracts

Prof. Gregory Duncombe, Exosome Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, the University of Queensland, Australia



Medical Education

1981 -86	University of Queensland	MBBS
1989	RANZCGP, RANZCOG	Diploma of Obstetric
1993	RANZGP	CSCT General Practice
1997	RANZCOG	Membership
2000	RANZCOG	Fellowship
2000	ASUM	Diploma of Diagnostic Ultrasound
2003	RANZCOG	Certificate in Maternal Fetal Medicine

Awards

2000	Perinatal Society of Australia and New Zealand 4 th Annual Scientific Meeting, Brisbane, Qld (oral presentation: NEW INVESTIGATOR AWARD, BASIC SCIENCE)
2000	Australasian Society for Ultrasound in Medicine 30 th Annual Scientific Meeting, Auckland, New Zealand (oral presentation: MEDITRON YOUNG INVESTIGATOR AWARD)
2002	33 rd Annual Meeting of the Perinatal Research Society, San Jose, California, USA (NIH YOUNG INVESTIGATOR Conference grant)

Recent Grants

Sullivan EA, Duncombe G, Cincotta R, Halliday L, Oyelese Y. International Vasa Praevia Foundation IVPF: Vasa Praevia in Australia: Surveillance, Management, Outcomes and Experiences. 2012-2013. \$97, 654.

Sullivan EA, Saunders C, Dickinson J, Boyle F, Ives A, Halliday L, Rose-Humphreys N. National Breast Cancer Foundation NBCF , Novel Concept Award 2012: Breast Cancer in Pregnancy: Surveillance, Management, Outcomes and Experiences. 2012-2013. \$200,000. Became an associate investigator after the grant awarded.

Duncombe G, Eiby, Y. Improving the efficacy of current inotropic treatments for preterm cardiovascular compromise using a porcine model RBWH Research Foundation Grant 2013: \$63, 435

Duncombe G, Salamon C, Rice G, Smith M, Rosser S, Jackson E, Mitchell M, Callaway L. Role and

Regulation of placental-derived exosomes in the onset and development of Gestational Diabetes Mellitus (GDM) 2014 RBWH Research Foundation \$66,000

Recent Committee membership

- 2006 - RANZCOG Examination Committee for Subspecialty of Maternal Fetal Medicine
- 2010 - RANZCOG National Committee for Subspecialty of Maternal Fetal Medicine (Deputy Chair)
- 2009-13 PSANZ Obstetric Representative, National Committee
- 2010 - 13 PSANZ Obstetric Representative, Queensland State Committee
- 2010 - 13 Australasian Maternity Outcomes Surveillance System (AMOSS) (advisory group, PSANZ representative)
- 2012-13 Qld Maternal & Perinatal Quality Council - Indigenous Perinatal Health Subcommittee, Fetal Anomaly Subcommittee

Current positions

Co-Director Queensland Ultrasound for Women

Associate Professor, School of Medicine Department of Obstetrics and Gynaecology, Associate Professor, Exosome Biology Laboratory, Centre for Clinical Diagnostics, Centre for Clinical Research, University of Queensland

Senior Staff Specialist in Maternal Fetal Medicine at the Royal Brisbane and Women's Hospital

Deputy Chair, Maternal Fetal Medicine Subspecialty Committee, RANZCOG

Consultant MFM and Obstetric Specialist, IHMS

Recent Articles and Book Chapters

A PROSPECTIVE PILOT STUDY IN ASSESSING ACCURACY OF ESTIMATED FETAL WEIGHT PRIOR TO DELIVERY - A SINGLE CENTRE EXPERIENCE Renuka Sekar, Mohsina Khatun, Helen Barrett and Greg Duncombe *Aust N Z J ObstetGynaecol* 2015

THE EFFECT OF GLUCOSE ON THE RELEASE AND BIOACTIVITY OF EXOSOMES FROM FIRST TRIMESTER CYTOTROPHOBLAST CELLS Gregory E Rice, Katherin Scholz-Romero, Emma Sweeney, Hassendrini Peiris, Mihar Kobayashi, Gregory Duncombe, Murray D Mitchell, Carlos Salomon. *J Clin Endocrinol Metab* 2015

POTENTIAL USES OF PLACENTAL EXOSOMES IN NORMAL AND COMPLICATED PREGNANCY Murray Mitchell, Hassendrini Peiris, Mihar Kobayashi, Yong Koh, Gregory Duncombe, Sebastian Illanes, Gregory Rice, Carlos Saloman *AJOG* 2015

ANTENATAL CARE FOR ASYLUM SEEKERS: IS "GOOD ENOUGH" GOOD ENOUGH Mark Parrish, Anthony Renshaw, Will Milford, David Watson, Paul Bretz, Greg Duncombe. *Medical Journal of Australia* 202(1), January 2015

CLINICAL IMPLEMENTATION OF CELL FREE DNA BASED ANEUPLOIDY SCREENING: PERSPECTIVES FROM A NATIONAL AUDIT Lisa Hui, Mark Teoh, Fabricio da Silva Costa, Philippa Ramsay, Ricardo Palma-Dias, Zara Richmond, Sofie Piessens, Sue Walker on behalf of the Australian NIPT Collaboration. *Ultrasound in Obstetrics and Gynecology*, 2015 Jan;45(1):10-15.

"WRAPPING MYSELF IN COTTON WOOL" AUSTRALIAN WOMEN'S EXPERIENCES OF BEING DIAGNOSED WITH VASA PRAEVIA Nasrin Javid, Elizabeth A Sullivan, Lesley E Halliday, Greg Duncombe and Caroline SE Homer *BMC Pregnancy and Childbirth* 2014, 14:318 doi:10.1186/1471-2393-14-318

VASA PRAEVIA: ULTRASOUND DIAGNOSIS AT THE MID-TRIMESTER SCAN. S.Marr, L. Ashton, A Stem, R. Cincotta, J. Chua and G. Duncombe. *AJUM* February 2013 16 (1): 10 – 20

UPTAKE OF INVASIVE PRENATAL TESTS IN PREGNANCIES CONCEIVED VIA ASSISTED REPRODUCTIVE TECHNOLOGIES: THE EXPERIENCE IN QUEENSLAND. L.Hunt, M.Peterson, S. Sinnott, B. Sutton, R. Cincotta, G. Duncombe, J. Chua and A McInerney-Leo. *Prenatal Diagnosis* 2012, 32, 1049–1052

Current status of fetal therapy in Australia

Gregory Duncombe, Gregory E. Rice & Carlos Salomon

Exosome Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, The University of Queensland, Brisbane QLD 4029, Australia.

The expansion of possibilities in diagnosis by non-invasive techniques and the progress in ultrasound imaging, resolution and techniques has not only increased our knowledge of fetal well being, functional embryological development and fetal disease states but also increased the pressure on us to do something with this knowledge. These exciting times are tempered by lessons learnt from past events (hydrocephalus and shunting, fetal surgery in congenital diaphragmatic hernia). We realize we must tread slowly and carefully when translating this knowledge into practical options. In this talk I will outline summarize the current state of play in Australia and New Zealand, and future directions related to progress in fetal therapy on the world stage.

Exosomes during normal and pregnancy complications

Gregory Duncombe, Gregory E. Rice & Carlos Salo

Exosome Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, The University of Queensland, Brisbane QLD 4029, Australia.

Exosomes are a subtype of extracellular vesicle that are specifically defined by an endosomal biogenesis and particle size (~40-120nm) and density (~1.13-1.19 g.ml-1). Exosomes are specifically package with signaling molecules (including: protein; mRNA, micro RNA and non-coding RNA) and are released by exocytosis into biofluid compartments. Exosomes regulate the activity of both proximal and distal target cells, including: translational activity, angiogenesis, proliferation, metabolism and apoptosis. The University of Queensland Centre for Clinical Research has developed expertise in the isolation of exosomes and, in collaboration with local and international centres, is making significant progress in elucidating the functional characteristics of this vesicle. In this presentation I will discuss the basic characteristics of exosomes, their potential roles in pregnancy, and current directions we are taking in exosome related research.

Prof. Elif Gül Yapar Eyi, Asc.Professor in Obstetrics & Gynaecology, Subspecialist in Perinatology, Zekai Tahir Burak Women's Health Education & Research Hospital, Ankara, Turkey



Education

2009 Diploma of Subspecialty in Perinatology
1987-1991 Doctor: Department of Obstetrics & Gynaecology
Faculty of Medicine, Hacettepe University in Ankara

1985-1987 Department of Anesthesia & Reanimation, Faculty of Medicine, Erciyes University in Kayseri(obligatory work)

1979-1985 Licence : Faculty of Medicine, Ankara University in Ankara

1969-1979 TED Ankara College, primary, secondary school and Lycee Work experience

2011-2015 Clinical Director of Perinatology Unit, Labor Ward and Emergency Department Zekai Tahir Burak Women's Health Education & Research Hospital, Ankara

2009 Subspecialist in Perinatology

2010-2000 Ass. Professor & Chief Helper in Perinatology Unit

1998-2000 Chief Helper in Perinatology Unit
Zekai Tahir Burak Women's Health Education & Research Hospital

1991-1998 Specialist(obstetrician & gynaecologist) in Perinatology Unit
Zekai Tahir Burak Women's Health Education & Research Hospital

Awards and Memberships

1996 First award in V. National Congress of Perinatology
Congenital Anomalies in Twin Pregnancies and Perinatal Mortality Ratios

1995 Award of WHO- Emergency Care in Obstetrics & Gynaecology

(Fellowship) High Risk Pregnancy
Unit- Charing Cross & Westminster Medical School
Chelsea & Westminster Hospital, London, The United Kingdom

1994 First award in IV. National Congress of Perinatology
The Importance of Sonographic Evaluation of Fetal Intraabdominal Masses

2007- Member of the Main Committee for License for Pharmaceutical Drugs & Medical Devices, Ministry of Health of Turkish Republic

2007-∞ Director of Hospital Pharmacovigilance Unit

2007- ∞ Member of Zekai Tahir Burak Women's Health Education & Research Hospital Transfusion Committee

2008 -∞ Co-director of Zekai Tahir Burak Ethics Committee

2008-∞ Counsultant in Obstetrics & Gynecologyin the Emergent Medical Care Coordination (ASKOM) 2008-2014 Editor of the Journal "Jinekoloji Obstetrik ve Neonatoloji"

2009-∞ Zekai Tahir Burak Human Milk and Breatfeeding Project Education Coordinator

2010-2014 Secretary of the Society of Gynecologic & Obstetrical Ultrasonography

2012- ∞- Secretary of the "Turkish Perinatology Society"

Deferee of National Journals
Kadın Doğum Dergisi
Türkiye Klinikleri Dergisi
Turkish Journal of Perinatology

Citations: More than 270 international \ More than 50 national

International Publications : 41

National Publications: 54

Oral presentations & Posters in International Congress & International Educational Activities: 57

Oral presentations, conferences, posters, educational activities in National Congress & Courses: 106

Books & Chapters in Books/ Translations: 12

Supervision of Doctora thesis: 20

Cesarean Scar Pregnancy: Ultrasonographic and Doppler Findings and Management

Despite efforts to decrease the numbers of caesarean section(C/S), among European countries Turkey has the highest C/S rate (42.7%), and C/S rates continues to rise constituting more than 50% of all deliveries. High C/S rates and the use of ultrasonography have contributed to increased reports in Turkey of the occurrence of caesarean scar pregnancy (CSP), the rarest form of ectopic pregnancies with an incidence of 1/1800 of deliveries . CSP has been reported to have two different types. In type I, the amniotic sac is implanted on the scar with progression towards either the uterine cavity or the cervico-isthmic junction. Type II is characterized by a deep infiltration into the uterine myometrium and bulging from the uterine serosal surface, creating predisposition to disastrous outcomes such as uterine rupture, disseminated intravascular coagulation and maternal death if unrecognized and not treated. Of many theories that have been proposed to explain the occurrence of CSP, the most widely accepted is that the blastocyst enters the myometrial wall through a microscopic dehiscence canal that may have been created through a trauma, mostly associated with C/S or another uterine surgical procedure. To my knowledge, this theoretical canal has not been revealed sonographically and has not been added to the sonographic

criteria of CSP, that has been previously established as:

- 1) Empty uterine cavity and cervical canal;
- 2) Implantation of the GS in the anterior uterine wall at the isthmus
- 3) Presence of a rounded 38.3mm GS with an embryo, yolk sac and cardiac activity
- 4) The presence of an area of increased peritrophoblastic vascularity revealed by a colour Doppler examination
- 5) Absence of healthy myometrium between the bladder and GS, allowing differentiation from the cervico-isthmic implantation

Moreover, the dehiscence canal at the boundary of the GS has been illustrated by me sonographically and this has not been previously published in the literature. Herein the sonographic and Doppler findings of a "canal defect type II CSP" has been presented suggesting the possibility of a minimally invasive procedure at 8^{2/7} weeks gestation with previously defined high risk criteria as high hCG levels (118.000 mIU/ml (ADVIA Centaur Assay Manual Total hCG 1 / 1200609933 Rev. D, 2007-03 ThCG, Siemens Medical Solutions Diagnostics, USA) with a GS measurement of 38.3 mm, CRL: 11.3mm and only a 2.3mm distance between the bladder and gestational sac.

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Prof. Tatyana Znamenska ,Professor, Doctor of Medical Sciences, President of Association of Neonatology of Ukraine, Deputy Director for Perinatal Medicine and Chair of the Department of Neonatology SI «Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine», Kiev, Ukraine

The Prophylactic of RSV-Infection in Infants

Znamenska T, Pysariev A.

Respiratory-syncytial viral infection is a great medical and social problem due to the high level of morbidity, the necessity of prolonged hospitalization and mortality especially in high risk groups of children. RSV infection in early childhood is characterized by severe flow and in 90% causes severe bronchiolitis. Common methods of prophylactic of RSV infection are not enough effective. Palivizumab – monoclonal IgG₁ antibody which interacts with the epitop A of viral antigen of confluence protein F – is recommended for passive immunoprophylaxis of RSV infection in children of high risk groups through disease severe flow.

Palivizumab is administered in dose 15 mg/kg once per month intramuscular during epidemic season. Passive immunization is carried out as in the hospital (in first 72 hours) as at the other steps of care. Indications for passive immunization are: chronic pulmonary disease, hemodynamical meaningful heart anomalies, preterm delivery (especially before 32 weeks of gestation), inborn anomalies of respiratory way and neuro-muscular disorders.

Follow-up of Newborns with Genetically Determined Changes in Folate Metabolism

Znamenska T, Rossokha Z, Pohilko V, Kyriachenko S, Gorovenko N

Introduction. To optimize the use of folic acid is relevant to the study nowadays in different periods of pregnancy in women. Less attention has been devoted to the perinatal period of folate metabolism in neonates, although the genes controlling the synthesis of folate metabolism enzymes, involved in the development of various pathological states in neonates. The goal was to determine the relationship of *MTHFR* (C677T) gene polymorphisms with possible folate metabolism changes, as well as to investigate the prevalence of gene polymorphism in neonates with critical state in neonatal period.

Materials and methods. 75 full clinical examined neonates screened for folate metabolism changes in early neonatal period. We analyzed folate metabolism indexes (homocysteine in blood plasma and folate in blood serum) in neonates with critical states (Group 1) compared with clinically healthy neonates (Group 2) on the first and third day of life. Molecular genetic testing of *MTHFR* (C677T) gene polymorphisms investigated in 350 neonates. Statistical analysis of folate metabolism indicators in the comparison groups performed using analysis of variance (SPSS program 17).

Results. Folate level significantly reduced in neonates of Group 1 (740.4 ± 47.95 ng/ml) in the first days of life compared to neonates Group 2 (1069.25 ± 46.06 ng/ml). On the third day of life in neonates of Group 1 folate level remained unchanged from the first day. Folate level in Group 2 significantly decreased on the third day (682.5 ± 36.53 ng/ml) as compared with the first day. In neonates of Group 1 folates are not disposed in the first days of life because as most of neonates had 677CT genotype. The level of homocysteine in Group 1 was consistently high during the first three days of life. In 350 neonates with critical states detected following genotype frequencies: 677TT – 20%, 677CT – 35%, 677CC – 45%. 55% of neonates with critical states had unfavorable 677CT or 677TT polymorphisms in *MTHFR* gene, which increased risk of hyperhomocysteinemia and endothelial dysfunction.

Conclusion. Serum folate levels in neonates with critical states at birth reduced and folate not utilized in the first days. Folate metabolism changes is a factor worsening during the neonatal period in the presence of critical states. More than half of neonates are carriers of unfavorable genotypes in which the folate deficit occurs. It is necessary to monitor the neonates with unfavorable genotypes, control folate indicators and replenishment of folate through nutrition.

A Problem of Invasive Mycosis in Neonatology : Approaches to Effective and Safe Prophylaxis and Treatment

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Fungal infections are important reason of morbidity and mortality in neonates and infants which challenge long and intensive treatment, have certain difficulties in diagnostics. Their outcomes critically depend on timely beginning of adequate antifungal therapy. Fungal infections are inflammation, which are caused by eucariotic heterotrophic organisms including moulds and yeast living as saprophytes or parasites. Invasive fungal infection is a severe system infectious disease caused by moulds and yeast. Pathogenesis depends on the way of transmission into the organism, its colonization and penetration through epithelial barrier as a result of dissemination.

Factors of risk are immunological (functional defects of phagocytes, breach of function of T-lymphocytes, humoral deficit in preterm infants) and non-immunological (catheters, invasive ventilation, antibiotic usage, massive colonization, parenteral nutrition, surgical activity). Clinical manifestations of mycosis in neonates are non-specific, their diagnostic is difficult, the disease is escorted with extreme high attributive lethality.

What are reasons of such extreme high lethality? They are – late beginning of therapy, limited possibilities of usage of effective antimycotics such as amphotericin B due to the high frequency of adverse effects. Reasons of late beginning of therapy also are limited possibilities of timely diagnostic and absence of fungal suspicion from the medical staff.

Slow progress in the creating of new antifungal medicines is due to the fact that fungi as mammals have eucariotic cells - that is why antifungal agents while affecting on the destruction of synthesis of protein, DNA, RNA, lead to the toxic impact on the human, especially on liver and kidney. Nevertheless, during the last ten years a variety of antifungal medicines increased due to new compositions. Echinocandins belong to a society of new antifungals which inhibit the synthesis of 1,3- β -D-glucan, which is absent in the cells of mammals thus decreasing frequency of side effects. Profile of safety of echinocandins which acts fungicide on the most of *Candida* spp., *Aspergillus* spp. is exceptional.

Empire de-escalation antifungal therapy is directed to decreasing of attributive lethality of children in case of invasive candidosis, particularly aspergillosis, and at suspicion on the infection of resistant to fluconazol stocks. Mikafungin is the most adequate medicine for providing such de-escalation therapy.

Despite of achievements in diagnostic and store with new antifungal drugs and wide prophylaxis in the risk groups, fungal infection is the problem in neonates. Further hopes of the medical science are directed to the early initiation of safe antifungal prophylaxis and treatment for improvement of outcomes.

Keywords: fungal infection, invasive mycosis, newborn, echinocandins.

Perinatal Care in Ukraine - the State of the Art.

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The support for the increasing of fertility rate and maternal and child health preservation in Ukraine is the only way to national security ensurement within the predicted population decline. The main component of the systemic reforms in perinatology is the regionalization of perinatal care, that includes the creation of a regional perinatal centers network. It's basic principles include free access to a high-end qualified medical care with maximal economic investment efficiency. The forming of patient-centered care; increasing the competence of human resources; creating an effective perinatal care management; the development of science and innovation. In the national project boundaries of regionalization of perinatal care it's important today to continue the establishment of perinatal center of the third level in all regions, the establishment of a unified information system and a single register of births in Ukraine, organization and coordination of research, the advisory management, creating a network of training centers in system of continuous post-graduate education and initiating handover evaluation committees professional associations to create a system of follow-up and implementation of the "early intervention" to reduce morbidity and early childhood disability.

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Many years of experience in multi-disciplinary study of the efficacy of prenatal development programming of the nervous system from the position of epigenetic mechanisms

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Introduction. Prenatal diagnosis (PD) associated with euthanasia, under the pressure of new knowledge and experience is converted into prenatal programming (PP).

Proven interaction of DNA methylation and histone modifications with a wide range of physiological processes of embryonic development has become the scientific foundation, which confirms the role of epigenetic modifications in the appearance of human pathology (M.C.Antonelli,2015). A feature of epigenetics is its ability to convert the environmental factors in biological signals by modulating the transcriptome in response to specific influences. This ability makes the plasticity of development and allows you to display different phenotypes of the same genome (P.A.Desplats,2015;M.C.Antonelli,2015). Twenty years of prenatal parenting experience and prenatal genetic monitoring of pregnancy allowed to set a goal of creating a unique system of diagnosis, monitoring and correction of disorders of the fetus and exploring the feasibility and effectiveness of prenatal program development from the standpoint of genetic mechanisms. A multidisciplinary team was created and implemented a unified system for monitoring the family with complicated obstetrical and genetic history: a physician-geneticist, obstetrician-gynecologist (he is a specialist of prenatal diagnosis), narrow specialists, including-cytogenetics, biochemists, molecular genetics, infectious diseases specialists, morphologists. Designed and implemented a system of Prenatal education of children, aimed at preventing the action of the main triggers-inadequate nutrition, stress, infection, smoking, alcohol, injuries. Were used: chromosome analysis, FISH, chromosomal microarray, single gene testing, whole-exome sequencing(WES) and wholegenome sequencing(WGS) (in individual observations), biochemical genetic testing (amino acid analysis, organic acid analysis, carnitinelevels, acylcarnitine profile), virological and bacteriological examination

Results: Genetic monitoring subjected:322000 newborns. Among them 10068 were found with developmental disabilities.

Medical and genetic counseling was conducted in the first year of life.

The frequency of CNS from the year 2000:

anencephaly: 0-1:45000;

spinal hernia: 1.79-4.72:10000;

meningocele: 0-1.18:10000;

hydrocephalus: 2.86-5.72:10000;

microcephaly: 0-3.72:10000.

Determined the risk of central nervous system diseases - 5 times more than European.

Prenatal genetic monitoring of 114128 pregnant women has revealed 2444 fatal, and 1084 vital (detection rate 5.9%).

Studied the main triggers.

The study of single nucleotide polymorphisms MTHFR C677T-8863, MTRR A66G-5658, MTR A2756G-4949. Received following distribution of genotypes: MTHFR C677T (SS-4238, PT-3739, CT-886), MTRR A66G (AA-1790, AG-3868, GG-2826), MTR A2756G (AA-2963, AG-1738, GG-248).

Analysis of the MTHFR gene promoter methylation was carried, followed by methyl-specific PCR (MSPCR).

Conducted phenotypic and genotypic comparison and determination clinically relevant variants, developed individual tactics prenatal programming CNS.

Efficiency of the system is high

Prenatal Care, Childbirth and Neonatal Period when Maternal Gaucher Disease

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Introduction: Gaucher disease (hlyukoziltseramid lipidoz) - hereditary disease is the most common of the lysosomal storage disease. Developed as a result of insufficiency hlyukotserebrozidaza enzyme that leads to accumulation hlyukotserebrozyd in many tissues, including the spleen, liver, kidneys, lungs, brain and bone marrow.

Purpose: the experience of observation the pregnancy with Gaucher disease against a background of thrombophilia..

Results: Patient D. addressed to our Centre in the gestation period of 10 weeks with a diagnosis of Gaucher disease (diagnosed in 2005). Complained: pain in the right hip bone, the knee, lumbar spine, nasal bleeding. The course of pregnancy with the threat of termination. Received: Dufaston, folic acid, magnesium, vitamin B6, suppository viburkol. When ultrasound pregnancy 10-11 weeks, twins, that did not happen, the threat of

abortion. Pregnant have lysosomal storage disease (Gaucher disease type I, an autosomal recessive inheritance type).

The examination revealed gene polymorphism (MTHFR677 CT, MTRR 66AG, MTR 2756AG), was found the moderate hypercoagulable - increased risk of thrombophilia. Features of pregnancy was to obtain enzyme replacement therapy (Cerezym), Cardiomagnyl, folic acid, Aspirin-cardio. Conducted ongoing monitoring of the fetus, the results of coagulation, platelet aggregation, biochemical markers, ultrasound of the fetus.

Conclusion: pregnant with Gaucher disease are need of receiving specific treatment and conduct a comprehensive survey to identify concomitant metabolic disorders, correction which can prevent possible complications of pregnancy, childbirth and the postpartum period.

Risk Factors during Pregnancy as Potential Triggers of Autism

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Introduction. Today, autism is becoming a global problem - just in the last 6 years, the frequency of diseases increased from 1: 150 to 1:63 children (National Institute of Mental Health, 2014). Every 20 minutes a new case of autism is registered. At the beginning of 2015 the number of autistic people in the world reached 67 million people. One of the triggers of autism are considered unfavorable factors of pregnancy in the mother (infections, stress, use of drugs (including hormones, antibacterial and antiviral), alcohol, drugs, smoking, X-ray examination, occupational hazards, electromagnetic radiation, early ultrasound examination of the embryo (Caroline Rogers, 2006, Pasko Rakic, 2006)), the exchange of inadequate own food).

Goal. Study of peculiarities of pregnancy in mothers of children with autism.

Materials and methods. The study included 181 child with autism and autistic behavior disorder between the ages of 2 and 18 years.

Results. Features of pregnancy and childbirth: early morning sickness (76%), anemia (21%), the threat of abortion and related hormonal therapy (49%), reproductive tract infections in pregnant women (52%), acute respiratory viral infection, herpes infection, influenza in pregnancy (73%), chronic stress (72%). 14% of mothers smoked during pregnancy, and 2% have abused alcohol.

Conclusions.

1. Common complicated by an early pregnancy toxemia, stressful situations, SARS, and urinary tract infection.
2. Somatic disorders by the mother during pregnancy given the opportunity to suggest that the metabolic disorders manifest even in utero, and demanded compensation by the body of a pregnant.

Preconceptional Preventive Measures, Monitoring and Prenatal Diagnosis of Maternal Phenylketonuria

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Introduction. Phenylketonuria (PKU)- is an inborn error of metabolism involving impaired metabolism of phenylalanine (PA), one of the amino acids. It is noted that women with PKU, more often gave birth to children with mental retardation and birth defects.

Purpose of the study. To develop approaches to individual preparation of preconception with maternal PKU.

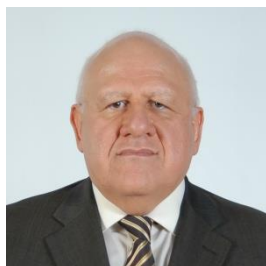
Materials and methods of the research. 90 families with PKU were observed. Last year two patients with PKU gave birth to healthy children.

Research results and considerations. We have been conducting genetic monitoring over the closed circle of families who have children with PKU. A system of medical-genetic assistance of children and adults was designed and implemented — the observation of the families is conducted by the multidisciplinary team under the supervision of a medical genetics specialist. The preconceptional preventive measures consisted of a rigid diet for a female three months prior to the conception and throughout the pregnancy using dietary amino acid mixture without PA. Harmonization of folic-methionine metabolism was

conducted, since the women were heterozygous carriers of the MTHFR gene, also after a regular monitoring of PA and blood biochemical parameters it was detected that both women were heterozygote carriers of the gene mutation R408W PAH. Further healthy boys were born, who were subsequently examined at the Center.

Conclusions. The special feature of the preconceptional preventive measures is the individual correction not only of PA metabolism but also of other metabolic disorders.

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In 1977 graduated from the Yerevan State Medical Institute with an M.D. degree.

In 1982 completed his Ph.D. at All-Union Institute of Obstetrics and Gynecology, Moscow, Russia.

From 1982 to 1984 worked as a senior laboratory researcher,

from 1984 to 1992 as assistant and since 1993-2010 as the head of the Department of Obstetrics and Gynecology of National Institute of Health of the Republic of Armenia.

In 1991 successfully obtained his Doctoral Degree in Medical Science and in 1994 received a rank of professor.

From 1997 to 1999 worked as the Head of Obstetrics and Gynecology Department of the Medical Center "Erebuni".

2011-up to present - Head of the Department of Obstetrics and Gynecology of the faculty of postgraduate and continuing education of the Medical University after M. Geraci.

Professor Okoev is the author of 383 scientific publications, including 3 monographies, 2 books, 5 manuals and 1 invention.

Capabilities of fertiloscopy in gynecology

Today needs a highly informative method of diagnosing the state of the fallopian tubes and pelvic organs, which must meet the requirements of both minimally invasive and is a screening for the selection of patients requiring surgical correction.

The purpose of this study was to identify opportunities and places fertiloscopy survey patients with infertility. We observed 90 women suffering from infertility.

Women were examined by the standart technique using such invasive research methods as hysterosalpingoscopy, laparoscopy and fertiloscopy, the latter two methods are combined with each other.

Diagnostic capabilities hysterosalpingoscopy and fertiloscopy evaluated in selected clinical groups. As the “gold standart” used the results of abdominal laparoscopy, based on which were calculated sensitivity, specificity, positive predictive value, negative predictive value, and diagnostic accuracy of these methods.

Found that fertiloscopy as abdominal laparoscopy, allows a high degree of correlation to identify the anatomical and physiological features of the location in the pelvis of the uterus and its appendages, as well as to evaluate the patency of the fallopian tubes. In case where there is tuboperitoneal factor infertility and endometriosis diagnostic accuracy fertiloscopy towards laparoscopy was 96,1% and 85,7%, respectively, due to the severity of adhesions and localization of endometrioid heterotopias. Using fertiloscopy when examining women with infertility requires significantly less economic cost than abdominal laparoscopy and need conversion to abdominal 30,8%.

Fertiloscopy advantages are: the possibility of a survey of women with infertility in a “one-day hospital”; no need to use endotracheal anesthesia; redicing inspection time as compared with abdominal laparoscopic average 2,3 times.

Thus, the problem of finding a highly informative method for diagnosing the state of the fallopian tubes and pelvic organs to meet the requirements of minimally invasive and the possibility of using as a screening for the selection of patients requiring surgical correction may decide fertiloscopy including realization of minihysteroscopy, transvaginal laparoscopy and salpingoscopy.

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Bioethics in the protection and support of Mother and Child at the Example of Strategy to Counter Perinatal HIV infection

Presented is the dynamic assessment of ideological and applicative bioethical issues related with mother and child protection at the example of control of perinatal HIV infection in Ukraine. Bioethical problems caused by the development of HIV epidemic in Ukraine, particularly, of perinatal HIV-infection, were dynamically identified and assessed based on the results of 17-year clinical experience of health settings of Odessa working within the framework of international cooperation and implementing research projects. Also presented is a dynamic evaluation of problems of HIV-positive patients' stigmatization, relationship between health professionals and patients, ethics of clinical investigations, observance of professional secrecy and confidentiality. Individual autonomy of mother and child, definition of fetus as a patient, social equality and justice in the context of HIV infection are discussed. Particular attention is paid to the protection of children's rights and prevention of child abuse. Currently bioethics has entered a new nooethical stage of its development, reflecting its further globalization and integration with the paradigm of biosafety and healthy lifestyle. Worldview and applicative nature of bioethics and nooethics has acquired great importance in solving the problems of mankind civilization, including those of mother and child protection, which is clearly demonstrated at the example of strategy to counter perinatal HIV infection.

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abstract

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Predictors of Arterial Hypotension Development in Preterm Born Children with a Bacterial Infection in Early Neonatal Period

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Introduction. Nowadays infectious pathology came in second place in the overall structure of human diseases. Among the causes of mortality proportion of infections is 23-25%, while in the ICU - about 40-60%. Sepsis plays a major role in the adverse outcomes among neonates, while the frequency remains very high and according to different authors range from 0.5 to 8.0 cases per 1,000 live births. One of the most common manifestations in premature neonates is arterial hypotension (AH).

The purpose of this study was to determine the clinical and pathogenetic mechanisms of AH in premature neonates with early bacterial infections.

Materials and methods. The first group included prematurely born children with early bacterial infections and AH syndrome (n = 58), and the second - prematurely born with infections, but without AH (n = 62). Statistical analysis conducted using licensed package STATA version 11 (Stata Corp, Texas, USA). We calculated odds ratio, confidence intervals. The differences are considered significant with p-value less than 0,05.

Results and discussion. Estimation of medico-demographic characteristics of patients found no significant changes in average values of gestational age, weight and gender. That is, children with lower gestational age and weight were not likely to develop hypertension syndrome. We found no significant differences between sex and the number of children born with weight less than the 10 percentile in groups. Apgar scores in premature neonates was at 1st and 5st minutes also nearly the same in investigated groups. The resuscitation frequency in neonates of first group was not significantly different from the second group. The AH presence are not increased the necessity or length of mechanical ventilation in investigated neonates. Most of the neonates with AH had no symptoms of the respiratory or the cardiovascular system damage. But the impact index of the left ventricle and resistance index of the middle cerebral artery were significantly lower in premature neonates with AH than those without

(respectively $1, 1 \pm 0,11$ versus $1,9 \pm 0,19$, $p = 0.005$ and $0,7 \pm 0,02$ versus $0,8 \pm 0,04$, $p = 0.012$). A more detailed analysis of the association between the AH development and certain microorganisms in any locus identified the presence of significant impact of St. Epidermalis.

Conclusion. The main pathways of hypotension syndrome in premature neonates with early bacterial infections were left ventricle and resistance of middle cerebral artery indexes and St. Epidermalis colonization.

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Algorithm of Obstetrical Actions at Isthmico-cervical Insufficiency

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Istmicocervicalinsufficiency (ICI) is one of the main causes for pregnancy interruption in term of 16-28 weeks, its frequency in pregnant population - up 15-20%, and 18-37% of women with recurrent miscarriage.

In order to diagnose the uterine cervix (UC) state during pregnancy in terms of ICI identifying, the most significant methods are palpatory estimation of UC state during vaginal study (UC location, its length, consistency, the presence of the old lacerations, degree of its disclosure) and transvaginal ultrasound investigation (USI) with US cervical stress test.

Pregnant women with pathology of UC are recommended the study of a microbiocenosis of vagina and cervical canal (CC) with sensitivity determination of microbial agents to antibiotics. To restore of the vaginal biocenosis, the pregnant women are recommended the prescription of probiotics. Use of probiotic "Vagilac" (Jadran-Galenski Laboratorijdd, Croatia) is convenient and pathogenetically justified (it consists of probiotic strains of urogenital origin *L. rhamnosus* GR-1™ and *L. reuteri* RC-14™). They acidified vaginal environment, produce bacteriocins, destroy pathogens biofilms.

Using of micronized progesterone at ICI is a basic importance due to the need to reduce the uterine tone if the UC is a short one, and the creation conditions for the formation of an adequate epithelial layer in the vagina. In order to maintain the acidic media in the vagina the daily use of means for daily intimate hygiene with lactic acid is recommended. The use of obstetric outloading pessary (OOP) leads to the closure of the cervix, redistribution of the ovum pressure, the sacralization of UC, the better formation of truncated and partially open cervix (use the moisturizing gel "Vagilac" with lactic acid).

ALGORITHM OF OBSTETRICIAN-GYNECOLOGIST ACTIONS:

- Diagnostic actions (CC palpation, USI + cervical stress test, determination of vaginal pH value, progesterone concentration in blood, bacteriologic study);
- Two-stage sanitation of genital tracts assisted by pathogenetic justified topical antimicrobial agent and selective probiotic "Vagilac" (vaginal capsules, 7 days);
- Progesterone support (micronized progesterone 50-100 mg sublingual, twice per day);
- Introduction of OOP (use of moisturizing gel "Vagilac"), or cerclage;
- Long-term support of vaginal microflora and pH level (oral probiotic "Vagilac", up to 1 month; means of daily intimate hygiene "Vagilac");
- Progesterone support (micronized progesterone intravaginal, 50-150 mg, twice per day);
- Periodic efficacy checking (vaginal pH, bacterioscopic/bacteriologic examination, USI);
- OOP removal in the term of 37-38 weeks followed by sanitation before delivery in accordance with the same principles.

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The role of innate immunity in the pathogenesis of premature birth and formation of the pathology of extremely premature

An immune-activated inflammation is not limited to the induction of labor, but has a prolonged effect on premature infants. Activation of TLR in premature infants is a marker processes lead to damage in the lungs, brain, intestine and retina.

There was a significant correlation ($r_s = +0,4-0,8$, $p < 0.01$) between the level of TLR2 and IL6, psychomotor and socio-emotional development of preterm infants.

A significant increase in the relative risk of neonatal death and disability 5.2 times 4.1 times and increase the chances of them in 51.3 and 12.4 times, respectively, at a concentration of TLR2 > 2,0 ng / ml in blood serum 3-5 days of life and 35-36 weeks of PCV. The level of IL6 in 35-36 weeks PKV > 5.0 pg / ml significantly increases the relative risk of 2.5 times and 7.3 times the odds of disability.

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Stabilization and Respiratory Management in Delivery Room

Delivery room management, especially in the first "golden" minute, is of the utmost importance and may determine lifelong outcome. Delayed cord clamping is recommended for both preterm and term infants. Since delayed cord

clamping increases mean birth weight by approximately 30 g/kg, the present birth weight charts based on early clamping need to be corrected. A recent meta-analysis on sustained inflation in preterm babies showed that initial treatment with SLI compared to intermittent positive pressure ventilation led to less mechanical ventilation, with no improvement in the rate of BPD and/or death. Preterm infants in need of ventilatory support should start stabilization with CPAP from the first breath. For babies < 28 weeks of gestation start with 30% oxygen and for infants of 28-32 weeks start with 21-30% and adjust according to the response obtained. Surfactant instillation is often not needed prophylactically provided the mother has received antenatal steroids. Less invasive methods for administering surfactant may be useful.

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Neurodevelopmental Care in High-Tech Environment

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The conception of plasticity of sensor system during early ontogenesis is in base of strategy of developmental care. The butterfly effect or sensitive dependence from primary conditions always exists of preterm delivery. The violation of brain development on early stages which is called "trajectory of development under of influence of external condition" can lead to development of unfavorable short-term and long-term consequences in advance of child. The model of Universe of developmental care is proposed for organization of developmental care. Five core position of developmental care are defined: sleep protection, management of pain/stress, nursing activity, family-centered care, healthy environment.

Neuroprotective interventions on modern stage are presented by kangaroo-mother method, NIDCAP (neonatal individualizing developmental care & assessment program) and program of early intervention which take advantages of neural plasticity more expressed before 24 month of corrected age

Organization of developmental care has huge potential for improvement of life quality and consequences for preterm infants.

Keywords: brain plasticity, butterfly effect, preterm infant, developmental care, neuroprotective strategy.

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Non-invasive respiratory support in neonatology: evidence and implications for practice

Noninvasive strategies for respiratory support of newborns are perhaps the most actively investigated interventions for neonatal care in recent years.

These strategies have evolved from continuous positive airway pressure (CPAP) to now include CPAP-like strategies, such as high-flow nasal cannulas, and “assisted” CPAP, which uses none synchronized or synchronized ventilator-delivered breaths with nasal devices and even nasal high-frequency oscillatory ventilation.

These innovations are then applied for a variety of therapeutic goals: initial stabilization of breathing after birth, management of the primary respiratory disease, facilitation of extubation, and, finally, for chronic lung diseases.

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Minimally invasive surfactant treatment (MIST) in infants suffering from respiratory distress syndrome (RDS)

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The aim: to study the efficiency of minimally invasive surfactant treatment with simultaneous “lungs involvement” very preterm in infants suffering from respiratory distress syndrome (RDS).

Material and methods: 143 infants born in 2008-2014 in Zhytomyr Oblast Perinatal Centre were involved into the study. The infants were $28,4 \pm 2,7$ weeks old, weighed 1000 [550 - 1500] g., and had the clinical signs of RDS. All the newborns were administered surfactant replacement therapy with the help of Curosurf® by the technique of invasive (control group, n = 107) and minimally invasive surfactant (index group, n = 36) treatment on the background of “lungs involvement” (index group, n = 36). The both techniques were compared and tested for death, IVH, PVL, BPD, pneumothorax frequency. The investigation is done within the framework of comparison with historical control.

Results: no complications observed during MIST on the background of “lungs involvement”. The infants tolerated the administration well. The investigation revealed no increase in duration of oxygen therapy in the infants of index group versus those of control group ($p = 0,2$). The comparison of invasive and minimally invasive surfactant treatment techniques revealed no difference in duration of primary ventilator support ($p = 0,51$). The research detected the tendency for decreasing the number of the infants with bronchopulmonary dysplasia (BPD) during MIST administration on the background of “lungs involvement” in comparison to the infants who had been administered surfactant replacement therapy: 5,6% vs. 16,8%, accordingly ($p=0,16$). No statistical

discrepancy in the developmental frequency of severe IVH was found: 8,3% versa 10,3%, accordingly ($p = 0,98$); in the developmental incidence of periventricular leukomalacia: 2,8% versa 1,9%, accordingly ($p = 0,7$); in the incidence of air leak syndrome: 2,8% versa 6,5%, accordingly ($p = 0,68$). The investigation detected the decrease of composite indicator in the infants weighed 500-999 g.: death or BPD: RR = 0,67; 95% CI (0,41 – 1,1), $p = 0,11$, NNT = 4, [CI]: -0,04 – 0,47, $p = 0,1$. The observation revealed the tendency for the loss in IVH – III and BPD frequency in the infants (weighed from 500 till 999 g) of the index group versa those of the control group (accordingly 5,6% versa 15,7%, $p = 0,49$; and 5,6% versa 19,6%, accordingly $p = 0,30$).

The observed discrepancy, however, is of no considerable statistical significance requires further investigation to study the clinical efficacy of minimally invasive surfactant treatment.

Keywords: minimally invasive surfactant treatment, RDS, BPD, IVH, “lungs involvement”

Zhitomir, Sabyrova 2a)

David Davarashvili, *Head of DD Clinic*; Tamaz Nikolaishvili, *Gynecology Clinic “Bibida”*; Tbilisi, Georgia

TTTS - The Role of Color Doppler and Amnioreduction

Background. Twin to twin transfusion syndrome (TTTS) affects approximately 15% of monochorionic/diamniotic pregnancies and has perinatal mortality of up to 80% if untreated. The purpose of this study was to evaluate our experience with Twin-to-twin transfusion syndrome and to determine the effectiveness in treating TTTS with amnioreduction and color Doppler.

Methods. Prospective study of 48 cases of monochorionic pregnancy was done. In 31 pregnancies with a diagnosis of TTTS were treated with 29 standart and 20 aggressive amnioreduction and 3 cases with septostomy. The mean gestational age at time of diagnosis was 20 weeks (range 16w to 33 w). Color Doppler study of fetal – maternal vessels (a. and v. umbilical, middle cerebral artery, ductus venosus, fetus a.renalis, a.uterine) were done in all cases before and after procedure.

Results. The mean number of amniocentesis done was 3 (range 1 to 7). The mean total of amniotic fluid removed over the course of the pregnancy was 3,2 L (range 500 to 8000 ml). In 22 (70.9%) cases pregnancy was prolonged to 4-15 weeks. After amnioreduction the indexes of umbilical and uterine bloodflow were improved and were depended on level of polyhydramnion showing decrease of resistance. The risk of perinatal death was associated with an absent or reversed end-diastolic bloodflow in the donor umbilical artery and with a pulsatile umbilical vein or absent or reversed end-diastolic flow in the ductus venosus of the recipient. The renal artery PI in recipient was lower than in donor ($P < 0.01$). In cases with septostomy we found elevation of the donor’s urine bladder, probably as a consequence of a diminished level of hypovolemia and this resulted in an improvement of the renal function. 67.7% of the treated fetuses survived. Neonatal morbidity was 23.8% among the survivors. Average gestational age of delivery was 32 weeks (range 20 – 37 w).

Conclusion. Our experience shows that the management of TTTS is complex. Various treatment modalities such as amnioreduction, septostomy, tocolitic therapy are recommended as effective and low-cost therapy if no possibility performing laser coagulation procedure. Doppler results are important part of management for choosing optimal time for intervention, methods and time of delivery for improving perinatal outcome.

DIAGNOSIS AND TREATMENT OF FETAL ANEMIA

David Davarashvili, Salome Chkhaidze, *DD Clinic, Tbilisi, Georgia*

Purpose: Anemia is a major contributor to fetal morbidity and mortality. The etiology remains diverse and is sometimes difficult to detect by ordinary clinical means. The middle cerebral artery Doppler peak systolic velocity (MCA-PSV) has been recommended as the methodology of choice to detect and assess suspected fetal anemia. This is a sensitive tool for both the evaluation of fetal anemia and response to treatment. The object of this study was to assess the applicability of Doppler method for prediction of moderate-severe anemia in fetuses, who have undergone and more intrauterine transfusion.

Material and methods: Prospective study of 39 pregnant women with diagnosis of fetal anemia by Doppler peak systolic velocity was done. Indication for intrauterine blood transfusion was means MCA-PSV MoM more 1.5. Average of gestation age was 26.3 weeks (range 19 w – 34 w). In 22 case fetuses was hydropic, 17 - nonhydropic. All 120 intrauterine blood transfusions were done. One transfusion was done in 10 cases, two – 8 cases, 3-6 transfusion - in 21 cases.

Fetal blood sample from umbilical vein getting by cordocentesis checked for Hb, Ht, blood group and Rh, common blood test. Ht and Doppler MCA – PSV checked before and after blood transfusion.

Results: The reason of anemia in 34 cases was maternal red blood cell alloimmunization. In 5 cases - Fetuses blood was Rh – negative: blood was positive for Parvovirus B19 in 4 cases, 1 case – idiopathic thrombocytopenia. Blood transfusion via umbilical vein was done in 115 cases (range of transfused blood 30ml – 150 ml depending on Ht and gestation age), in 5 cases - intraperitoneal.

29 fetuses were delivered at 33 – 37 weeks of gestation, 6 fetuses were delivered at 26– 32.6 weeks of gestation and needed intensive neonatal care – 4 survived. Antenatal death was in 5 cases. All survival rates for nonhydropic fetuses -87%, for hydropic – 56%

Conclusion: Fetal MCA-PSA has been established as the method to identify the presence of fetal anemia of any cause. It must be standard for management in cases where fetal anemia is suspected. A confirmed prediction of severe fetal anemia enables optimal therapy, in beginning the intrauterine blood transfusion and than a timely delivery with full preparation for resuscitation of a severely anemic newborn.

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Avtandil R. Chkheidze, *Professor, Chairman and President of World OGASH Board, President of OGASH Academy, Chairperson of Steering Committee of the Society for the Study of Pathophysiology of Pregnancy (SSPP), World Organisation Gestosis (WOG); Tbilisi, Georgia*

NOMENCLATURE, CLASSIFICATION, DEFINITION AND BASIC MANAGEMENT OF EPH-GESTOSIS / RIPPMMANN'S SYNDROME

OGASH, (Organisation Gestosis Affiliated and Sponsored Hospitals) supported by OG - Organisation Gestosis spreads the information of the OG on International Nomenclature, Classification and Definitions of EPH-Gestosis. These parameters have to be applied world wide to fight killer №1 for babies and mothers. Without universal acceptance of OG suggestions no progress is to be expected. The menus are: inviting the OGASH Hospitals applying these data, selecting boards like OGASH Academy, World OGASH Board, Regional OGASH Boards, OGASH Chairmen (etc.) by regular meetings, establishing a medical Journal, OG Library, recommending standard procedures in detection, therapy and prevention. Special concern: developing countries with 4 mill, prenatal death per annum. In developed regions 4000 women die per year, while in developing countries - 580 000 women.

The syndrome of EPH-Gestosis has been recognized as of multifactoral origin and not as one clearly defined disease. This world wide complication of pregnancy is still killer №1 for babies (100) and mothers (1) in the given relation (100:1) the following facts are of utmost importance:

Fact 1: This most dreadful complication can be prevented by simple precautions

Fact 2: To find out, which of the many causes are responsible for the disturbance (...osis) in every individual pregnancy (Gest...station) intensive post partum investigation is mandatory and its importance should not be underestimated.

Fact 3: Not only to prevent EPH-Gestosis during a following pregnancy but also because EPH-Gestosis is a forerunner, an indicator of women diseases to appear later, possibly decades after the pregnancy complication. It gives up, the doctors the opportunity to foresee the fate of the older woman, a fate which might be prevented by early detection and adequate guidance of the former obstetrical patient

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Aris. J.Antsaklis, MD PhD FRCOG, Professor of Obstetrics and Gynecology, Chairman of the 1st Department of Obstetrics and Gynecology University of Athens Medical School

Education:

He studied medicine at Athens University (MD degree **1969**). He trained as an Obstetrician Gynecologist (**1970-1974**) in university of Athens 2nd Department of Obstetrics and Gynecology. In **1974** he defended his MD thesis "Amniotic fluid Immunoglobulin IgG IgM IgE in normal and high risk pregnancies" of the University of Athens. In **1975** he was a Council of Europe research fellow and honorary lecturer at the Department of Obstetrics and Gynecology at the University College Hospital, University of London with Professor D.V Fairweather. In **1976** he was at the Department of Obstetrics and Gynecology at Yale University. In **1977**, Dr.Antsaklis was appointed senior registrar of Obstetrics and Gynecology.

In **1981**, he defended his PhD thesis "Fetoscopy and fetal blood sampling for prenatal diagnosis in twins" at University of Athens. In **1982**, he was as an assistant Professor of Obstetrics and Gynecology and Deputy Director of Maternal Fetal Medicine Division of the 1st Department of Obstetrics and Gynecology at the University of Athens. In **1993**, he was appointed associate Professor of Obstetrics and Gynecology and Deputy Director of Maternal Fetal Medicine.

In **2002**, he became a Professor of Obstetrics and Gynecology at the University of Athens in the 1st Department of Obstetrics and Gynecology. He was involved in the teaching program for the medical students, junior staff members, and the residents of the Department and the Obstetrics Gynecology. He was also the Director of the Maternal Fetal Medicine Division. In September **2005**, he was appointed Chairman of the 1st Department of Obstetrics and Gynecology at the University of Athens.

Membership:

At the national level he is a Founding Member, Executive Board Member and President of several organizations in the field of Obstetrics and Gynecology, Perinatal Medicine, Ultrasounds and Fetal Medicine. He served as President, General Secretary and a member of the Executive Board of **Hellenic Society of Obstetrics and Gynecology** since **2009**.

He also holds membership and various board positions with the **Hellenic Society of Perinatal Medicine** (President for several years), the **Hellenic Society of Prenatal Diagnosis and Fetal Therapy** (Founder and President), the **Hellenic Society of Ultrasound in Obstetrics and Gynecology** (Founder and President since **1992**), the **Hellenic Society of Maternal Fetal Medicine** (Member of the Executive Board). He has participated in several committees of the **Hellenic Health Council of Medicine** since **1990** and on **Ultrasound in Obstetrics** since **1995**. He is member of the Editorial Board of several Greek Medical Journals.

At an International level, he is currently President of the **World Association of Perinatal Medicine (WAPM) 2013-2015**. He has also served as Vice President and member of the Scientific Committee of **WAPM (1996-2000)**. Member of the Board of the International Society: "**The fetus as a patient**". He is a member of the "**Fetoscopy Working Group**". He has also been a member of the expert advisory Panel on **Maternal and Perinatal Health and Obstetrics FIGO** since **1997**.

He was President elect of the **European Association of Perinatal Medicine (2002-2004)**, President of the **19th European Congress of of Perinatal Medicine**, Athens, **Oct.2004** and President of **EAPM for 2004-2006** and Past President for **2006-2008**. He is member of **the International Academy of Perinatal Medicine**, Vice President of the Mediterranean Union on Ob/Gyn, Co-editor of the Donald School Journal of Ultrasound in Ob/Gyn, and editor of the Greek journals "Perinatal Medicine and Neonatology" and "Ultrasonography".

Awards:

In **1997** he became Fellow of the **International College of Surgeons in Obstetrics and Gynecology**. In **1988** in Calcutta he received the Appreciation Award by the **Indian Society of Perinatal Diagnosis and Therapy**. In **1999**, he became Honorable Member of the Romanian Association of Perinatal Medicine for his contribution to the development of Perinatal Medicine.

The Turkish and the Hellenic “Soranos Award” Committees confer upon granting him the **2003 “SORANOS Science award”** for his contribution in the field in Perinatal Medicine and Perinatal Diagnosis. In **2005** he received the **“Sir William Liley” Award** from the **International Society “The Fetus as a Patient”**. His contribution in **Perinatal Medicine and Perinatal Diagnosis** both nationally and internationally was of great significance worldwide. In **2005**, the **Serbian and Montenegro Association of Perinatal Medicine** awarded him for his popularization of Perinatal Medicine and developing connections amongst countries.

In **2006** the 1st Dept. OB/Gyn of the University of Athens was honored with accreditation as a **European Training Center in Obstetrics and Gynecology** from the hospital Recognition Committee and the European Board & College of obstetrics and Gynecology (**EBCOG**). In **2007**, he became Fellow of the **World Academy of Art and Science**. In **2008**, the 1st Dept. OB/Gyn of the University of Athens was recognized and accredited as a **Training Centre in Materno-Fetal and Perinatal Medicine**, by the European Association of Perinatal Medicine (**EAPM**) and the European Board & College of Obstetrics and Gynecology (**EBCOG**). In **2009** he received a letter of Appreciation for his help and guidance in establishing the **Ian Donald School** at Katmandu, Nepal.

In **2009** he was also elected honorary member of the **Croatian Association of Perinatal Medicine** for his outstanding contribution to the development of world perinatal medicine.

In **2010** he received the highest award in Perinatal Medicine the “Maternity Prize” for the European Association of Perinatal Medicine (**EAPM**)

In 2011 he became Honorary Fellow to the **Royal College of Obstetrics and Gynecology** and he received the :George Papanicolaou Award “by the **Hellenic medical Society of New York**, In recognition of his contribution to women’s health. The same year **2011** he was declared **Honorary Member** of The Russian Association of **the Perinatal Medicine and Honorary Member off the Society of Perinatal Medicine of Respublic of Moldova**.

Professional and research interests:

He is highly interested in the Organization and **Quality assurance** and services of **Perinatal care** as well as the proper application of screening tests for **Prenatal Diagnosis of congenital malformations of invasive procedures for fetal diagnosis and in Ultrasound in Obstetrics and Gynecology**.

He organizes several National and International Conferences and Meetings on Prenatal Diagnosis, Prenatal Medicine and Ultrasound in Obstetrics and Gynecology. Just to mention a few:

The 4th International Conference of Chorionic Villus Sampling and Early Prenatal Diagnosis/Athens, May 28-29,1988

The 19th European Congress of Perinatal Medicine/Athens, October 13-16,2004

The 16th Hellenic Congress of Perinatal Medicine/Athens. October 21-23,2013

The Ian Donald School every second year since **2005**

The national Congress of Ultrasound in Obstetrics and Gynecology every second year since 2000

His contribution to **Perinatal Medicine** was great both Greece and worldwide. **The Hellenic Society of Perinatal** was always happy to sponsor and follow his initiatives. He was member of the **Advisory Committee** in 1998 that advised the Central Council of Health on the importance of Obstetric Ultrasound (1998-2005) and organized **Perinatal Diagnosis on Hereditary Hemoglobinopathies**.

He has participated in many European Community concerted **action projects** "New methods for Perinatal surveillance", European network for prenatal transport (**EUROPET, EURAIL, EUROPOP**).

He has supervised PhD theses, research projects on different subjects and acted as referee for other PhD thesis. He is visiting Professor at the **European and Summer and Winter School of Perinatal Medicine** since **1998**.

His current research lies mainly in the field of **Prenatal Diagnosis and Therapy**, Ultrasound in **OBGYN** (3D ultrasonographic diagnosis of fetal malformation early in pregnancy).

Publications:

Professor Antsaklis is the author and co-author of **400 publications** in the International and Hellenic Pre-reviewed journals and has written **25 chapters** in the International and **15 chapters** in **Greek medical books**.

In **1989**, he published a book titled "**Chorionic villus sampling and early prenatal diagnosis.**"

In **2008** he published a text book for Greek medical school students and residents on **Obstetrics and Gynecology 2008-2011**

Prediction of Preterm Labor by Ultrasound

Who in 1993 has recommended that preterm birth (PTB) is defined as a gestational age less than 37 weeks of pregnancy or less than 259 days from the first day of the last menstrual period. Preterm birth occurs in 7-10% of pregnancies before 37 weeks and 3-7% of pregnancies before 34 weeks. Is the leading cause of neonatal mortality and morbidity. It is estimated that there are nearly 13 millions preterm babies born worldwide each year with an incidence from 5,8% to 11,2%. In Europe the overall incidence of PTB is approximately 5,9%, or an expected annual population of 375000 neonates. 95% of them are potentially treatable. The etiology of PTB is multifactorial and one of the most important cause is cervical incompetence. About 25% of women with contractions will give birth within 48 h, while continue the pregnancy because of tocolysis, and 61% will carry their pregnancy to term without any intervention. PTB is frequent, has an important morbidity and mortality and an important cost and it is logical that we try to decrease the problem by predicting. This allows to initiate appropriate risk specific treatment and to gain important insights into mechanisms or pathways lead to PTB. Predictor factors for PTB can be classified as primary secondary predictors such as cervical length measurements and fetal fibronectin. Concerning the cervical length, there is a relationship between CL funneling and the risk of PTB. The exact cut off point is not known and measurements between 14-24 weeks are used to identify patients at risk for preterm in general population. Findings associated with an increased risk for PTB are the CL less than 25mm and the appearance of the funnel that comprises 50% or more of the total cervical length. Previous history of PTB alone is not enough indication for cerclage. Women with risk factors for PTB must have follow up with serial TVS should start early in second trimester until 30-32 weeks. The exact interval between TVS measurements should be individualized. We must not use cervical sonography to screen asymptomatic pregnancies for PTB. After 20 weeks gestation the cervix appears to shorten and efface slightly with increasing gestational age, from 35-40 mm at 24-28 weeks to 30-35 mm at 32 weeks. The prediction and prevention of PTB continues to be one of the most difficult and complex problems in Obstetrics.

Prenatal Diagnosis of CNS Malformations by Ultrasounds and MRI

Prenatal sonography is the preeminent tool used to document, study, and understanding the anatomy, pathology, and developmental changes of the fetal CNS. Gestational age plays a critical role in the examination of CNS of the fetus since it develops in a systematic manner and at precise developmental time appears each new structures of the CNS. In the 1st trimester fetal CNS structures rapidly changes in the 2nd and 3rd trimester CNS slow down its developmental pace but some of the brain structures continue to evolve or change and there is a 40 fold increase in the Weight of the brain between the end of the embryonic period and birth. Brain surface appears smooth before 20 weeks, central sulcus appears on the 27th week and the secondary sulci after the 33 weeks. Sulcation is an important aspect of brain development that can be visualized by fetal MRI. Fetal MRI first described in 1993, allows direct visualization of both sides of the fetal brain and assessment of the developing cortex and sulcation pattern. If abnormality is seen further evaluation is recommended namely the multiplanar neuroscan which examine fetal brain in greater detail. Ventricular the most common abnormality and 70-80% are associated with structural or chromosomal anomalies. The CC reaches the adult form by 18-20 weeks... Fetal MRI can determine the shape and size of the vermis. Measurements of lateral ventricles up to 10mm... Most cases is bilateral and between 11-14mm characterized as borderline ventriculomegaly... Fetal MRI is a part of the assessment of pregnancies complicated with fetal ventriculomegaly. The most common use of fetal MRI has been to evaluate CNS abnormalities and influence or change management and counseling in up to 50% of cases. As complementary diagnostic procedure to ultrasounds, MRI is one of the most modern and complex radiological diagnostic methods used for diagnosing fetal anomalies.

Screenings for Preeclampsia

In preeclampsia the initial pathological changes begin in the first trimester of pregnancy and consists of abnormal remodeling of the spiral arteries. Preeclampsia is an important cause of maternal and perinatal morbidity and mortality, Affect about 2-5% of pregnancies and leads to over 100000 maternal deaths worldwide each year. Clinical manifestation can appear any time from the second trimester to the first few weeks postpartum. At the severe end of the spectrum pre eclampsia can result in Pulmonary edema, Cerebral hemorrhage Renal failure, seizures. Placentas in women with pre eclampsia have increased amounts of disease The rate is increased with lower gestational ages at the time of delivery for women with preeclampsia. First trimester screening would represent a major advantage over a second trimester approach because open prospects for early and more efficient intervention. Screening test for preeclampsia should be Simple Rapid Non invasive, inexpensive, easy to perform and should not expose the patient to discomfort. The ability to predict PE is of limited benefit because neither the development of the disorder nor its progression from mild to severe spectrum of the disease can be prevented in most patients and there is no cure except delivery. Screening by maternal history will detect only 30% of women who will have preeclampsia. Mean arterial pressure improve the DR by 20% for FPR 10%. The uterine artery pulsatility index improve DR 30%, while biochemical markers like PAPP-A and PLGF improve DR 6%. Systematic review of screening test for preeclampsia concluded that no single test is yet available to provide a good diagnostic accuracy. Combined screening using several markers is more likely to provide the best prediction.

Prof. **Panos Antsaklis**, MD, PhD, Professor, Senior Lecturer University of Athens, Greece, Executive Director Ian Donald School, Greece.

Epidemiologic Characteristics of preeclampsia

Preeclampsia is a multi-system syndrome

Involves: Systemic endothelial dysfunction, Elevation of blood pressure, Proteinuria, Affects 5-7% of first pregnancies, Affects 2-10% of all pregnancies, Recurs in 13-18% of subsequent pregnancies. 2-fold increased risk of stillbirth. 35% higher risk of stillbirth. 80-fold increased risk of iatrogenic preterm delivery <33 wks. 40- fold increased risk between 33-36 weeks iatrogenic PTD. 4-fold increase in low birth weight

rates. 2-fold higher neonatal mortality. Pregnancy Specific Syndrome. Uniquely Human Disease (reproductive disadvantage unique to humans). Human beings have a particularly extensive placental invasion, possibly because of the long intrauterine period needed for fetal brain development.

Risk Factors:

AGE: Extremes of childbearing age have been associated with PET. Age >40 → 2.0 RR (independent of parity). Risk of PET ↑ 30% for every additional year after 34 years. However, once adjustments for parity are made in the younger age group (since most first pregnancies occur at a younger age), the association between younger age and preeclampsia is lost. For ↑ age → many of these do not control for preexisting medical conditions.

RACE: ↑ risk of PET in African-American women. More severe forms of PET may be associated with maternal non-white race. Higher prevalence of chronic hypertension, often undiagnosed in African-American. Larger studies → better defined PET → controlled for other risk factors → did not find significant association between PET & African-American race.

PARITY: Nulliparity → 3.0 RR. Women with PET are twice as likely to be nulliparous compared to women without PET. Preeclampsia: "The disease of first pregnancy". Risk of PET 26% in NULLIPS vs 17% in MULTIPS (in women with CHTN). NullIPS 4.2% vs MULTIPS 1.3%

PATERNAL: Men who fathered one pre-eclamptic pregnancy were nearly twice as likely to father a preeclamptic pregnancy in a different woman (irrespective of whether she had already had a pre-eclamptic pregnancy or not). Mothers had a substantially increased risk in their second pregnancy if they became pregnant by a man who had fathered a preeclamptic first pregnancy in another woman.

HISTORY OF PET: Hx PET in 1st Pregnancy than women who do not develop PET in their 2nd pregnancy. A general 7-20% chance of PET recurrence in subsequent pregnancy. Chance is further ↑ if > 2 previous PET

Long term effects on mother: CHRONIC HYPERTENSION, CORONARY ARTERY DISEASE, METABOLIC SYNDROME, TYPE-II GDM, CHRONIC RENAL FAILURE, NEUROLOGIC DEFICITS (MRI, Memory Loss, Attention Deficit), PREMATURE DEATH, DEPRESSION, ANXIETY, THYROID DISORDERS-HYPOTHYROIDISM, RETINAL DISEASE – BLINDNESS, DVT

Skeletal Dysplasias

SKD are a large group of heterogeneous conditions involving the growth and bone structure. SKD may be associated with other organ system abnormalities or be part of a genetic syndrome. Over 456 known types. Classification System categorizes in 40 major groups by their cardinal features (sonographic, radiological, molecular, inheritance). Prenatal Diagnosis can be difficult/challenging. Birth Prevalence 1.1-2.4/10,000 Births. Most common: Thanatophoric Dysplasia, Osteogenesis Imperfecta (OI), Achondroplasia, Achondrogenesis. Incidence: 2.4-5/10,000 births, 7.5/10,000 ultrasound screened pregnancies, 0.9-1.5/10,000 Births-Lethal SD.

Thanatophoric Dysplasia

Type I: Telephone receiver femur, Incidence 1:10,000. Characteristics: Micromelia/Risomelia – Mesomelia, Narrow Thorax (champagne cork), Normal size trunk, Macrocephalic, Prominent frontal bossing, relative normal shape, depressed nasal bridge, short upturned nasal tip, Platyspondyly – Prominent Lumbar Kyphosis, Very short phalanges - Trident shaped hands, Type II: Clover Leaf – Less curved (straight) – longer femurs, Differential Diagnosis: OI Types II, III, IV ACH

Achondrogenesis

Lethal SKD. Prevalence: 1/40.000. Autosomal Recessive. Absent ossification of SPINE and PELVIS. Bowing of long bones with metaphyseal cupping. Spinal Cord: 2 ossification centres. Thorax Hypoplasia. Rib fractures.

Micromelia

SKELETAL DYSPLASIAS: DIAGNOSTIC ULTRASOUND APPROACH

Circumferences (head, abdomen, chest), Mineralization (cranium, vertebra), Mandibular size and shape, Fetal Profile (frontal bossing, NB Micrognathia), Abnormal posturing of extremities, cheek mobility, other congenital (>25 weeks). Relative macrocephaly with frontal bossing & round HC. Short fingers / Trident fingers. ↑ AFI anomalies (ie GHD Renal), amniotic fluid, hydrops.

Heterozygous Achondroplasia

The most common viable short stature syndrome. 98% due to mutation in FGFR3 gene. Late onset limb shortening (can be the first marker). May have slight bowing of femur. Small square iliac wings

SKD recurrence risk: Thanatophoric Dysplasia <1%, Osteogenesis Imperfecta 3-5%, Achondrogenesis type I 25%, srsps 25%, Ellis van Creveld 25%, Jeune's Asphyxiating Dystrophy 25%, Hypophosphatasia 25%.