

21st World Congress on Ultrasound in Obstetrics and Gynecology, 18–22 September 2011, Los Angeles, USA: presentations and awards

IAN DONALD GOLD MEDAL

Awarded to Hugh Robinson*

This year's recipient is a very worthy addition to the list of Gold Medal winners, whose important contributions to the development of ultrasound are still felt today. Hugh Robinson was born in 1943 in Ayr, in the south of Scotland. He was educated at Ayr Academy, a school that was founded – I love saying this in America – in 1202, and completed his medical education at Glasgow University, qualifying in 1967. In 1972, he became First Assistant to Professor Ian Donald at the Queen Mother's Hospital in Glasgow and from 1973 to 1975 he pioneered first-trimester studies on fetal heart rate, crown–rump length measurement and early pregnancy failure. It is of note that many of his publications in this period carry only the name of Hugh Robinson – there was no *droit du seigneur* with Ian Donald; if one of Donald's junior doctors made an advance or had an original idea then he let them publish it with their name on the title page alone. Ian Donald was in this regard the most generous of men.

In 1977–1978, Hugh collaborated with Joachim Hackelöer in his pioneering work on follicular and corpus luteal development. He subsequently moved to Melbourne, Australia, to take up a position as Assistant Professor at the Royal Women's Hospital. There he collaborated with Lachlan de Crespigny on numerous papers on subjects such as ectopic pregnancy, fertility scanning and interventional ultrasound. From 1987 to 1992, he was instrumental in setting up a training program for ultrasound as a subspecialty in obstetrics and gynecology in Australia and he discussed this in an early Editorial for *Ultrasound in Obstetrics & Gynecology*.

Hugh retired from medical practice in 2006 to run his own vineyard, on the Mornington Peninsula located south of Melbourne. I have been told by an expert that Hugh's vineyard produces the best pinot noir in the world. As always with Hugh, he is meticulous in everything that he does.

Many of our Gold Medal winners have received the award for a lifetime of endeavor. In Hugh's case, it is for his extraordinary burst of innovation over those few years in the early 1970s. His paper 'Sonar measurement of fetal crown–rump length as means of assessing maturity in first trimester of pregnancy' was published in the *British Medical Journal* in 1973. I have to admit that at the time I was somewhat incredulous that it was possible to predict the gestational age from the crown–rump length measurement to within 3 days between the 6th and 14th weeks of gestation. The best that I could do at that time with the biparietal diameter in the second trimester



Hugh Robinson scanning with the Disonograph in c.1975.

was to within 9 days. Previous charts of crown–rump length had shown a huge range for any given week of gestation and it was Hugh's precise technique that allowed him to produce the classic graph with narrow confidence limits with which we are all familiar. I must remind you that he was using a static scanner (the Disonograph) which today would be regarded as extremely cumbersome. Also in 1973, he published 'Fetal heart rates as determined by sonar in early pregnancy' in the *British Journal*, then *The Journal of Obstetrics and Gynaecology of the British Commonwealth*. Until then nobody had measured the fetal heart rate from as early as 6 weeks 3 days, or demonstrated the acceleration in fetal heart rate to a peak of 180 bpm at 9 weeks. The graph that Hugh produced has not changed, and could still today be used reliably in daily practice. In 1975 he published 'The diagnosis of early pregnancy failure by sonar', the beginning of ultrasound diagnosis of failed pregnancy. Hugh's work was performed transabdominally, and the 1980s saw the development of real-time transvaginal sonography led by Ilan Timor-Tritsch, which allowed more detailed study of the early embryo and the 'genetic sonogram'.

Hugh Robinson is a quiet, modest, self-effacing Scot. To speak to him you would never realize that he pioneered first-trimester diagnosis. No-one previously had studied the embryo so intensively. His work laid the foundation for further studies. Many of us still use his graphs today.

That is why we honor him today with the award of the Ian Donald Gold Medal.

Stuart Campbell

* The Gold Medal will be presented to Hugh Robinson in person on the occasion of the 23rd ISUOG World Congress, in Sydney, Australia, 2013.

FREE COMMUNICATION ACKNOWLEDGMENTS

The following free communications presented at the 21st World Congress on Ultrasound in Obstetrics and Gynecology are acknowledged as the best presentations in their categories. Full abstracts to these titles can be found in *Ultrasound in Obstetrics and Gynecology* 2011; 38 (Suppl. 1). We thank these authors for their valuable contributions to our scientific program.

Top abstract winner

Prevention of preterm delivery in twin gestations (PREDICT): a multicentre randomised placebo-controlled trial on the effect of vaginal micronised progesterone (OC01.01)

L. Rode^{1,2}, K. Klein³, K. Nicolaidis⁴,
E. Krampl-Bettelheim³, I. Vogel⁵, H. Larsen⁶,
A. Holmskov⁷, K. Riis Andreassen⁸, N. Ulbjerg⁹,
J. Ramb¹⁰, B. Bødker¹¹, L. Skibsted^{12,2}, L. Sperling¹³,
S. Hinterberger¹⁴, L. Krebs¹⁵, H. Zingenberg¹⁶, E. Weiss¹⁷,
I. Strobl¹⁸, L. Laursen¹⁹, J. Tranberg Christensen²⁰,
B. M. Hansen²¹, A. Lando²¹, A. Tabor^{1,2}. ¹Department of Fetal Medicine 4002, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark; ²Faculty of Health Sciences, University of Copenhagen, Copenhagen, Denmark; ³Department of Obstetrics & Gynecology, Medical University of Vienna, Vienna, Austria; ⁴Harris Birthright Research Centre for Fetal Medicine, King's College Hospital, London, United Kingdom; ⁵Department of Clinical Genetics, Aarhus University Hospital Skejby, Aarhus, Denmark; ⁶Department of Obstetrics & Gynecology, Aalborg Hospital, Aalborg, Denmark; ⁷Department of Obstetrics & Gynecology, Viborg Hospital, Viborg, Denmark; ⁸Department of Obstetrics & Gynecology, Hvidovre Hospital, Hvidovre, Denmark; ⁹Department of Obstetrics & Gynecology, Aarhus University Hospital Skejby, Aarhus, Denmark; ¹⁰Department of Obstetrics & Gynecology, Sønderborg Hospital, Sønderborg, Denmark; ¹¹Department of Obstetrics & Gynecology, Hillerød Hospital, Hillerød, Denmark; ¹²Department of Obstetrics & Gynecology, Roskilde University Hospital, Roskilde, Denmark; ¹³Department of Obstetrics & Gynecology, Herlev Hospital, Herlev, Denmark; ¹⁴Department of Obstetrics & Gynecology, General Hospital of Klagenfurt, Klagenfurt, Austria; ¹⁵Department of Obstetrics & Gynecology, Holbæk Hospital, Holbæk, Denmark; ¹⁶Department of Obstetrics & Gynecology, Glostrup Hospital, Glostrup, Denmark; ¹⁷Department of Obstetrics & Gynecology, Medical University of Graz, Graz, Austria; ¹⁸Department of Obstetrics & Gynecology, Medical University of Innsbruck, Innsbruck, Austria; ¹⁹Department of Obstetrics & Gynecology, Odense University Hospital, Odense, Denmark; ²⁰Department of Obstetrics & Gynecology, Gentofte Hospital, Gentofte, Denmark; ²¹Department of Neonatology, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark

Alfred Kratochwil award for best oral communication on 3D ultrasound

Fetal brain morphology and medullary vascular development (OC23.05)

R. K. Pooh. CRIFM Clinical Research Institute of Fetal Medicine PMC, Osaka, Japan

Young Investigator award winner – Obstetrics

Impaired maternal cardiac contractility and systolic dysfunction is a feature of preterm and not term preeclampsia (OC03.05)

K. Melchiorre^{1,2}, G. Sutherland², A. Baltabaeva²,
M. Liberati³, B. Thilaganathan¹. ¹Fetal Maternal Medicine Unit, St George's Hospital, University of London, University of London, London, United Kingdom; ²Department of Cardiology and Cardiothoracic Surgery, St George's Hospital Medical School, London, United Kingdom; ³Department of Obstetrics and Gynaecology, University of Chieti, Chieti, Italy

Young Investigator award winner – Gynecology

Agreement between ultrasound and histopathological findings with regard to tumor size and extent of local disease in cases of early stage cervical cancer (OC24.01)

A. Gaurilcikas¹, D. Vaitkiene¹, A. Cizauskas², E. Svedas¹,
A. Bartusevicius¹, S. Augustis³, A. Testa⁴. ¹Obstetrics and Gynecology, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania; ²Department of Pathology, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania; ³Lithuanian University of Health Sciences, Kaunas, Lithuania; ⁴Gynecologic Oncology Unit, Catholic University of Rome, Rome, Italy

Best Oral Communications

The following oral communications were each selected as the best in their subject area. Selection was according to a combination of anonymous peer-review in advance of the Congress and scores for presentation and/or scientific merit allocated on-site by a panel of judges.

General gynecology

Ultrasound assessment of the intima and media layers on the carotid arteries in peri- and postmenopausal women (OC27.04)

F. Chantraine¹, B. Tutschek², J. Schaaps¹, J. Foidart¹.
¹Gynaecology and Obstetrics, CHR Citadelle, CHU ULg, Liege, Belgium; ²Gynaecology and Obstetrics, Inselspital, Bern, Switzerland

Early pregnancy

Local and systemic methotrexate injection may be the preferred treatment of Cesarean section scar pregnancies: experience of 16 cases (OC07.03)

I. E. Timor-Tritsch, A. Monteagudo, E. Rodgers, R. Santos.
Ob/Gyn Dept., NYU School of Medicine, New York, NY, USA

Uterine bleeding

New ultrasound based mathematical models for the preoperative prediction of high risk endometrial cancer (OC17.02)

C. Van Holsbeke^{1,2}, L. Ameye³, A. Testa⁴, F. Mascilini⁴,
A. Masbäck⁵, D. Fischerova⁶, S. Fransis⁷, E. de Jonge¹,
D. Timmerman², E. Epstein⁵. ¹Obstetric and Gynecology, Ziekenhuis Oost-Limburg, Genk, Belgium; ²Obstetric and Gynecology, University Hospitals Leuven, Leuven, Belgium; ³Department of Electrical Engineering, Katholieke Universiteit Leuven, Leuven, Belgium; ⁴Department of Obstetrics & Gynecology, Università Cattolica del Sacro Cuore, Rome, Italy; ⁵Department of Obstetrics &

Gynecology, Karolinska Institutet, Stockholm, Sweden; ⁶Department of Obstetrics & Gynecology, Charles University, Prague, Czech Republic; ⁷Department of Pathology, Ziekenhuis Oost-Limburg, Genk, Belgium

Reproductive medicine

The reproductive outcomes of women with congenital uterine anomalies: a systematic review (OC14.04)

Y. Chan¹, K. Jayaprakasan¹, A. Tan², J.G. Thornton¹, A. Coomarasamy², N. Raine-Fenning¹. ¹School of Clinical Sciences, Division of Human Development, University of Nottingham, Nottingham, United Kingdom; ²Academic Unit of Obstetrics and Gynaecology, Birmingham Women's Hospital, Birmingham, United Kingdom

Ovarian pathology

Selection of women with an ovarian tumor for surgery in specialist centers: a comparison of two triaging protocols (OC21.02)

B. Van Calster^{1,2}, T. Bourne^{3,4}, R. Husicka³, L. Valentin⁵, A. Testa⁶, C. Van Holsbeke^{7,4}, I. Vergote⁴, S. Van Huffel^{1,2}, D. Timmerman⁴. ¹Department of Electrical Engineering (ESAT), Katholieke Universiteit Leuven, Leuven, Belgium; ²IBBT-K.U. Leuven Future Health Department, Katholieke Universiteit Leuven, Leuven, Belgium; ³Department of Obstetrics and Gynecology, Imperial College London, Hammersmith Campus, London, United Kingdom; ⁴Department of Obstetrics and Gynecology, University Hospitals K.U. Leuven, Leuven, Belgium; ⁵Department of Obstetrics and Gynecology, Skåne University Hospital, Malmö, Sweden; ⁶Istituto di Clinica Ostetrica e Ginecologica, Università Cattolica del Sacro Cuore, Rome, Italy; ⁷Department of Obstetrics and Gynecology, Ziekenhuis Oost-Limburg, Genk, Belgium

Imaging in oncology

Agreement between ultrasound and histopathological findings with regard to tumor size and extent of local disease in cases of early stage cervical cancer (OC24.01)

A. Gaurilcikas¹, D. Vaitkiene¹, A. Cizauskas², E. Svedas¹, A. Bartusevicius¹, S. Augustis³, A. Testa⁴. ¹Obstetrics and Gynecology, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania; ²Department of Pathology, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania; ³Lithuanian University of Health Sciences, Kaunas, Lithuania; ⁴Gynecologic Oncology Unit, Catholic University of Rome, Rome, Italy

Pelvic pain

Office sonovaginography: redefining the concept of a normal pelvis on transvaginal ultrasound in women with suspected endometriosis (OC11.04)

S. Reid¹, S. Winder¹, G. Reid², G. Condous¹. ¹Acute Gynaecology, Early Pregnancy and Advanced Endosurgery Unit, Sydney Medical School, University of Sydney, Nepean Hospital, Sydney, NSW, Australia; ²Sydney Women's Endosurgery Centre, Sydney, NSW, Australia

Urogynecology

Does levator trauma 'heal'? (OC29.03)

K. Shek, V. Wong, S. E. Langer, H. Dietz. Department of Ob/Gyn, Sydney Medical School Nepean, Penrith, NSW, Australia

Aneuploidy & fetal anomalies – first trimester

Increased nuchal translucency, normal karyotype and infant development (OC02.03)

C. B. Miltoft¹, C. K. Ekelund¹, B. M. Hansen², A. Lando², O. B. Petersen³, P. Skovbo⁴, F. S. Jørgensen⁵, L. Sperling⁶, H. Zingenberg⁷, A. Nikkila⁸, A. C. Shalmi⁹, I. Stornes¹⁰, V. Erbak¹¹, A. Tabor¹. ¹Fetal Medicine and Ultrasound, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark; ²Department of Neonatology, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark; ³Department of Obstetrics and Gynaecology, Aarhus University Hospital, Skejby, Aarhus, Denmark; ⁴Department of Obstetrics and Gynaecology, Aalborg University Hospital, Aalborg, Denmark; ⁵Fetal Medicine Unit, Department of Obstetrics and Gynaecology, Copenhagen University Hospital, Hvidovre, Copenhagen, Denmark; ⁶Department of Obstetrics and Gynecology, Copenhagen University Hospital, Herlev, Copenhagen, Denmark; ⁷Department of Obstetrics and Gynecology, Copenhagen University Hospital, Glostrup, Copenhagen, Denmark; ⁸Department of Obstetrics and Gynecology, Copenhagen University Hospital, Gentofte, Copenhagen, Denmark; ⁹Department of Obstetrics and Gynecology, Copenhagen University Hospital, Hillerød, Copenhagen, Denmark; ¹⁰Department of Obstetrics and Gynecology, Randers Hospital, Randers, Denmark; ¹¹Department of Obstetrics and Gynecology, Silkeborg Hospital, Silkeborg, Denmark

Aneuploidy & fetal anomalies – second trimester

Potential role and clinical impact of noninvasive prenatal testing by massively parallel DNA sequencing of maternal blood (OC28.06)

A. J. Sehnert¹, L. D. Platt², A. Abuhamad³, R. P. Rava¹. ¹Research, Artemis Health, Inc., San Carlos, CA, USA; ²Center for Fetal Medicine and Women's Ultrasound, Los Angeles, CA, USA; ³Obstetric and Gynecology Department, Eastern Virginia Medical School, Norfolk, VA, USA

Fetal cardiology

Fetal cerebral blood flow predicts neurologic functioning in infants with congenital heart disease (CHD) (OC19.05)

I. A. Williams¹, A. R. Tarullo², P. G. Grieve¹, A. Wilpers¹, M. M. Myers^{2,3}, W. P. Fifer^{2,3}. ¹Pediatrics, Columbia University College of Physicians & Surgeons, New York, NY, USA; ²Psychiatry, Columbia University College of Physicians & Surgeons, New York, NY, USA; ³Department of Developmental Neuroscience, New York State Psychiatric Institute, New York, NY, USA

Central nervous system

Fetal optic nerve sheath measurement as a potential non-invasive tool for assessment of increased intracranial pressure (23.01)

K. K. Haratz^{1,2}, F. Viñals³, D. Lev^{4,7}, H. Feit^{1,7}, L. Ben-Sira^{5,7}, T. Lerman-Sagie^{6,7}, G. Malinger^{1,7}. ¹Division of Prenatal Diagnosis, Wolfson Medical Center, Holon, Israel; ²Fetal Medicine Discipline, Department of Obstetrics, Federal University of São Paulo - UNIFESP, São Paulo, Brazil; ³Clinica AGB Ultrasonografía, Clínica Sanatorio Aleman, Concepcion, Chile; ⁴Genetics Institute, Wolfson Medical Center, Holon, Israel; ⁵Division of Pediatric Radiology, Tel Aviv Medical Center, Tel Aviv, Israel; ⁶Division of Pediatric Neurology, Wolfson Medical Center, Holon, Israel; ⁷Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

Multiple pregnancy

Vaginal progesterone and the risk of preterm delivery in high-risk twin gestations - secondary analysis of a placebo-controlled randomized trial (OC06.01)

K. Klein¹, L. Rode^{2,3}, K. Nicolaidis⁴, E. Krampfl-Bettelheim¹, H. Larsen⁵, A. Holmskov⁶, K. Riis Andreasen⁷, N. Ulbjerg⁸, J. Ramb⁹, B. Bødker¹⁰, L. Skibsted¹¹, L. Sperling¹², S. Hinterberger¹³, L. Krebs¹⁴, H. Zingenberg¹⁵, E. Weiss¹⁶, I. Strobl¹⁷, L. Laursen¹⁸, J. Tranberg Christensen¹⁹, I. Vogel²⁰, B.M. Hansen²¹, A. Lando²¹, A. Tabor^{2,3}. ¹Department of Obstetrics and Gynecology, Medical University of Vienna, Vienna, Austria; ²Department of Fetal Medicine 4002, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark; ³Faculty of Health Sciences, University of Copenhagen, Copenhagen, Denmark; ⁴Harris Birthright Research Centre for Fetal Medicine, King's College Hospital, London, United Kingdom; ⁵Department of Obstetrics and Gynecology, Aalborg Hospital, Aalborg, Denmark; ⁶Department of Obstetrics and Gynecology, Viborg Hospital, Viborg, Denmark; ⁷Department of Obstetrics and Gynecology, Hvidovre Hospital, Hvidovre, Denmark; ⁸Department of Obstetrics and Gynecology, Aarhus University Hospital Skejby, Aarhus, Denmark; ⁹Department of Obstetrics and Gynecology, Sønderborg Hospital, Sønderborg, Denmark; ¹⁰Department of Obstetrics and Gynecology, Hillerød Hospital, Hillerød, Denmark; ¹¹Department of Obstetrics and Gynecology, Roskilde University Hospital, Roskilde, Denmark; ¹²Department of Obstetrics and Gynecology, Herlev Hospital, Herlev, Denmark; ¹³Department of Obstetrics and Gynecology, General Hospital of Klagenfurt, Klagenfurt, Austria; ¹⁴Department of Obstetrics and Gynecology, Holbæk Hospital, Holbæk, Denmark; ¹⁵Department of Obstetrics and Gynecology, Glostrup Hospital, Glostrup, Denmark; ¹⁶Department of Obstetrics and Gynecology, Medical University of Graz, Graz, Austria; ¹⁷Department of Obstetrics and Gynecology, Medical University of Innsbruck, Innsbruck, Austria; ¹⁸Department of Obstetrics and Gynecology, Odense University Hospital, Odense, Denmark; ¹⁹Department of Obstetrics and Gynecology, Gentofte Hospital, Gentofte, Denmark; ²⁰Department of Clinical Genetics, Aarhus University Hospital Skejby, Aarhus, Denmark; ²¹Department of Neonatology, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark

Fetal growth & assessing fetal health

Early treatment of gestational diabetes and obstetric adverse outcome prevention (OC30.04)

B. Matarrelli¹, E. Vitacolonna², M. D'Angelo², G. Pavone¹, C. Celentano¹. ¹ObGyn, University of Chieti, Chieti, Italy; ²Internal Medicine, University of Chieti, Chieti, Italy

Fetal therapy

Radiofrequency ablation (RFA) vs. bipolar cord coagulation (BCC) in the management of complex monochorionic pregnancies: a 14 year single center experience (OC15.02)

M. Bebbington, E. Danzer, J. Moldenhauer, N. Khalek, M. P. Johnson. Center for Fetal Diagnosis and Treatment, Children's Hospital of Philadelphia, Philadelphia, PA, USA

Obstetric management

Preeclampsia predisposes to persistent long-term postpartum left ventricular myocardial injury (OC03.06)

K. Melchiorre^{1,3}, G. Sutherland¹, A. Baltabaeva², M. Liberati³, B. Thilaganathan¹. ¹Fetal Maternal Medicine

Unit, St. George's Hospital, University of London, London, United Kingdom; ²Department of Cardiology and Cardiothoracic Surgery, St George's Hospital, London, United Kingdom; ³Obstetric and Gynecology Department, University of Chieti, Italy, Chieti, Italy

Imaging technologies

Analysis of fetal ear rotation by three-dimensional rendering mode using a novel method: the ear angle - preliminary results (OC10.04)

A. R. Hatanaka, L. C. Rolo, E. Araujo Junior, P. M. Nowak, R. Mattar, L. Nardozza, A. F. Moron. São Paulo Federal University, São Paulo, Brazil

Maternal fetal Doppler

Comparison of placental blood flow in the third trimester of normal and diabetic pregnancy using a novel stereological 3D power Doppler technique (OC22.05)

N. W. Jones^{1,2}, N. Raine-Fenning², E. Bradley¹, H. Mousa¹, R. Deshpande^{1,2}, P. Mansell^{1,2}, G. Bugg¹. ¹Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom; ²School of Clinical Sciences, Division of Human Development, University of Nottingham, Nottingham, United Kingdom

Safety issues

The effect of power settings on obstetric ultrasound measurements (OC20.01)

R. K. Sande^{1,2}, K. Matre³, G. E. Eide⁴, T. Kiserud^{1,2}. ¹Fetal Medicine Unit, Department of Obstetrics and Gynaecology, Haukeland University Hospital, Bergen, Norway; ²Clinical Fetal Physiology Research Group, Department of Clinical Medicine, University of Bergen, Bergen, Norway; ³Institute of Medicine, University of Bergen, Bergen, Norway; ⁴Centre for Clinical Research, Haukeland University Hospital, Bergen, Norway

Best Short Oral Presentations (oral posters)

The following short oral presentations were each selected as the best in their subject area. Selection was according to a combination of anonymous peer-review in advance of the Congress and scores for presentation and/or scientific merit allocated on-site by a panel of judges.

Early pregnancy

Ovulation-implantation interval in relation to early pregnancy outcome (OP02.05)

A. Mahendru¹, T. R. Everett¹, G. A. Hackett², C. M. McEniery², I. B. Wilkinson², C. Lees¹. ¹Fetal Medicine, Addenbrooke's Hospital, Cambridge, United Kingdom; ²Clinical Pharmacology, Addenbrooke's Hospital, Cambridge University Hospitals NHS Trust, Cambridge, United Kingdom

Uterine pathology

Image Study Webapp - a web interface for imaging-based interrater agreement studies (OP08.01)

A. Installe^{1,2}, D. Timmerman³, B. De Moor^{1,2}, T. Van den Bosch³. ¹Department of Electrical Engineering, ESAT-SCD, Katholieke Universiteit Leuven, Leuven, Belgium; ²IBBT-K.U. Leuven Future Health Department, Katholieke Universiteit Leuven, Leuven, Belgium; ³Department of Obstetrics and Gynecology, U.Z.-Leuven, Katholieke Universiteit Leuven, Leuven, Belgium

Reproductive medicine

Anomalies of the Muller duct development in women with reproductive disorders (OP19.06)

D. Smetanova, M. Hynek, S. Brezinova, M. Matouskova, D. Stejskal. *Fetal Medicine, GENNET, Prague, Czech Republic*

The effect of ovulation on standardised fractional moving blood volume (sFMBV) of the subendometrium (OP19.08)

S. Sur, J. Elangovane, J. Clewes, B. Campbell, N. Raine-Fenning. *School of Clinical Sciences, Division of Human Development, University of Nottingham, Nottingham, United Kingdom*

Ovarian pathology

The evolution of simple ovarian cysts detected at transvaginal ultrasound examination in breast cancer patients (OP24.02)

D. Franchi¹, B. Sara¹, C. Norma¹, R. Davide², S. Mario¹. ¹Gynecology Department, European Institute of Oncology, Milano, Italy; ²Epidemiology and Biostatistics Department, European Institute of Oncology, Milano, Italy

Urogynecology

Levator ani muscle injury after first delivery in Chinese primiparous women (OP34.07)

S. Chan, A.S. Wong, R. Cheung, A. Yiu, L. Lee, W. Pang. *Department of O&G, The Chinese University of Hong Kong, Hong Kong, Hong Kong*

Gynecology case reports

A pelvic mass of curious origin in a patient with prior hysterectomy and bilateral salpingo-oophorectomy (OP13.02)

L. Haakova, V. Hejda, P. Safar, L. Krofta. *Institute for the Care of Mother and Child, Prague, Czech Republic*

Labor

3D ultrasound evaluation of changes in the angle of progression in nulliparous women undergoing spontaneous vaginal and operative delivery (OC22.10)

A. M. Youssef, T. Arcangeli, F. De Musso, M. Nanni, E. Maroni, A. Priolo, F. Giorgetta, G. Pilu, N. Rizzo, T. Ghi. *Prenatal Medicine Unit, S.Orsola Malpighi Hospital, Bologna University, Bologna, Italy*

The first-trimester scan

Low maternal levels of first-trimester PAPP-A and free β -hCG are associated with an increased risk of admission to NICU and of neonatal disease (OP21.01)

I. Kirkegaard^{1,2}, N. Uldbjerg¹, T. B. Henriksen^{2,3}. ¹Department of Obstetrics & Gynecology, Aarhus University Hospital, Skejby, Aarhus N, Denmark; ²Perinatal Research Unit, Aarhus University Hospital, Skejby, Aarhus N, Denmark; ³Department of Pediatrics, Aarhus University Hospital, Skejby, Aarhus N, Denmark

Fetal cardiology

Detection of major fetal heart defects with routine use of color Doppler (OP35.06)

C. Heien¹, M. Berget³, C. Lycke Ellingsen², T. M. Eggebo¹. ¹Department of Obstetrics and Gynecology, Stavanger University Hospital, Stavanger, Norway; ²Department of Pathology, Stavanger University Hospital, Stavanger, Norway; ³Department of Pediatrics, Stavanger University Hospital, Stavanger, Norway

Central nervous system

Prenatal detection of closed spina bifida (OP03.05)

K. O. Kagan, H. Abele, B. Yazdi, M. Hoopmann. *Obstetrics and Gynecology, University of Tuebingen, Tuebingen, Germany*

Multiple pregnancy

Aortic intima media thickness in twin pregnancies affected by selective intrauterine growth restricted and small for gestational age co-twin (OP31.02)

S. Visentin¹, V. Zanardo², D. Trevisanuto², F. Grumolato¹, S. Vedovato², E. Cosmi¹. ¹Obstetrics and Gynecology, University of Padua, Padua, Italy; ²Pediatrics, University of Padua, Padua, Italy

Fetal therapy

MRI findings in MC twin pregnancies after intra-uterine fetal death (OP17.01)

S. Lipitz, C. Hoffman, Y. Yinon, L. Gindes, G. Greenberg, E. Sivan, B. Weisz. *Obstetrics and Gynecology, Sheba Medical Center, Tel-Hashomer, Israel*

Fetal growth & surveillance

Utility of uterine artery Doppler, alone or in combination with brain Doppler, in the prediction of adverse perinatal outcome in term small-for-gestational-age fetuses (OP20.02)

R. Cruz-Martinez, S. Savchev, E. Maroni, F. Figueras, E. Gratacós. *Department of Maternal-Fetal Medicine, Hospital Clinic, Barcelona, Spain*

Placental disease

Diagnosis of placental insufficiency with magnetic resonance imaging using the Diffusion Weighted Imaging (DWI) on a murine model of vascular fetal growth restriction (OP06.01)

M. Alison^{2,4}, G. E. Chalouhi^{1,2}, N. Siauve^{2,3}, B. Deloison^{1,2}, G. Autret^{2,3}, D. Balvay², R. Thiam^{2,3}, C. Charles-Andre^{2,3}, C. Olivier^{2,3}, L. J. Salomon^{1,2}. ¹Department of Obstetrics and Fetal Medicine, Hôpital Necker-Enfants-Malades, AP-HP, Université Paris V, Paris, France; ²Laboratoire de Recherche en Imagerie, Inserm U 970, PARCC, Hôpital Européen Georges Pompidou, Paris, France; ³Radiology Department, Hôpital Européen Georges Pompidou, Paris, France; ⁴Radiology Department, Hôpital Robert Debré, AP-HP, Université Paris 7, Paris, France

Fetal anomalies

Second and third trimester termination of pregnancy for fetal anomaly: impact of a previous Caesarean section on maternal morbidity (OP26.02)

M. Driessen^{1,2}, M. Dommergues^{1,2}, L. Mandelbrot³, I. Durand-Zaleski^{4,5}, N. Boudjema⁴, J. Nizard^{1,2}. ¹Obstetrics and Gynecology, Groupe Hospitalier Pitié Salpêtrière, Paris, France; ²Université Pierre et Marie Curie Paris VI, Paris, France; ³Obstetrics & Gynaecology, Hôpital Louis Mourier, Assistance Publique Hôpitaux de Paris Université Paris VII Denis-Diderot, Colombes, France; ⁴Service de Santé Publique, Hôpital Henri Mondor, Assistance Publique Hôpitaux de Paris, Université Paris EST Créteil, Créteil, France; ⁵Unité de Recherche Clinique Economie de la Santé, Assistance Publique Hôpitaux de Paris, Université Paris EST Créteil, Créteil, France

Imaging technologies in obstetrics & gynecology

Fetal aortic intima media thickness measurement by decomposing unprocessed radio frequency derived ultrasound wall reflection into two Gaussian pulses (OP23.09)

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Maternal fetal Doppler

Maternal ophthalmic artery Doppler: novel parameter to predict early-onset pre-eclampsia in the first trimester of pregnancy (OP09.04)

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Quality assurance

Visibility and dimensions of Caesarean section scars in pregnancy - an interobserver variability study (OP33.03)

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Fetal intervention and first trimester: obstetric case reports

The human fetal tail: first trimester finding leading to the detection of familial pilonidal sinus (OP28.01)

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Obstetric case reports

Subependymal heterotopia: US and MR diffusion tensor imaging (OP32.07)

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