



South African Society of Gynaecological Oncology Workshop

UPPER ABDOMINAL SURGERY FOR OVARIAN CANCER

G Dreyer

It is clear that complete cytoreduction is associated with improved outcome. It is also accepted that surgical radicality and the completeness of tumour resection are associated with the level of specialisation of surgeon and unit. It can therefore be concluded that surgical effort and expertise determine cancer-specific survival in ovarian cancer.

In the upper abdomen major surgical morbidity has to be weighed against the desire to improve long-term outcome. Feasible procedures include splenectomy, partial colectomy and partial resection of the stomach, pancreatic tail and liver. These procedures will be discussed.

Resection and ablation of diaphragmatic disease is now commonly done, but has acknowledged complications. Resection of lymph node disease is also often indicated, and malignant nodes are often situated in the para-aortic area, mesentery and below the left kidney. Methods to minimise surgical morbidity and to help with the selection of patients for these procedures will be discussed.

IMMUNISATION OF AFRICAN PRETEEN/ ADOLESCENT GIRLS AND YOUNG WOMEN WITH THE HPV-16/18 AS04-ADJUVANTED VACCINE

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INTRODUCTION: African countries have some of the highest incidence and mortality rates for cervical cancer worldwide. The human papillomavirus (HPV)-16/18 AS04-adjuvanted vaccine has been shown to be highly immunogenic and well tolerated in subjects aged 10 - 25

years from diverse geographical situations. We present preliminary results from a phase IIIb study, specifically conducted in Senegal and Tanzania, evaluating the immunogenicity and safety of the HPV-16/18 vaccine in HIV-negative adolescent girls and young women aged 10 - 14 and 15 - 25 years (NCT00481767).

METHODS: Subjects (Senegal N=342, Tanzania N=334) were randomised (2:1) to receive 3 doses of HPV-16/18 vaccine or Al(OH)₃ control at 0, 1 and 6 months. Immunogenicity was assessed using ELISA at months 0, 2 and 7.

RESULTS: After vaccination (month 7), most subjects in the according-to-protocol immunogenicity cohort (100% in Senegal, ≥97.8% in Tanzania) showed seroconversion for anti-HPV-16 and 18 antibodies with high geometric mean titres (GMTs) in both countries. In Senegal, anti-HPV-16 and 18 antibody GMTs in subjects seronegative at baseline were higher in 10 - 14-year-olds (16 813.2 (95% CI 13 765.2 - 20 536.1) and 6 864.2 (5 484.5 - 8 590.9) EL.U/ml, respectively) compared with 15 - 25-year-old subjects (11 022.1 (9 518.3 - 12 763.5) and 3 684.0 (3 325.0 - 4 081.8) EL.U/ml, respectively). Findings in Tanzania were similar (10 - 14-year-olds: 17 785.5 (12 987.6 - 24 355.9) and 5 405.7 (3 967.0 - 7 366.2); 15 - 25-year-olds: 7 287.8 (5 082.8 - 10 449.4) and 3 042.6 (2 285.1 - 4 051.1)). The vaccine was generally well tolerated in both study populations.

CONCLUSION: Data from this study indicate that the HPV-16/18 AS04-adjuvanted vaccine was highly immunogenic and generally well tolerated when administered to HIV-negative African women.

Maternal & Fetal Medicine Society Workshop

THE PERCEPTION AND KNOWLEDGE OF WOMEN WITH PROSTHETIC CARDIAC VALVES ABOUT REPRODUCTIVE HEALTH AND CONTRACEPTION

N du Plessis

OBJECTIVE: To determine the perception and knowledge of women with prosthetic heart valves concerning reproductive health and contraception use and thereby the value of a preconception clinic for high-risk patients.

METHODS: A cross-sectional questionnaire was conducted in women aged between 18 and 45 years, with prosthetic heart valves warranting warfarin use, during routine visits at a tertiary hospital.

RESULTS: Communication was never hampered by language. Eighty-four per cent of the women said having children was important. Sixty-seven per cent of pregnancies were unplanned. Only 70% of the women interviewed received contraception after delivery. Fifty-one per cent of patients said they would consult their partners before falling pregnant. There was minimal use of the intra-uterine contraceptive device, especially the levonorgestrol-releasing device. Only 40% knew about emergency contraception. Sixty-three per cent used more than 5 mg of warfarin daily. Only 31.1% of the previous pregnancies were diagnosed before 7 weeks' gestation. The dangers of warfarin use were known by 72.8% of women.

CONCLUSION: Successful pre-conception counselling will empower women with prosthetic heart valves to make informed choices relating to pregnancy, contraception and future fertility. Optimising health and timely changes in medication will improve the likelihood of a successful pregnancy outcome and decrease the maternal mortality rate in a low-resource setting.

FETAL CARDIAC RHABDOMYOMA AND TUBEROUS SCLEROSIS WITH INCIDENTAL NEONATAL HEPATITIS SYNDROME: A CASE REPORT

Logie Govender

BACKGROUND: Rhabdomyoma is the commonest benign cardiac tumour identified in fetuses and neonates. Perinatal complications include arrhythmias, ventricle outflow tract obstruction, cardiomyopathy, cardiac failure and hydrops. Most cardiac rhabdomyomas tend to regress after birth with a good prognosis. Prenatal detection of a cardiac tumour should be a warning sign for tuberous sclerosis (TS), an autosomal dominant disorder manifesting primarily as skin, eye, kidney, brain or heart lesions that can adversely affect perinatal and maternal health. TS may present with a broad range of clinical symptoms due to variable expressivity and can affect any organ system. A literature review showed no reports on the association of TS complex and liver disease.

CASE: A 21-year-old woman was referred to the Fetal Unit at 26 weeks' gestation in her second pregnancy with a suspected fetal cardiac tumour. Her previous pregnancy had been complicated by preterm delivery, and this child is well. She had no past or family history of TS. Assessment of the fetal heart revealed cardiomegaly with a large rounded solitary homogeneous echogenic mass in the interventricular septum. There was no obstruction to the outflow tracts or other obvious anatomical abnormalities. Fetal heart rate and rhythm were normal.

Doppler assessment revealed no evidence of cardiac failure and there were no features of hydrops. The rest of the fetal anatomy including the brain and kidneys was unremarkable. A normal male karyotype was confirmed. Retrospective examination of the woman revealed facial angiofibromas, oral fibromas and skin lesions; a clinical diagnosis of TS was made. The most likely prenatal diagnosis was considered to be fetal cardiac rhabdomyoma. Genetic counselling was offered and the patient opted to continue with the pregnancy. Serial fetal scans revealed no significant increase in the size of the tumour, and no cardiac complications developed. The woman delivered a 3 300 g male infant spontaneously at 38 weeks. The baby initially developed mild respiratory distress that settled on oxygen therapy. He later required ventilatory support for intermittent left outflow tract obstruction. Postnatal echocardiography confirmed the prenatal findings. On CT angiogram, two other small lesions were noted in the right side of the heart. The brain and kidney scans were normal. The infant was discharged 2 weeks later on a beta-blocker and presented at 1 month of age with worsening jaundice. He had a cardiac arrest that was successfully treated. A papular rash was noted on his upper and lower limbs. An abdominal scan showed mild hepatomegaly. Investigation for the jaundice, including liver biopsy, confirmed neonatal hepatitis syndrome (NHS) and he was managed accordingly. He was transferred back to the base hospital for continuation of care and subsequently lost to follow up.

CONCLUSION: When fetal cardiac rhabdomyoma is suspected, the pregnant woman and fetus should be carefully evaluated for signs of tuberous sclerosis. This allows for comprehensive prenatal counselling of parents on the prognostic implications for at-risk fetuses and for genetic counselling of families. To our knowledge, this is the first case report of NHS in an infant with TS.

SUSTAINING IMPROVED QUALITY OF ANTENATAL CARE AND ITS ASSOCIATED IMPACT ON PERINATAL MORTALITY RATES

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OBJECTIVE: To evaluate the sustainability and effect of the basic antenatal care quality improvement programme introduced in the 14 primary health care clinics of south-west Tshwane from 2005 to 2010.

METHODS: A quality of antenatal care improvement programme was designed using the WHO Integrated Management of Pregnancy and Childbirth manual and introduced using a training of trainers methodology. The training programme also gave instruction regarding changing the way antenatal care was organised and in the development of clinic-based protocols and referral routes. The quality of antenatal care was assessed prior

to the introduction of the programme and 4 months, 1 year and 5 years after its introduction using a score sheet by collecting the antenatal cards at the referral hospital. A control group of antenatal cards was also collected at the same time from clinics referring to the hospital but not involved in the programme to act as a control group. After completion of the training, quarterly BANC meetings were held in the sub-district to ensure communication of new developments and to clear up any problems in referring between clinics and the hospital.

FINDINGS: There was an improvement in the average score of the implementation group, from 68.0% to 71.0% ($p=0.00$) at 4 months, 74.0% ($p=0.00$) at 1 year and 76.0% ($p=0.00$) at 5 years. The perinatal mortality rate (≥ 1 000 g) for the 5 years before the introduction of BANC was 20.5/1 000 births and after 13.8/1 000 births ($p<0.000$).

CONCLUSION: The skills and procedures learnt with the introduction of BANC have been sustained since its introduction, and this has been associated with a 33% reduction in perinatal mortality.

APPROACH TO FETAL LUNG DISEASE

Lou Pistorius

Diagnostic tips:

- Examine the lungs; not only as backdrop to the fetal heart.
- Lesions present as:
 - volume shift (mediastinal shift, lowered diaphragm)
 - increased or decreased echogenicity.
- Always use power or colour Doppler ultrasound to determine the vascular supply of a presumed pulmonary abnormality.

Classification of pulmonary abnormalities:

- Congenital pulmonary adenomatoid malformation (CPAM) (previously classified as congenital cystic adenomatoid malformation/CCAM):
 - type I (macrocytic: cysts >2 cm diameter)
 - type II (mixed)
 - type II (microcystic: cysts <5 mm diameter).
- Obstructive lung disease:
 - tracheal obstruction
 - bronchial obstruction.
- Pulmonary sequestration:
 - intralobar
 - extralobar.
- Other:
 - pulmonary agenesis
 - scimitar syndrome
 - pulmonary arteriovenous malformations
 - pleural effusion.

Diaphragmatic hernia will not be considered in this overview, because it is discussed elsewhere.

THE PATIENT WITH A STILLBIRTH

Hennie Lombaard

Stillbirths account for 5.2/1 000 deliveries in the developing world. This is one of the most distressing events that can happen to a patient during pregnancy. Part of the management is how to break the bad news. One needs to determine the emotional needs of the woman and her companion. You need to understand her wishes and needs and inform her in such a way that they understand their options but are not persuaded into making any specific choices.

The commonest causes are congenital malformations, congenital infections, antepartum haemorrhage, maternal disease, cord prolapse, idiopathic hypoxia acidosis and uterine rupture. The general principles in the management are first to establish maternal wellbeing by taking a detailed history, doing a full clinical evaluation and evaluating her for having a DIC. The cause needs to be determined, the recurrence risk needs to be established, and one then tries to work out how this can be prevented in the future. It is important to realise that in half of the cases no cause is found, but if a cause is found it can influence management of the subsequent pregnancy. The findings of laboratory tests should be correlated to the clinical and pathological findings, since not all abnormal lab tests are diagnostic. The different tests will be discussed in detail. After doing all that is necessary, management should be discussed. Induction of labour is an option, as is expectant management. The only contraindications to expectant management are maternal infection, rupture of membranes or severe pre-eclampsia, DIC or abruptio placentae. The preferred route of delivery is vaginal. Good pain relief is essential. The couple should receive appropriate postpartum care.

THE EFFECT OF HIV EXPOSURE ON NEONATAL NEAR-MISSES AND DEATHS

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AIMS: To determine the effect of HIV exposure on neonatal near-miss and neonatal death.

METHODS: The standard PPIP format was used to collect data for every neonate that fulfilled the criteria of severe neonatal morbidity (neonatal near-miss) and mortality at Kalafong Hospital for the years 2008 and 2009. The criteria of morbidity were based on neonatal organ dysfunction.

RESULTS: There were 248 neonatal near-misses and 75 neonatal deaths (three times more neonatal near-misses than deaths). Neonatal death was twice as common in HIV-exposed as in unexposed neonates (OR 2.3; 95% CI 1.38 - 3.84), the neonatal mortality index and neonates

with life-threatening conditions were more common in HIV-exposed neonates, with ORs of 1.48 (95% CI 0.83 - 2.65) and 1.72 (95% CI 1.33 - 2.22), respectively. Significantly more HIV-exposed neonates than HIV-unexposed neonates had neonatal near-misses and deaths due to intrapartum asphyxia. Spontaneous preterm labour was associated with more neonatal near-misses in HIV-infected women, but death rates were similar in both groups.

CONCLUSION: Maternal HIV infection is strongly associated with severe neonatal morbidity and mortality. Intrapartum asphyxia may commonly be mistaken for possible subclinical chorio-amnionitis, or the exposed neonate might respond differently to hypoxia than other non-exposed neonates.

CHANGING PATTERNS OF SEVERE MATERNAL DISEASE: AN AUDIT OF PREGNANT WOMEN WITH LIFE-THREATENING CONDITIONS IN THE PRETORIA ACADEMIC COMPLEX FOR 2008 - 2009 AND COMPARISON OF PREVIOUS DATA FROM 1997 - 1998 AND 2002 - 2004

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AIM:

- To audit life-threatening conditions for 2008 - 2009 in the Pretoria Academic Complex.
- To compare the patterns of life-threatening conditions of 2008 - 2009 with two previous audits, 1997 - 1998 and 2002 - 2004, and to identify any new trends.
- To assess the impact the HIV epidemic had on our disease profile.
- To assess the impact of a revised protocol on postpartum haemorrhage.

SETTING: The Pretoria Academic Complex comprises 1 central hospital (Steve Biko Academic Hospital, SBAH), 1 regional hospital (Kalafong Hospital), 2 district hospitals (Mamelodi and Tshwane District Hospitals), and 3 community health centres (Pretoria West, Laudium and Stanza Bopape) that conduct births. It serves a population of mainly indigent, urban South Africans.

METHODOLOGY: Maternal near-miss auditing has been performed in the Pretoria Academic Complex since 1997. The same definitions and methodology have been used. Data are collected at the regional and central hospitals at the daily morning meetings and entered on a Maternal Morbidity and Mortality Audit System database modified to accommodate maternal near-misses.

RESULTS: There has been a 35% increase in births in the Pretoria Academic Complex over 12 years. The pattern of women with life-threatening conditions has changed in 2008 - 2009, with more patients with pre-existing medical and surgical conditions and complications of hypertension, but fewer patients with life-threatening

conditions with miscarriage. However, the mortality index significantly increased for miscarriage in 2008 - 2009 compared with 2002 - 2004, and there was also a non-significant increase in cases with pregnancy-related sepsis. There was a drop in the mortality index of obstetric haemorrhage, but this did not reach significance. Women who were HIV infected had more non-pregnancy-related infections and pregnancy-related sepsis. HIV-infected women with a life-threatening condition had a significantly increased mortality index.

CONCLUSION: In 2008 - 2009 there was a deterioration in the outcome of women with severe sepsis. HIV infection played a role in pregnancy-related sepsis and possibly miscarriages. The change in protocol in managing obstetric haemorrhage to include a balloon catheter to stop the bleeding before going to theatre and doing a hysterectomy seems to have reduced the mortality index.

MATERNAL NEAR-MISS VOICES

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AIM: To describe women's mental, psychological and physical experience of a maternal near-miss event.

SETTING: Steve Biko Academic Hospital and Kalafong Hospital.

METHOD: A qualitative study was undertaken on women who agreed to be interviewed. The women were interviewed after the near-miss event and again around a month of discharge. A semi-structured interview was held and recorded by SN. The data were transcribed and analysed.

RESULTS: 38 women agreed to be interviewed. 16 had complications of hypertension, 12 had postpartum haemorrhage, 2 were cardiac patients, 1 had a medical condition (osteogenesis imperfecta), 3 had ectopic pregnancies, 2 had severe sepsis (1 had puerperal sepsis ending in hysterectomy), 1 was a high spinal case, and 1 experienced bladder rupture post delivery. 28 of the babies were born alive in our unit. The remaining babies were fresh stillbirths and macerated stillbirths (2 cases). 32 patients experienced intense, disagreeable emotional and psychological symptoms that produce a feeling of death, 12 of the patients experienced depression (severe in 1 patient), and 14 patients experienced psychotic events (either visual or auditory hallucinations). These patients also had fixed false beliefs of being persecuted. 9 patients had to adjust to reduced global assessment function, and 10 experienced sexual dysfunction. Interestingly, sleep deprivation, high care and ICU routine seemed not to be important factors. They accepted the environment and routine of the units.

Of the 38 patients, 23 still had severe emotional problems at follow-up 1 month after the event, 1 patient needing referral to a psychologist. The patients who had had emergency hysterectomy expressed not knowing or understanding that they had the procedure. Of those who had lost their babies, 5 were still in the grieving process.

CONCLUSION: Saving a life is not enough; we need to pay attention to women's emotional and mental wellbeing as well. Women who survive severe pregnancy complications are at high risk for postpartum depression. A postpartum follow-up clinic where women who experienced a maternal near-miss can be re-evaluated and counselled is necessary.

THE MONICA AN24™ WIRELESS FETAL-MATERNAL MONITORING DEVICE

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INTRODUCTION: Monica Healthcare's new wireless fetal-maternal monitor, the AN24™, opens new doors for monitoring during pregnancy and early labour in the hospital and clinic. As the device can be carried by the pregnant woman, recordings can also be done overnight at home. In addition, it offers extensive research opportunities as computerised analysis of the fetal heart rate (FHR) pattern and improves sensitivity, and reduces intra- and inter-observer variability in interpretations. Using innovative abdominal fetal ECG and electrohysterogram, derived uterine activity technology, the AN24™ works particularly well in early and late gestation, and performs well in women with a high body mass index. Another advantage above the currently used ultrasound transducer is that recordings of the fetal heart rate are not interrupted by fetal movements or changes in the position of the transducer.

TECHNIQUE: The electrical signals are obtained from five specifically placed high-quality ECG electrodes on the anterior abdominal wall of the mother and connected to a cellphone-sized recording device that can store data for at least 16 hours. During the recordings, signals can be transmitted wirelessly to a laptop for real-time display of the fetal and maternal heart rate patterns. In addition, the data can be downloaded at the end of the recording for more detailed inspection and quantitative analyses including approaches such as the Dawes and Redman and Monica criteria. Although the recording of FHR is the AN24's main feature, information is also gathered on the maternal heart rate and movement, and uterine activity. The Monica AN24™ offers simple set-up and minimal supervision. As high-quality recordings of the FHR can be obtained from as early as 20 weeks' gestation, the Monica AN24™ provides a level of information never before available to the clinician. The system will be explained to the audience and its potential use in research illustrated. Examples will be given of maternal heart rate recordings,

FHR recordings in early and late pregnancy, and uterine contraction patterns.

Early pregnancy (20 - 24 weeks). Examples will be shown of different observed FHR patterns. As very little is known about the clinical implications of these early recordings in fetuses that are not viable, information from this period should be regarded as for research only.

Late pregnancy (34 - 38 weeks). Examples will be shown of the FHR and contraction patterns. As the clinical implications of contraction patterns as derived from the electrohysterogram are still uncertain, this information should be regarded as for research only.

Maternal heart rate. Different maternal rate patterns have been observed such as a constant tachycardia (above 100 beats per minute), decelerations or accelerations with contractions and fluctuating rates. Clinical implications of these findings are still uncertain.

CONCLUSION: Many of the observed findings open various doors for future research, based on large numbers and no premature interventions for uncertain findings. At the end of the study, the PASS Network will have a database of more than 10 000 recordings for detailed analyses.

Non-author members of the PASS Network Steering Committee (in alphabetical order) are: Larry Burd, PhD; Kimberly A Dukes, PhD; Amy Elliott, PhD; Rebecca Folkerth, MD; Gary Hankins, MD; Dale Hereld, MD, PhD; Hannah Kinney MD; Caroline Signore, MD, MPH; Lisa M Sullivan, PhD; Marian Willinger, PhD; Colleen Wright, MD.

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TEN, PLUS FIVE, PLUS ONE: REPORT CARD ON HOW SOUTH AFRICA IS DOING IN IMPLEMENTING THE 16 KEY INTERVENTIONS TO PREVENT STILLBIRTHS AND MATERNAL AND NEONATAL DEATHS

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AIM: To ascertain how South Africa is faring with the 16 key interventions to prevent stillbirths, neonatal and maternal deaths.

METHOD: Coverage and quality of care of 16 key strategies in preventing stillbirths, neonatal and maternal deaths were compared. Data were derived from Saving Babies 2008 - 2009, demographic and health surveys, and provincial reports in NaPeMMCo.

RESULTS: In the ten key interventions involving mothers, fetuses and neonates our scores are:

1. Periconception folate supplementation or fortification: Good
2. Detection and management of HIV infection: Good
3. Detection and management of hypertension in pregnancy: Mixed
4. Detection and management of gestational diabetes: Poor
5. Detection and management of growth restriction in pregnancy: Poor
6. Detection and management of post-term pregnancies: Poor
7. Detection and management of syphilis: Good
8. Skilled care at birth: Good
9. Basic emergency obstetric care: Mixed
10. Comprehensive emergency obstetric care: Mixed.

In the five key neonatal and maternal interventions we score:

11. Tetanus toxoid immunisation: Good
12. Antibiotics for preterm premature rupture of membranes: Unknown
13. Antenatal corticosteroids for preterm labour: Getting better
14. Active management of the third stage of labour: Mixed
15. Neonatal resuscitation: Getting better.

In the plus one:

16. Contraception: Much room for improvement.

CONCLUSION: South Africa has an estimated stillbirth rate of 22.7/1 000 births (≥ 500 g) and should concentrate on detecting and managing syphilis, HIV infection and hypertension in pregnancy, and improve labour management. To aspire to an SBR range $\geq 5/1\ 000$ - $< 15/1\ 000$ (with Brazil, etc.) we must improve labour management.

Main Programme

THE CURRENT ROLE OF URODYNAMIC ASSESSMENT

Z Abdool

Spinal cord injury to a large population of World War II (1939 - 1945) veterans prompted the early studies of bladder function, e.g. water cystometry. The era of modern urodynamic studies began with the work of Hinman and colleagues in the 1950s, by studying voiding in normal people. Recent studies have focused on the neurological and pharmacological aspects of bladder function, and it is these historical data that form the basis of our current concepts of urodynamic studies. While the principal aim of urodynamics is to reproduce the patient's symptoms and relate the finding to a synchronous urodynamic event, the wider role of urodynamic assessment in clinical practice will be discussed during this presentation.

TRANSCULTURAL MENOPAUSE

Jack Biko

Pretoria University

Although menopause is a natural process just like puberty, many women see it as signifying that 'the end is near'. This is particularly the case in cultures where older women are regarded as less valuable members of society. For the childless woman, menopause is seen as a major stumbling block that has abruptly ended her reproduction potential. Because of the negative connotations associated with the menopause, these patients often present with depression and severe menopausal symptoms.

In cultures where age is regarded with respect and menopausal women are accorded a higher status in society, menopause is regarded as a joyous process that is eagerly awaited and welcomed. For the grand multiparous woman deprived of modern contraception because of religion or cultural beliefs, menopause is a welcome relief from further pregnancies. Life has 'just begun' for these patients.

The clinician must be aware that symptom reporting is different between the various cultures and between those who see menopause as 'the end' and those who see it as 'the beginning'.

PCOS 2011

Danie Botha

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Patients with polycystic ovarian syndrome (PCOS) form part of every gynaecological practice. The condition affects 4 - 18% of women of reproductive age and is associated with metabolic, reproductive and psychological dysfunction. Owing to the severity of symptoms and impairment of quality of life, early diagnosis is mandatory and increased awareness of PCOS in young females is needed. The diagnosis and workup should be considered in young girls with risk factors suggestive of this condition, including earlier onset of pubarche and thelarche.

Metabolic abnormalities, showing many overlapping features with dysmetabolic syndrome, include dyslipidaemia with higher low-density lipoprotein (LDL) cholesterol, regardless of BMI. A meta-analysis of 31 articles showed that circulating C-reactive protein was 96% higher in women with PCOS compared with controls, indicating that women with PCOS have an elevation in chronic low-grade inflammation. Although the pathophysiology of PCOS remains unknown, it probably includes a combination of genetic factors, insulin resistance and environmental factors. Current research showed that the syndrome is possibly associated with some auto-immune diseases, as demonstrated by increased levels of anti-ds DNA. PCOS impairs fertility on several hormonal and biochemical levels. Although

patients with this syndrome typically respond well to stimulation for ART, the oocytes are often of poor quality, leading to lower fertilisation, cleavage and implantation rates.

Treatment of these patients is complex and should be done by multidisciplinary teams with dietary and lifestyle changes and targeted medication, including metformin.

SURROGACY AND OVUM DONATION

D Botha

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Although the obligations of physicians dealing with surrogacy may vary depending on their level of involvement, gynaecologists should carefully examine all issues related to surrogacy, including medical, legal, psychological and ethical aspects. In order to avoid legal pitfalls in surrogacy arrangements, a thorough knowledge of the legislation in South Africa is essential and legal expertise should be part of the multidisciplinary team.

According to the FIGO guidelines on ethical issues in obstetrics and gynaecology, surrogacy describes a reproductive model where a woman carries a pregnancy and delivers a child on behalf of a couple where the woman is unable to do so, because of a congenital or acquired uterine abnormality or a serious medical contraindication to pregnancy. Distinction is being made between full surrogacy and partial surrogacy, where the planned surrogate also provides her oocytes. The South African scenario differs from this definition of surrogacy in that homosexual male couples may also make use of surrogacy, as long as they can show a female influence in the life of the child. Different cultures have their own regulations, often based on religious principles. This may be problematic, especially with cross-border surrogacy and commercial surrogacy. These and the effect of surrogacy and oocyte donation programmes on disclosure and the effect on children born through these techniques will be addressed.

PALLIATION AND PAIN CONTROL

Lynette Denny

University of Cape Town

Women with gynaecological malignancies in South Africa often present late due to the nature of the disease (such as ovarian cancer), lack of access/knowledge, or poor health care (e.g. with cervical cancer). Cure rates for the different gynaecological malignancies vary, with 5-year survival rates ranging from less than 10% in women with stage 4 cervical cancer to over 90% in women with early-stage disease. Palliation should be directed towards symptom control and improving quality of life and should be holistic, which includes attending to the non-physical needs of the patient such as economic, family, spiritual and emotional issues, to name a few. Investigations should be directed towards relieving symptoms rather than done for their own sake. Palliation should ideally involve a multi-disciplinary team and have a multi-pronged approach which includes surgery, radiation and

chemotherapy, used judiciously. Treatment should never be worse than the disease. The lack of good palliative care is recognised throughout Africa, although in South Africa the hospice movement has brought increased awareness and services for patients with progressive cancer.

SCREENING FOR AND EARLY DETECTION OF CERVICAL CANCER

Lynette Denny

University of Cape Town

Historically, cervical cytology has been used for the secondary prevention of cervical cancer, and in countries with organised, national screening programmes, cervical cancer has been rendered a rare disease. Currently, over 80% of cervical cancers worldwide are diagnosed in women living in developing countries that lack screening programmes. Competing health needs, lack of resources, overwhelming poverty and many other factors have prevented most developing countries from tackling the issue of cervical cancer prevention. In the past 15 years significant research, including randomised controlled trials, has evaluated alternative screening methods and protocols for the prevention of cervical cancer in low-resource settings. These have included visual inspection with acetic acid (VIA), HPV DNA testing and a range of optically based techniques. Initial cross-sectional studies of VIA and HPV DNA testing showed relatively good test performance, but once subjected to randomised trials it soon became clear that VIA has a minimal impact on reduction of either cervical cancer or its precursors and that HPV testing linked to treatment is significantly better, although it has a lower specificity and PPV compared with cytology. The ideal test does not yet exist, but it has been scientifically established that HPV DNA testing linked to immediate treatment is an effective intervention and should be implemented where feasible. Data on alternative approaches will be presented during the presentation

ON TAPES AND MESHES, PROSTHESES AND GRAFTS

Jan Deprest

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Implants are increasingly being used in pelvic floor surgery. These may be synthetic (called prostheses) or biological (referred to as grafts). Most commonly used are tapes for incontinence surgery and meshes for prolapse surgery. Following the operation these foreign bodies induce a host response, contributing to the functional result as well as potentially being involved in graft-related complications (GRC). A committee of IUGA and ICS recently standardised the terminology to describe GRC. It introduces a terminology and classification based on category (C), time (T) and site (S) classes and divisions. The classification systems should enable the description of all possible scenarios for describing insertion complications and healing abnormalities. The CTS code for each complication, involving three (or four) letters and three numerals, is likely to be very suitable

for any surgical audit or registry, particularly one that is procedure-specific. Users of the classification have been assisted by case examples, colour charts and online aids (www.icsoffice.org/complication).

COMPLICATIONS AND MANAGEMENT OF MONOCHORIONIC TWINS

Jan Deprest, Jute Richter, Philip De Koninck, Joachim van Keirsbilck, Paul Lewi, Luc De Catte, Roland Devlieger, Liesbeth Lewi

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Monochorionic twin pregnancies are high-risk pregnancies. The most common complications are fetofetal transfusion, growth discrepancy and discordant anomalies. Twin-to-twin transfusion syndrome can now be treated by fetoscopic laser with high survival rates. Twin anaemia-polycythaemia syndrome is less common, and treatment is dependent on presentation. The management and outcome of growth restriction depend on the presence and nature of Doppler changes in the umbilical artery. Today, monochorionic status should be diagnosed at first-trimester ultrasound, at which time adverse events can also be predicted based on discrepancy in amniotic fluid and crown-to-rump length.

LAPAROSCOPIC SACROCOLPOPEXY

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Laparoscopy offers great exposure and surgical detail and reduces blood loss and the need for excessive abdominal packing and bowel manipulation, making it an excellent modality to perform pelvic floor surgery. Although laparoscopic colposuspension has been shown to be as effective as an open procedure at 2 years' follow-up, it is less practised since the introduction of transvaginal tape procedures. Laparoscopic repair of level I or apical vaginal prolapse may be challenging, owing to the need for extensive dissection and advanced suturing skills. However, it offers the efficacy of open abdominal sacrocolpopexy, such as lower recurrence rates and less dyspareunia than sacrospinous fixation, as well as the reduced morbidity of a laparoscopic approach.

THE FETAL RESPIRATORY SYSTEM AS TARGET FOR ANTENATAL GENE THERAPY

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The widespread use of prenatal ultrasound has made the fetus a patient. A number of conditions diagnosed as such may require therapy prior to birth. Recently,

fetuses with isolated congenital diaphragmatic hernia (CDH) with lethal lung hypoplasia have been offered percutaneous fetal tracheal occlusion to provoke lung growth. A very rare condition is laryngeal atresia, which requires peripartum re-establishment of the airways. As we get more experience with access to the fetal airways, this may open the doors for novel therapies. One of these is gene delivery to treat fetuses with serious monogenic disorders or to induce transient over-expression of certain proteins. We review the individual hurdles that are being met by researchers when designing fetal gene therapeutic strategies, in particular for the fetal lung. The use of stem cells for pulmonary disorders is also explored.

ADVANCED CANCER: LIMITS OF TREATMENT PROSPECTS

G Dreyer

Advanced cancer is often associated with poor performance and nutritional status, and sometimes also with advanced age. Medical co-morbidities and heavy pre-treatment status are also important limitations to anti-neoplastic treatment.

In most cancers the number of treatment events determines survival. The other side of this coin is that therapeutic complications will also increase. Quality-of-life assessments and the addition of treatment-free months to life are therefore important measures of outcome.

The decision whether a patient can benefit from treatment in a case of metastatic or advanced cancer is a difficult one. It requires expert knowledge and experience of the natural course of the disease without therapy, as well as the expected outcome and treatment-related morbidity and mortality of the different therapeutic options. These different options must be weighed thoroughly. In my view the medical expert must have his or her own opinion about the optimal approach before the open-minded and honest counselling session is started. The wishes of the patient and her relatives are then the final determinant of the treatment decision.

In cases of advanced cancer where the limits of treatment are being tested, treatment decisions must be repeatedly re-evaluated with a willingness to change these as the needs of the patient and her clinical situation change.

NEW VIEWS ON LARGER-THAN-DATES FETUSES

N du Plessis

The fetus or infant weighing >90th percentile for gestational age is considered large for gestational age (LGA). Macrosomia indicates excessive growth regardless of gestational age and has been defined using various criteria, which include weight greater than the 90th percentile, birth weight greater than 4 000 g, and estimates of neonatal adiposity based on body composition measures.

Excessive fetal growth can occur because of constitutional factors, genetic abnormalities, or an increased supply of nutrients (environmental factors). The prevalences of obesity in pregnancy and related gestational diabetes are increasing and both are associated with rising birth weight.

During antenatal care the diagnosis of a large-for-gestation fetus is just as important as recognising the small-for-gestation fetus. Maternal and neonatal morbidity are greater than that of the general population and rise substantially with a birth weight above 4 500 g. Aetiological studies have also shown a relationship between high birth weight and an increased risk for childhood and adult obesity. The aetiology of increased growth must be determined.

LGA fetuses and infants pose their one set of possible complications during labour and in the early neonatal life. Birth injuries, e.g. brachial plexus injury and clavicular fracture, and other abnormalities including hyperglycaemia, polycythaemia, and perinatal asphyxia are more commonly encountered.

The attending obstetrician needs to establish when a prophylactic caesarean delivery is indicated, the place of routine induction of labour, and whether or not an instrumental delivery can be attempted.

TOWARDS AFFORDABLE ART

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Financial strain in general is a collective problem for patients with a low to middle income seeking reproductive assistance. It is, however, a universal dilemma that was emphasised by the recent global recession, which culminated in the general reassessment of procedures and processes within health care systems. Basic, simplistic, low-cost, minimal stimulation, affordable and accessible assisted reproduction technologies (ART) are terms/concepts that are used to address aspects of cost-effective, simpler versions of ART.

An overview will be provided on the surge towards less complex technologies with regard to stimulation regimens, monitoring, laboratory equipment and protocols. Simpler ART regimens have been suggested, i.e. a modified, low-cost stimulation protocol with minimal monitoring and a short-phase laboratory procedure. Screening and selection of patients using inexpensive first-line diagnostics and treatments, batching of patients for procedures, and using simpler media formulations, equipment and devices are elements that have been or are under investigation. Discussions are also ongoing on alternative ART laboratory training methods and methodologies versus rigorous tuition and protocols.

It should be noted that 'the terminology "affordable ART" has a relative meaning depending on the region of the world or within a health care setting'. Some patients may or may not qualify for less detailed and simpler ART procedures, and in which case a custom-made approach would be beneficial. Investigations may not overturn solid existing principles, but could conceive novel solutions to age-old problems, adding new perspectives and innovative approaches.

DELIVERY OF TWINS: BEST AVAILABLE EVIDENCE

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The real question is to cut or not to cut, and I do not refer to episiotomy. The mode of delivery in twin pregnancy has long been a debated issue. Certain combinations in twin pregnancies are a certainty with regard to how to deliver. Leading twin transverse presentation and breech vertex presentation have been widely accepted as indications for elective caesarean section delivery. The term breech trial is frequently used or abused in the counselling of women regarding route of delivery. Some data did suggest a slightly increased mortality for the second twin in vaginal delivery. There is also evidence that the perinatal mortality for twins is higher than for singletons, and they also have a four times higher risk of low Apgar scores than singletons. The fact that there is a higher rate of malpresentation of the second twin also helps in counselling women more towards caesarean section. The decision-making process is further influenced by the fact that twins are more frequent in older women and in patients who suffered from infertility, so the baby is regarded as 'special'. The talk will deal with the current available best evidence on the route of delivery for twin pregnancies.

FETAL NEURAL TUBE DEFECTS: PROGNOSIS AND PREVENTION

Lou Pistorius

Neural tube defects comprise the following: anencephaly, encephaloceles and spina bifida.

Anencephaly still has a dismal prognosis. Encephaloceles have a varying prognosis, depending on the associated abnormalities (occurring in 40% of encephaloceles, including Meckel-Gruber syndrome), the site and content of the encephalocele, and possible underlying brain pathology. The more rostral (frontal and parietal) encephaloceles have a better prognosis than do the more caudal (occipital) encephaloceles. If the sac contains an extensive amount of brain tissue, this carries a worse prognosis, as does underlying pathology of brain parenchyma (such as migrational disturbances or cysts) or ventriculomegaly.

The prognosis of spina bifida depends on the lesion height, as well as the associated Chiari malformation. Hydrocephalus and shunt problems can affect the chance of survival and normal mental development. Ambulation is dependent on lesion level, but the functional lesion level can be several spinal levels above or below the anatomical lesion level. Urologically, the management is aimed at protecting the upper urinary tract and achieving social continence. Sexual sensation is also related to the lesion level, with normal sensation and capability for orgasm usually retained with a functional lesion level below L2.

All in all, with a lesion level at L3 or higher, there is a 40% chance of survival, a 25% chance of mental retardation or non-ambulation, and a 15% chance of normal mental development. With a lesion level at L4 or lower, there is a 75% chance of survival, a 25% chance of mental retardation or non-ambulation and a 50% chance of normal mental development.

The outcome is not influenced by the route of delivery. Prenatal surgery might improve the lesion level by an average of 2 spinal levels, at the cost of an 80% risk of preterm delivery.

Daily intake of 400 µg folic acid in low-risk women, 1 mg in women on anti-epileptics and 5 mg in women with a previous child with a neural tube defect probably reduces the risk around 50%. Different strategies, such as a media campaign or food supplementation, can be used to reach people who would otherwise not be aware of this possibility. The use of folic acid might also decrease the risk of non-syndromic cleft lip and palate.

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SOFT MARKERS: MUCH ADO ABOUT NOTHING?

Lou Pistorius

Soft markers are defined as a nonspecific, often transient finding that in isolation is insignificant in itself in relation to the outcome of pregnancy and frequently occurs in normal fetuses, but which increases the risk of fetal (chromosomal and non-chromosomal) abnormalities.

Some soft markers are mostly associated with chromosomal abnormalities, such as echogenic cardiac foci (trisomy 21) and choroid plexus cysts (CPCs) (trisomy 18). Some are associated with both chromosomal and non-chromosomal abnormalities such as an increased nuchal translucence (trisomy 21, cardiac abnormalities, congenital infections and genetic syndromes), echogenic bowel (trisomy 21, retroplacental bleeding, CMV, growth restriction, bowel pathology and cystic fibrosis), a shortened femur (trisomy 21, skeletal dysplasias and growth restriction) and mild

ventriculomegaly (trisomy 21, hydrocephalus, corpus callosum agenesis and congenital infections). Some are mostly associated with non-chromosomal abnormalities, such as pyelectasis (hydronephrosis) and a single umbilical artery (SUA) (cardiac and renal abnormalities and growth restriction).

Using soft markers to screen for chromosomal abnormalities is inefficient, with a 60% sensitivity achieved for a 10% false-positive risk. Not to use this as 'the best way to terrify a pregnant woman', the following is suggested:

- First-trimester screening (nuchal translucency measurement and maternal serum HCG and PAPP-A) is used to screen for chromosomal abnormalities.

If a soft marker is found at mid-trimester scan:

- An isolated echogenic focus or CPC is described as normal variant.
- In case of mild pyelectasis, the ultrasound is repeated at 32 weeks to exclude hydronephrosis.
- In case of a combination of soft markers, or the presence of one of a thick nuchal skin fold, grade III echogenic bowel, mild ventriculomegaly, short femur or SUA, a detailed ultrasound evaluation is performed. The likelihood ratios of the different soft markers can be combined with the background risk to arrive at an adjusted risk of chromosomal abnormalities.

Although there are obviously soft markers with greater sensitivity and specificity, the question remains whether the 20w ultrasound examination is the best tool to screen for chromosomal abnormalities.

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FIRST-TRIMESTER PREDICTION OF MATERNAL COMPLICATIONS

Lou Pistorius

First-trimester screening has become the standard for screening for chromosomal abnormalities. It has become clear that a thickened nuchal translucency is also associated with other, especially cardiac, fetal abnormalities.

The circle has come round with expanding first-trimester screening to include obstetric complications such as pre-eclampsia, growth restriction or macrosomia and preterm labour.

Implications for research and practice of this development, which turns traditional, reactive antenatal care on its head, will be discussed.

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PREVENTING PRETERM LABOUR**Priya Soma-Pillay***University of Pretoria*

Preterm birth is an important cause of perinatal morbidity and mortality, affecting about 12 million births worldwide. Potential interventions for reducing the incidence of preterm birth may be classified as primary (aimed at all women), secondary (aimed at women at risk), and tertiary (preventing neonatal morbidity and mortality). Obstetricians have improved their ability to identify women at risk of preterm delivery, but unfortunately primary and secondary interventions have so far not been effective in reducing the rate of preterm delivery. Strategies to reduce preterm labour include progesterone administration and cervical cerclage. The most recent trials show that in certain circumstances progesterone is effective.

ONE SHOE DOES NOT FIT ALL: TAILOR-MADE TREATMENT FOR INCONTINENCE**Paul Swart***University of Pretoria*

Urethral incontinence occurs when the intravesical pressure exceeds the urethral pressure. The causes could therefore be either an increase in intravesical pressure or failure of the mechanisms that close the urethra.

Even though the symptomatology of patients who suffer from the two main aetiological pathologies differ, there is a large group of patients in whom it is impossible to make a diagnosis with any certainty after taking a history and doing a clinical examination.

The raised intravesical pressure might well be due to nothing more than obesity, but can also due to more sinister events such as spontaneous detrusor contractions. If inappropriate therapy would only be ineffective it would not be such a dangerous mistake to confuse the two conditions, but if surgery is performed in the wrong patient it will lead to the woman permanently being worse off than had she not seen a doctor.

Numerous forms of therapy have proven efficacy in treating incontinence. Increasing the urethral closing pressure by inserting a sub-urethral sling is very effective therapy in the right patient, but inserting a sling as a knee-jerk reaction in the patient who presents with a complaint of leaking when she coughs can have less than desirable sequelae. Weight loss and pelvic floor muscle training are very effective therapy in this group of patients without any side-effects whatsoever. Pelvic floor rehabilitation is also an excellent option for patients with urge incontinence. Any alternative to surgery should be explored before deciding on surgery. Even anti-muscarinics can leave patients with undesirable symptoms. When anti-muscarinics fail, one should remember that other forms of treatment such as posterior tibial nerve stimulation, Botox and neuromodulation are proven forms of therapy.

It is important to stay with protocols and exclude infections, perform urodynamic studies when indicated, and evaluate the upper tract when infections or high intravesical pressures are present.