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Maternal Medicine symposium

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DECLARATION OF INTERESTS No conflict of interests declared.

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INTRODUCTION

There are an increasing number of women entering pregnancy with a range of complex medical conditions. Although maternal mortality rates in the developed world remain low, serious maternal morbidity is increasing. The overarching theme of the symposium was how we can best prevent, manage and reduce such morbidity, which can have profound consequences on a woman and her family.

SESSION 1: MATERNAL MORBIDITY AND MORTALITY – ARE WE DOING ENOUGH?

Dr Catherine Calderwood (Consultant Obstetrician and Gynaecologist, Medical Advisor to the Scottish Government) opened the session with an overview of worldwide maternal mortality rates. However, mortality rates represent the tip of an iceberg of severe morbidity. Every year, 4,800 women in the UK suffer severe morbidity as a consequence of pregnancy. Of those, 20% will never have another pregnancy and there is a ten times greater risk of perinatal mortality for the babies of women suffering severe morbidity. Recommendations from the UK confidential enquiries and obstetric surveillance system highlight the need for multidisciplinary care of patients with complex medical problems.

The MBRRACE-UK collaboration has recently been appointed to lead the UK Confidential Enquiries into Maternal Deaths and has introduced a new programme of Confidential Enquiries into Maternal Morbidity. Professor Marion Knight [Head of UK Obstetric Surveillance System (UKOSS), University of Oxford] outlined the challenges in acquiring evidence from randomised controlled trials to guide practice in obstetric emergencies. She detailed some recent important UKOSS studies, which have been crucial in the development of guidelines to reduce severe morbidity and mortality, with particular emphasis on sepsis.[1]

Dr Kate Bramham (Clinical Research Fellow, Women's Health Academic Centre, St Thomas' Hospital, London) gave an overview of pregnancy outcomes in women after renal transplant. Women have a rapid restoration of fertility following transplant and the success of transplantation programmes means there are increasing numbers of pregnancies in women with a graft. The outcome is generally good but there are significant risks of complications, particularly pre-eclampsia and preterm birth. The need for pre-pregnancy counselling and multidisciplinary team care were highlighted.

Professor Catherine Nelson-Piercy (Obstetric Physician, Guy's and St Thomas' Hospital, London) tackled the question 'Is pulmonary hypertension still a contraindication to pregnancy?' She presented a summary of the international data from case series of women with pulmonary hypertension. With mortality in the range of 7–17% and limited evidence for effective therapies, she concluded that pulmonary hypertension remains a contraindication to pregnancy. For women continuing with a pregnancy, care should be delivered in a centre with experience in managing pulmonary hypertension in pregnancy.

SESSION 2: INTERACTIVE CASE-BASED DISCUSSION AND PANEL DISCUSSION

Professor Mark Strachan (Consultant in Diabetes and Endocrinology, Western General Hospital, Edinburgh) presented a thought-provoking case of a young woman

with cystic fibrosis who had undergone pulmonary transplant and was seeking fertility treatment. The case provoked lively discussion from the panel and floor on both the clinical challenges of her care, and also on the ethical dilemma of providing assisted conception to a woman for whom pregnancy was likely to present significant risk.

Dr Catherine Head (Consultant Cardiologist, Guy's and St Thomas' Hospital, London) used a series of clinical cases to give an excellent overview of the management of adult congenital heart disease in pregnancy. She emphasised some useful learning points including the need for MR or CT imaging to assess the maximal aortic diameter in women with bicuspid aortic valve and that women with repaired coarctation generally do well in pregnancy but must have an MRI scan to detect any residual gradient or aortic aneurism.

THE FREELAND BARBOUR LECTURE: MANAGING CRISES IN PRE-ECLAMPSIA

Globally, pre-eclampsia remains an important cause of maternal morbidity and mortality, with a particularly high prevalence in Africa. Professor John Anthony (Head of Maternity Centre, Groote Schuur Hospital, University of Cape Town, South Africa) shared his wealth of experience of the condition with an overview of the multidisciplinary intensive care necessary to optimise outcomes for women with severe disease. He emphasised strategies to avoid the immediate catastrophic consequences of cerebrovascular haemorrhage and pulmonary oedema but also reminded us of the long-term risks of renal failure and vascular disease in later life.

SESSION 3: HOT TOPICS

Diabetes in pregnancy has long been recognised as a significant risk factor for adverse pregnancy outcome. However, publication of the Hyperglycaemia and Adverse Pregnancy Outcomes (HAPO) study[2] and the Australian Carbohydrate Intolerance Study in Pregnant Woman (ACHOIS)[3] has ignited debate on the appropriate management of women with hyperglycaemia in pregnancy. Co-author of the HAPO study, Professor David McCance (Consultant Physician/Honorary Professor of Endocrinology, Royal Victoria Hospital, Belfast), presented a summary of the evidence and the consequent international consultation process which produced the guidance from the International Association of Diabetes and Pregnancy Study Group.

Obesity is the most common pregnancy co-morbidity in the UK. There are no effective evidence-based strategies for reducing complications in this group of women. Professor Siobhan Quenby (Professor of Obstetrics, Division of Reproductive Health, Warwick Medical School) presented her research on myometrial dysfunction in obese women. She believes this is the key to understanding the underlying mechanisms of pregnancy complications in obese women and emphasised the need for ongoing translational research in this area to develop targeted interventions.

SESSION 4: THE ACUTELY ILL PREGNANT WOMAN

Dr Alastair Campbell (Consultant Obstetrician and Gynaecologist, Royal Infirmary of Edinburgh) discussed the most common causes of the acutely ill pregnant woman, including sepsis, haemorrhage and severe pre-eclampsia. He highlighted the need for staff training in the early recognition of the acutely ill patient, the importance of the use of early warning charts in maternity care, and multidisciplinary teamwork.

Dr Andrew Thompson (Consultant Obstetrician and Gynaecologist, Royal Alexandra Hospital, Paisley) gave a preview of the likely changes in the updated Royal College of Obstetricians and Gynaecologists guideline on venous thromboembolism in pregnancy. These include 'new' risk factors such as hospital admission and preterm delivery and an emphasis on the importance of documented and repeated risk assessment during pregnancy.

Headache is a common presenting complaint in pregnancy and can be a diagnostic dilemma for the obstetrician. Dr Richard Davenport (Consultant Neurologist, Western General Hospital, Edinburgh) provided a helpful summary of potential causes, red flag symptoms and indications for imaging. He described the newly classified headache disorders of reversible cerebral vasoconstriction syndrome and posterior reversible encephalopathies syndrome.[4] In a recent cohort study, 97.9% of patients with eclampsia had posterior reversible encephalopathies syndrome, suggesting it may be part of the pathogenesis of the disease.[5]

TAKE HOME MESSAGE

Multidisciplinary team care is essential in reducing risk for complex patients. The symposium provided an excellent forum for the sharing of expertise among specialties and it was encouraging to see a range of medical specialties represented among the delegation. The talks were engaging and delegates left with enriched knowledge and new ideas to improve patient care.

REFERENCES

1 UK Obstetric Surveillance System. https://www.npeu.ox.ac.uk/ukoss

2 HAPO Study Cooperative Research Group, Metzger BE, Lowe LP et al. Hyperglycemia and adverse pregnancy outcomes. *N Engl J Med* 2008; 358: 1991–2002. http://dx.doi.org/10.1056/NEJMoa0707943

3 Crowther CA, Hiller JE et al. Effect of treatment of gestational diabetes mellitus on pregnancy outcomes. *N Engl J Med* 2005; 352: 2477–86.

4 Brewer J, Owens MY, Wallace K et al. Posterior reversible encephalopathy syndrome in 46 of 47 patients with eclampsia. Am *J Obstet Gynecol* 2013; 208: 468 e1–6. http://dx.doi.org/10.1016/j.ajog.2013.02.015

5 Edlow JA, Caplan LR, O'Brien K, Tibbles CD. Diagnosis of acute neurological emergencies in pregnant and post-partum women. *Lancet Neurol* 2013; 12: 175–85. http://dx.doi.org/10.1016/S1474-4422(12)70306-X