

# The third Swansea Perinatal Symposium (SWAPS 2017)

Liberty Stadium, Swansea, 19 May 2017

More than 220 delegates from neonatal, obstetrics and midwifery disciplines got together at the Liberty Stadium for the third Swansea Perinatal Symposium (SWAPS). Following the inaugural conference in 2015, the symposium has gone from strength-to-strength while staying true to its aim of providing high quality but affordable continuing medical education for the multidisciplinary team. This year's symposium offered breakout sessions in obstetrics and neonatology following the highly successful plenary session in the morning and added a forum for poster presentations.

The first speaker of the morning, Consultant Obstetrician Dr Austin Ugwumadu of St George's Hospital, London, engaged the audience with his talk entitled **Intrapartum hypoxia – greater scrutiny of the cardiocography?** Dr Ugwumadu discussed strategies, based on physiologic principles that may improve interpretation of acute fetal bradycardia and avoid unnecessary intervention. Using illustrative case studies he explained that prolonged decelerations, arising from previously normal or near-normal cardiocography, are only occasionally associated with acidosis if the fetal heart rate nadir stabilises at  $\geq 80$  beats/minute. If baseline variability is maintained, 95% of bradycardias will recover within nine minutes. The severity of the acidosis is often not correlated with long-term outcome, and central arterial pressure and subclinical infection are increasingly recognised as greater correlates of brain injury in the neonate. Many pieces are still missing from this puzzle, but extensive training using this principle has reduced the rates of neonatal encephalopathy and surgical interventions at St George's.

Dr Sujoy Banerjee, Consultant Neonatologist at Singleton Hospital, Swansea, and a founder of this symposium, presented an inspiring talk entitled **Managing antibiotics wisely**. Following a quality improvement initiative in collaboration with Vermont Oxford



Delegates Rachel May Morris, Stephanie Cannell, Jamie Evans, Ian Morris, Gemma Davies and Hayley Michael.

Network and the Centre for Disease Control, his unit has seen a reduction in antibiotic usage rate of 43% over a 15-month period while achieving one of its lowest mortality and morbidity outcomes for over a decade. He emphasised the need for strong antibiotic stewardship in an era where microbial resistance is increasing rapidly and very few new antibiotics are in the research pipeline. Dr Banerjee argued that antibiotics must not be used without good reason in this critical perinatal window as there are significant impacts on the development of the microbiome and consequent morbidities in the short- and long-term. The collaboration relied on short 'plan-do-study-act' cycles to develop a stewardship culture in the team, stop antibiotics early, prevent inappropriate initiation and develop partnership between staff and parents. The talk generated a lot of interest and optimism that the basic principles could be adapted across many different medical specialties.

Professor Amy Brown of Swansea University spoke on her work in **Breaking the myths of breastfeeding – the parent**

**perspective**. This powerful talk highlighted the urgent need to recognise the low breastfeeding rates in the UK as a major societal and public health problem rather than an individual's decision. The messages from parents here were strong and clear – we need to change the conversation around breastfeeding and we need to change it now.

Professor Paul Heath, Consultant in Paediatric Infectious Diseases, addressed a highly divisive issue in his talk, **Perinatal Group B Streptococcus (GBS) – time to change strategy or wait for new developments?** He told the audience that the rate of early onset GBS disease (EOGBSD) has risen in the UK since the introduction of a national policy of risk-based screening. Despite a lack of high quality evidence, data from individual countries provide an insight into the effects of different approaches. The risk-based strategy is constrained by the fact that nearly 40% of mothers whose babies develop EOGBSD do not have risk factors. Similarly, a culture-based strategy has problems related to low yield, loss of

colonisation, new acquisition and communication failures. He emphasised the knowledge gaps in the evidence. While rapid diagnostic tests and candidate vaccines offer hope, he believes that ensuring a high degree of compliance to a clear and simple national strategy provides the most effective way of minimising the risk of EOGBSD.

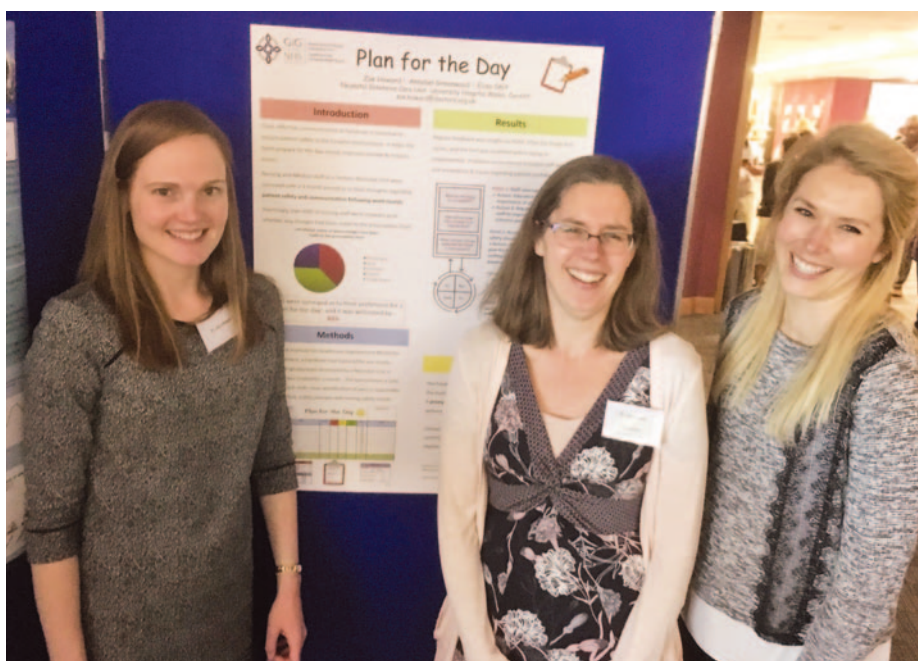
The morning session closed with the enigmatic Dr Damian Roland, Consultant and Honorary Senior Lecturer in Paediatric Emergency Medicine at the University of Leicester, broaching the controversial subject of the **Role of social media and technology in medicine**. Although social media is seen by many as a negative paradigm overloaded with useless information, Dr Roland provided many examples of how this untapped resource could be used to its advantage by filtering and sharing useful information in a busy professional environment. He emphasised that despite the lack of face-to-face interaction, professionalism is essential to use social media safely and productively and as a social enterprise in medicine.

The lunch and coffee breaks provided opportunities for delegates to visit the poster area as well as the exhibition stands from medical companies displaying innovative products in perinatal care. The best poster award was given to Drs Zoe Howard, Annabel Greenwood and Elisa Smit of University Hospital of Wales, Cardiff, for their quality improvement work entitled **Plan for the day**. They were able to demonstrate enhanced communication between the multidisciplinary team on a busy neonatal unit after introducing a dedicated handover tool.

### Neonatal breakout session

The neonatal breakout session in the afternoon focussed on three key morbidities in neonatal practice: necrotising enterocolitis (NEC), hypoxic ischaemic encephalopathy (HIE) and post-haemorrhagic ventricular dilatation (PHVD).

Professor Minesh Khashu of Poole Hospital spoke on **Recent advances in our understanding and management of NEC**. The incidence of NEC is increasing and there appears to be a discreet window of vulnerability around 32-33 weeks' corrected gestation. Progress in early diagnosis is being made through detection of volatile compounds, faecal imprint and predictive monitoring using heart rate characteristics. Promising preventative therapies using



Zoe Howard, Elisa Smit and Annabel Greenwood with their prizewinning poster. See the article about the 'plan for the day' on page 187.



More than 220 delegates attended SWAPS 2017.

colostrum, breast milk, probiotics and amniotic fluid rich in epidermal growth factors and avoiding prolonged antibiotic use were discussed. He advised the audience to minimise changes in feeding practices around the critical window of vulnerability.

Dr Elisa Smit, Consultant Neonatologist, Cardiff, presented an excellent talk entitled **Moving beyond therapeutic hypothermia (TH)**. TH is now ingrained in neonatal practice but only has a restricted use and modest beneficial effect on a devastating and life-changing condition. The search is on for the next therapeutic agent and to even extend the scope of TH. Longer and deeper cooling does not confer benefit and early cooling within three hours may improve outcomes. Several additional

therapies including xenon, erythropoietin, allopurinol and melatonin are at the stage of clinical studies. Although preliminary results from the TOBY xenon trial showed no significant difference in short-term outcomes, results are awaited from the CoolXenon study that used different dosage and cooling times.

Professor Andrew Whitelaw from Bristol, an eminent figure in the field, presented **Post-haemorrhagic hydrocephalus, drainage irrigation and fibrinolytic therapy (DRIFT) and cognitive outcome**. DRIFT was a pioneering intervention aimed at reducing brain damage caused by inflammatory up-regulation and raised intracranial pressure. The randomised trial did not show statistically significant benefit of the DRIFT technique, however, once

adjustments were allowed for the high risk demographics of the DRIFT subgroup, a significant reduction in death was reported. At 10-year follow-up the DRIFT intervention group had better cognitive outcomes. Pioneering work is underway in South Korea attempting to utilise stem cells to improve outcomes.

**Obstetrics breakout session**

In the obstetrics breakout session, Dr Stephanie Curtis, Lead Cardiologist of the Cardiac Pregnancy Service in University Hospitals Bristol, reminded the audience that cardiac disease is the leading cause of indirect maternal death and the overall leading cause of maternal mortality. This is accounted for by increasing obesity, maternal age and more women embarking on pregnancy with underlying cardiac disease. Dr Curtis argued that pre-conception counselling and contraception advice should be available within the paediatric cardiology transition service and to women of childbearing age with known cardiac disease. The risks of pregnancy – including the possible risk of death – should be discussed, and in certain cases women should be advised against pregnancy. Prior optimisation of cardiac function and a multidisciplinary approach to antenatal, intrapartum and postnatal management of this high-risk group of patients will ensure improved outcome for mother and baby.

The UK has one of the highest stillbirth rates in Western Europe. Senior Lecturer at the University of Bristol, Dr Dimitrios Siassakos discussed strategies to reduce stillbirth. He emphasised the importance of optimising pre-pregnancy health and weight, ultrasound assessment of fetal



Dr Sujoy Banerjee, Professor Andrew Whitelaw and Dr Geraint Morris.

growth, improving maternal understanding of fetal movements and avoiding post-date pregnancies beyond 41-42 weeks. He argued that routine induction of labour at 39 weeks could reduce term stillbirth by one in 1,000 without increasing the caesarean section rate; however, more studies are needed to justify offering it at present. In all cases, a post-mortem examination should be offered and a mandatory placental histology examination undertaken by a specialist pathologist to inform counselling for future pregnancies.

Professor Shantini Paranjothy of Cardiff University described how anonymised record linkage methods could bring together routinely collected datasets across disciplines to create a population based e-cohort of children and offer a cost

effective resource for research to support health policies. She described the development of the Wales Electronic Cohort for Children (WECC) and the studies undertaken using this resource.

The fourth Swansea Perinatal Symposium is provisionally scheduled for 18 May 2018.

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