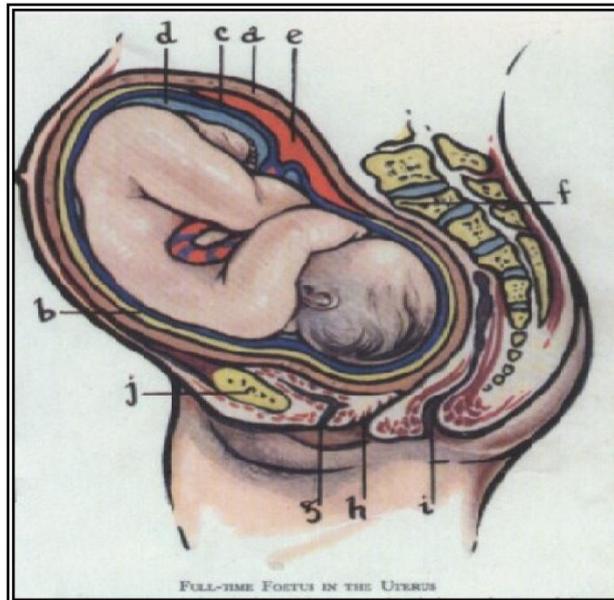


*The Surrey, Sussex & Kent Regional
Paediatric and Neonatal Research Network
&*

*Surrey & Sussex Reproductive Health and Childbirth
Research Network*

FIFTH ANNUAL PAEDIATRIC AND NEONATAL RESEARCH SYMPOSIUM

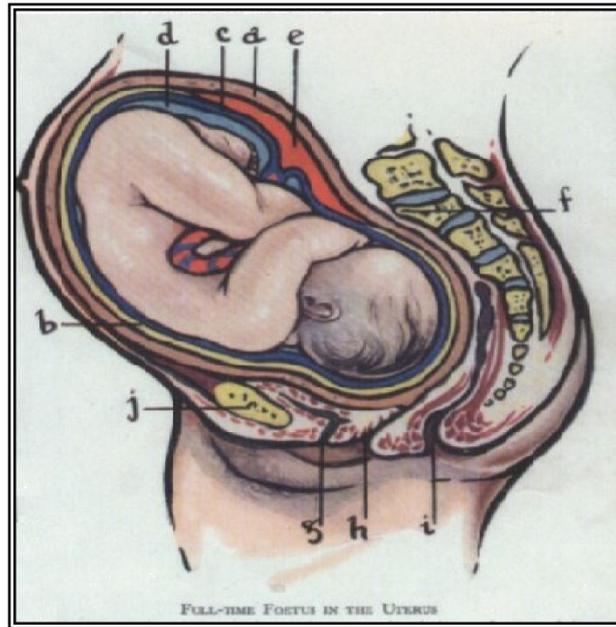


Programme & Abstracts

Friday 2nd September 2011, 08:15 - 16:30

Audrey Emerton Building,

Eastern Road, Brighton, BN2 5BE



Many thanks to:

Our chairpersons, speakers, presenters and guests

**Surrey & Sussex Reproductive Health and Childbirth
Research Network**

**The Surrey, Sussex and Kent Regional Paediatric and Neonatal
Research Network**

Brighton and Sussex University Hospitals NHS Trust

Brighton and Sussex Medical School

The Audrey Emerton Building staff and caterers

**Abel & Cole, Chiesi, Fisher & Paykel, and
Mead Johnson Nutrition for their support**

**The children attending Royal Alexandra Children's
Hospital who produced artwork for our display**

Afternoon Programme

Session III Chair: Professor Somnath Mukhopadhyay

14:00	Long-Term Respiratory Outcomes of Perinatal Events	Professor Sailesh Kotecha - Professor of Child Health, Cardiff University
14:30	Pressure Oscillations After Airway Interruption Pre- and Post-Bronchodilator in Wheezy Preschool Children	Ms Liz Symes - Clinical Paediatric Research Nurse, Brighton & Sussex University Hospital
14:45	Development of an Eating and Drinking Ability Classification System for Individuals with Cerebral Palsy	Mrs Diane Sellers - Research Speech and Language Therapist, Chailey Heritage Clinical Services, Sussex
15:00	Approaches and Outcomes of Complementary Therapy Interventions with Children in the High Dependency Unit at the Royal Alexandra Children's Hospital, Brighton	Kitty Cava – Registered Shiatsu Practitioner Kate Murdoch - 'Music for Wellbeing' Freelance Practitioner Both are members of Active Light Works Registered Charity, Brighton
15:15	Break - refreshments served on levels 1 & 2	
<h3><i>Session IV Chair: Dr Paul Seddon</i></h3>		
15:40	Poster Prize Presentation	
15:45	Maternal Drug Abuse in Pregnancy, and Baby Outcomes Afterwards	Dr Neil Aiton - Consultant Neonatologist, Brighton & Sussex University Hospital
16.15	The Effects of Breastfeeding on Methadone-Treated Mothers	Ms Rosemary Jambert-Gray - Lead Nurse in Primary Care (Addictions), Kingston Community Drug and Alcohol Team
16:30	Close	

Paediatricians attending this event may claim up to **4.5 CPD points**

in accordance with the current RCPCH CPD Guidelines

We value your feedback. Please place your feedback questionnaire in the box at the exit of the lecture hall at the end of the day

Welcome

On behalf of the Brighton and Sussex University Hospitals NHS Trust, Brighton and Sussex Medical School and the University of Brighton, we welcome you to the 5th Surrey, Sussex and Kent Regional Paediatric and Neonatal Research Network research symposium. We are also pleased to present the symposium in conjunction with the Surrey & Sussex Reproductive Health and Childbirth Research Network for the first time.

The University of Brighton, the Medical School and Trust are extremely proud of their evolving research portfolio in these areas. As part of this strategy we have planned a very interesting day on a wide breadth of topics covering the fields.

The symposium is structured around the key themes of pregnancy and childbirth, local National Institute for Health Research (NIHR) projects, and respiratory medicine.

Since building research partnerships is an essential part of our success, we have invited our valued keynote speakers from Southampton, Bristol and Cardiff as well as our local experts to be a part of today's event.

We hope that today's symposium will be a stimulating, inspiring and beneficial experience, as well as an excellent opportunity to meet and make connections for future research projects.



PD Dr Heike Rabe

Honorary Clinical Senior Lecturer,

Lead for Neonatal Research

Brighton and Sussex Medical School



Professor Valerie Hall

Professor of Midwifery

School of Nursing & Midwifery

University of Brighton

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Dr Ariane Waran (10:15 – 10:30am)
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All posters are
located in
teaching rooms

4 – 8 on level 2

Exhibition Stands

Primary Care Research Network South East (PCRN SE)

Works to increase patient access to clinical trials in Primary Care across the South East, and aims to bring together Primary Care practitioners and offer the opportunity to participate in studies involving innovations in prevention, diagnosis, treatment and health care delivery in the community.

<http://www.pcrn-se.org.uk/>

Research Design Service South East (RDS SE)

Provides help to people preparing research proposals for submission to peer-reviewed funding programmes in applied health and social care.

<http://www.rds-se.nihr.ac.uk/>

Comprehensive Local Research Network (CLRN)

Supporting research in paediatrics and reproductive health & childbirth.

http://www.crncc.nihr.ac.uk/about_us/ccrn/surrey_sussex

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rooms**

4 – 8 on level 2

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Speaker Abstracts

Normalising Birth

Miss Heather Brown, Consultant Obstetrician & Gynaecologist, Royal Sussex County Hospital.

Over the last twenty years Caesarean section rates in the UK have risen considerably and hence the associated maternal morbidity. The rising rates both nationally and locally have acted as a major driver for change. There is a revived interest in obstetric and midwifery practices that facilitate normal birth, particularly in women with low risk pregnancies.

Within the South East Coast Strategic Health Authority (SHA) over the last year, the Normalising Birth Project was set up; firstly to provide detailed information on where the challenges to facilitating normal birth lie, and then to develop appropriate evidence-based strategies to address these challenges. In this presentation I will provide an overview of the Normalising Birth Project, including regional data, successes and limitations, and importantly the next steps.

The Long-Term Impact of Caesarean Scar Problems on the Individual, and Associated Needs for Healthcare and Information

Mr Hubert van Griensven, Consultant Physiotherapist, Southend University Hospital NHS Foundation Trust.

Persistent scar pain following Caesarean section (CS) has only recently received research interest and is relatively unknown in the health service. An exploration of self report on the internet suggested that post-CS scar pain and other symptoms are an issue to many women, and that finding information and advice was difficult. The discrepancy between self report and healthcare utilisation was the subject of this mixed-methods study, which formed part of the researcher's PhD. The aim of the study was to explore CS scar-related issues and to identify associated healthcare needs.

The results of the internet exploration were used to develop a framework of themes, which were explored via a questionnaire sent out to 630 women who had undergone CS 18-30 months previously. The results of the 198 returns confirmed that symptoms such as pain, soreness, numbness and irregular scarring were common. The questionnaire established that scar problems affected choice of clothing in 25% of participants, and led to avoidance of certain positions in 9%. Participants reported being concerned about their next pregnancy (27%), internal damage (18%), adhesions (13%) and not having healed well (9%). Most participants had not sought help, 25% of whom expected that nothing would be done if they did. Of the 19 participants who had turned to their GP, only 9 felt that this had been helpful. Twenty participants volunteered suggestions for better information and advice in the free text sections of the questionnaire.

In order to provide more depth, the questionnaire was followed up by telephone interviews with 19 participants. The interviews expanded on the following issues: impact of the scar on the individual's life, concerns about the scar, participants' experiences of healthcare practitioners, and suggestions for healthcare provision. The data were subjected to Framework Analysis. Results suggested that CS scars and their symptoms could affect activities and sex life for a long time, and also affected body image and confidence. Participants generally learned to live with their symptoms, often with peer support, although some sought professional help.

To the researcher's surprise, most comments pertained to information and advice received before and immediately after CS. Participants felt that being prepared for the way the scar might look and feel, recovery time, and what symptoms were or were not acceptable, would have made it much easier for them to cope, both during the healing process and long term. Some suggested that healthcare practitioners might underplay CS as major surgery, and some felt dismissed when they tried to get information from clinicians. This put a question mark over informed consent for CS.

Analysis of the whole study is in progress, but preliminary results suggest that clear and realistic information given early on is important to acquire informed consent, and also to help women to cope after CS. Obstetric departments should also make women aware of national and local support groups. This requires that professionals in women's health become aware that CS has potentially long-term consequences for women, and are willing to acknowledge this.

Which Women Choose Vaginal Birth After Caesarean?

Dr Ariane Waran, Junior (FY1) Doctor, Guy's & St Thomas' Hospital, London

Background:

Worthing Hospital has a 74% vaginal birth after Caesarean (VBAC) success rate. However, in the South East only 31.1% of women who have had a previous Caesarean opt for a vaginal delivery next time, the rest choosing an elective Caesarean section (ELCS). The aim of this project was to determine what factors influence women in making this choice; demographics, previous experience, information provided by professionals or a combination of these. Previous studies have identified ethnicity, smoking status and early information about VBAC as significant indicators of the choice a woman will make. It is protocol at Worthing to provide women with a previous Caesarean delivery with the NICE information for patients on subsequent deliveries, as well as the web address so they can access information themselves. This consultation should then be documented in the handheld maternity notes. Part of the study was to see if protocol is being adhered to and documented within the unit. It also aimed to identify what can be done to optimise VBAC rates and thus reduce the number of Caesareans within the unit in line with NHS advice.

Methods:

The most recent birth register held in the Delivery Suite was used to identify women who had given birth following a previous Caesarean section. Using these basic details their medical records, containing their hand-held maternity notes, were retrieved and the information pertaining to demographics including age, partner, ethnicity, BMI, smoking and alcohol status recorded. Details of their previous deliveries as well as obstetric and relevant medical history were also noted. The antenatal consultation section was scrutinised and every time VBAC or the guidelines were mentioned the gestational date and grade of staff member was noted.

Results:

Of the 48 women, 22 (45.8%) planned a VBAC whilst 26 (54.2%) planned an ELCS. Age was not significantly associated with choice of mode but BMI was approaching significant ($p=0.054$) with those choosing ELCS having a mean BMI 3 points higher than those choosing VBAC. A discussion of VBAC was not documented at all in 13 of the women. The mean number of times that VBAC was mentioned to a woman was significantly higher in those who chose VBAC over ELCS ($p=0.05$) but the actual difference in number of mentions was small. The mention of guidelines did not affect planned mode of delivery.

Conclusions:

The reasons for choosing a particular mode of delivery following a previous Caesarean section seem to be complicated. There are both individual factors and those that are directly related to practice within the department. It seems that repeated discussion of VBAC appeared to have an impact on delivery choice but the mention of guidelines did not. This study signposts areas that can be explored in more depth in order to ensure the provision of information regarding choice of delivery is suitable for each woman under the care of the department.

Maternal and Fetal Influences on Placental Function

**Dr Jane Cleal, Lecturer in Epigenetics, Institute of Developmental Sciences
Southampton General Hospital**

Introduction:

Fetal growth depends on placental transfer of amino acids to the fetus, but it is not known how this occurs. Our work has now provided the first experimental evidence for novel transport systems (the facilitated amino acid transporters TAT1, LAT3 and LAT4) which provide net amino acid transport to the fetus and influence fetal growth. Our findings are important because poor fetal growth not only has serious immediate consequences for the baby, but is also associated with the development of a range of chronic diseases in adult life.

Methods:

Amino acid transport was measured in perfused human placental cotyledons at term using techniques which distinguish between different types of transport. To investigate influences of maternal diet, lifestyle and body composition on placental function and the subsequent effects on fetal growth, this study used 102 well characterised pregnancies from the Southampton Women's Survey (SWS). Activity of the amino acid transporter system A was measured and real-time rtPCR was used to determine System A, TAT1, LAT3 and LAT4 mRNA levels in the 102 SWS placentas.

Results:

Under conditions preventing transport by exchange, all amino acids appearing in the fetal circulation were substrates of TAT1, LAT3 or LAT4. In SWS placentas TAT1 mRNA was related to birth weight, head circumference and lean mass, but not fat mass. LAT3 mRNA also correlated with neonatal head circumference. Term placental system A activity was lower in women with smaller pre-pregnancy upper arm muscle area, but was not related to maternal fat mass.

Conclusion:

Lower placental system A activity in women who had a lower arm muscle area may reflect an alteration in placental function which protects maternal resources in those with lower nutrient reserves. This alteration may affect fetal development, altering fetal body composition, with long-term consequences. We have shown for the first time that TAT1, LAT3 and LAT4 function in the human placenta, mediating net efflux of specific amino acids to the fetus. This increases fetal amino acid concentrations and provides substrates to swap for other amino acids via the identified exchangers. The efflux transporters are key determinants of placental amino acid transfer capacity and fetal growth; a novel concept which has important implications for fetal wellbeing.

Placental Transfusion Strategies in Preterm Infants <1000g Body Weight: Meta-analysis of Short and Long-Term Outcomes

Dr Dushyant Batra, Consultant Neonatologist, Croydon University Hospital

Background:

Delayed umbilical cord clamping (DCC) or umbilical cord milking (UCM) in neonates <1000g BW has shown promise to reduce the number of blood transfusions. DCC is now a common practice in term infants, but the outcomes of preterm infants below 1000g subjected to DCC or UCM are not clear.

Objective:

To perform a meta-analysis of short and long term outcomes of infants < 30 weeks GA and < 1000g BW randomized to either DCC or UCM as compared to immediate cord clamping (ICC).

Design/Methods:

We searched through the literature for trials that randomized preterm infants to either experimental (DCC or UCM) or control (ICC) groups. Inclusion criteria included infants <1000 g BW. Primary outcome was 24 month Neurodevelopmental Impairment (NDI) using standardised outcomes; secondary outcomes included transfusions. Two independent investigators conducted searches with full agreement. Additional information was requested of authors. Data were summarized by RevMan5 as weighted mean difference (WMD) and 95% confidence interval (CI).

Results:

Searches yielded 15 studies, of which 6 were included, describing 108 infants. Data on NDI were limited and could not be pooled. One study (Mercer et al, 2010) recorded Bayley at 7 months for 27 infants (WMD MDI -4.40; CI -18.02, +9.22; p=no significance). Another study (Hosono et al, 2009) followed survivors to 24 months using a Japanese scale. This study found no significant differences in rates of disability (UCM 3/16 19% vs ICC 4/15 27%; p= no significance).

Short term benefits of DCC/UCM included better mean blood pressure on admission (WMD -4.9; CI -5.58, -4.22) and increased haemoglobin on admission (WMD 3.71; CI 3.94, 3.47). Other clinically relevant, statistically significant short-term benefits included reduced number of blood transfusions and shortened number of days on ventilator.

Conclusions:

Only one study reports 24 month MDI, and no pooling is possible. Short term benefits of DCC include rise in haemoglobin, decreased number of transfusions and shorter days on ventilator. More studies are needed to fully appreciate the long term implications of DCC/UCM.

Mercer JS, Vohr BR, Erickson-Owens DA, Padbury JF, Oh W.

Seven-month developmental outcomes of very low birth weight infants enrolled in a randomized controlled trial of delayed versus immediate cord clamping. *J Perinatol* 2010; 30:11-6.

Hosono S, Mugishima H, Fujita H, Hosono A, Okada T, Takahashi S, et al. Blood pressure and urine output during the first 120 h of life in infants born at less than 29 weeks' gestation related to umbilical cord milking. *Arch Dis Child Fetal Neonatal Ed* 2009;94:F328-31.

Engaging and Supporting Fathers to Promote Breastfeeding

Professor Valerie Hall, Professor of Midwifery, University of Brighton

Despite recent challenges to the optimum length of exclusive feeding for infants in developed countries (Fewtrell et al., 2011) there is clear evidence that breastfeeding has positive health benefits for both mother and baby in the short and longer term (Department of Health, 2008; WHO, 1990; 2003; 2009). However, the latest Infant Feeding Survey (Bolling et al., 2007) demonstrates that England has one of the lowest breastfeeding uptake rates in Europe. Research with mothers identifies fathers as a primary source of support, yet little is known about the nature of this support (Tohotoa, 2009). Amongst an array of social, cultural, socio-economic, and psychological factors, father support has been demonstrated empirically to have a strong influence on a mother's decision to initiate and continue breastfeeding (e.g. Britton et al., 2007; Sherriff et al., 2009).

Findings of a recent study show that there is an association between a lower socio-economic status and shorter breastfeeding (Flacking et al., 2010). However, although the importance of the father's role in supporting breastfeeding has been known for some time, our own research shows that in practice little has changed in the intervening years and fathers appear to be an absent part of the maternity jigsaw (Sherriff and Hall, 2011). There are few studies that actually involve fathers directly in breastfeeding research and fewer still that draw out the specific aspects and determinants of a father's supportive role in the breastfeeding process. It is important to understand more fully the role of a father's support in the breastfeeding process and it is, arguably unlikely that any intervention designed to increase rates of breastfeeding will be successful without taking this into account. This is particularly important when trying to address inequalities between different social groups.

This oral presentation will outline our research in progress which aims to clarify the concept of the 'father's role in supporting breastfeeding'. We are taking an innovative approach to this concept analysis by including parents from lower socio-economic groups in the process to ensure that the resulting model reflects the reality of their lives, thus establishing a link between theory and practice. Ethical approval for this study was granted by the University of Brighton.

Once the initial work is completed locally we will plan a meeting with international partners at which we will consider and discuss the similarities and cultural disparities in father support and build an international model for empirical testing.

Bolling K, Grant C, Hamlyn B, Thornton A (2007) Infant Feeding Survey 2005. The Information Centre for Health and Social Care.

Britton C, McCormick FM, Renfrew MJ, Wade A, & King SE (2007) Support for breastfeeding mothers. *Cochrane Database of Systematic Reviews*, issue 4. CD001141. <http://www.cochrane.org/reviews/en/ab001141.html> (last accessed 2.6.11).

Department of Health (2008) Maternal and Infant nutrition. Available at www.dh.gov.uk/en/Healthcare/Maternity/Maternalandinfantnutrition/index.htm (last accessed 2.6.11)

Fewtrell et al., (2011) Six months of exclusive breast feeding: how good is the evidence? *BMJ* 2011; 342:c5955 Available at <http://www.bmj.com/content/342/bmj.c5955> (last accessed 2.6.11)

Flacking R, Dykes F, Ewald U (2010) The influence of fathers' socioeconomic status and paternity leave on breastfeeding duration: a population-based cohort study. *Scand J Public Health*. Jun; 38(4):337-43

Sherriff, N.S. and Hall, V. (2011). Engaging and supporting fathers to promote breastfeeding. *Scandinavian Journal of Caring Sciences*, doi: 10.1111/j.1471-6712.2010.00850.x

Sherriff NS, Hall V & Pickin M (2009) Fathers' perspectives on breast feeding: ideas for intervention. *Bri J Midwifery* 17, 223-227.

Tohotoa, J., et al. *Dads make a difference: an exploratory study of paternal support for breastfeeding in Perth*, Western Australia. *International Breastfeeding Journal* 2009, 4:15. WHO/Unicef (1990) *The innocenti declaration on the protection, promotion, and support of breastfeeding. Breastfeeding in the 1990s: A global initiative meeting in Florence, Italy and New York*. WHO/UNICEF, Geneva.

WHO (2003) Global strategy for infant and young child feeding. World Health Organisation, Geneva.

WHO (2009). *The WHO Global Data Bank on Infant and Young Child Feeding*. Available at www.who.int/nutrition/databases/infantfeeding/en/index.html

Effective Training for Obstetric Emergencies

Professor Tim Draycott, Consultant Obstetrician, Southmead Hospital, Bristol

Reducing preventable harm in obstetrics is a priority for families and society at large. Some simulation-based training has reduced errors, increased knowledge, skills, communication & team working and improved perinatal outcomes.

However, simulation is not magic and training is not always effective, therefore we need to measure the effect of training to identify what works, where and at what cost.

I will present a review of my own data and the current literature to identify how best we could and should train to improve outcomes for mothers and their babies.

Long-Term Respiratory Outcomes of Perinatal Events

Professor Sailesh Kotecha, Department of Child Health, Cardiff University School of Medicine, Cardiff

Barker's hypothesis suggests that long-term disease has its origins in fetal and early life. Cardiovascular disease and diabetes as well as chronic obstructive pulmonary disease (COPD) have all been implicated in possibly having their origins in early life. Worldwide, intrauterine growth retardation (IUGR) remains a major challenge and clearly these babies may be at risk of long-term consequences. However, there is limited work on outcomes in childhood. In addition, an emerging area of interest for potential long-term consequences is moderately preterm birth – so called “late” preterm or “near” term. Rates of preterm birth have increased in most industrialised countries but data on later lung function of late preterm birth are limited.

Using the Avon Longitudinal Study of Parents and Children (ALSPAC), we have investigated the respiratory outcomes of both the IUGR and preterm (including the late preterm) populations.

Our data show that infants with gestation appropriate birth weight (n=3462) had significantly better lung function at 8–9 years of age than those with intrauterine growth retardation i.e. birth weight <10th centile (n=576). All spirometry measurements were higher in intrauterine growth retarded children with weight catch-up growth (n=430) than in those without (n=146). Both groups remained significantly lower than controls.

The ALSPAC data (n = 14062) who had lung spirometry at 8-9 (n=6705) and/or 14-17 (n=4508) years of age were further divided into 4 gestation groups. At 8-9 years of age, all spirometry measures were lower in the 33-34 week gestation group when compared to term controls but were similar to the spirometry decrements observed in the 25-32 week gestation group. The 35-36 weeks gestation and term groups had similar values. In the late preterm group at 14-17 years of age FEV₁ and FVC were not significantly different to the term group but FEV₁/FVC and FEF_{25-75%} remained significantly lower than term controls. Thus children born at 33-34 weeks gestation have significantly lower lung function values at 8-9 years of age, similar to decrements observed in the 25-32 weeks group although some improvements were noted by 14-17 years of age.

In summary, it is clear that both the IUGR and preterm populations have abnormal pulmonary physiology in childhood but encouragingly the decrements may be amenable to modulation.

Pressure Oscillations after Airway Interruption Pre- and Post-Bronchodilator in Wheezy Preschool Children

Ms Liz Symes, Paediatric Research Nurse, Royal Alexandra Children's Hospital, Brighton

Changes in mouth pressure during flow interruption (Pmo transients) can be used to assess airway resistance (Rint). Initial pressure oscillations can cause difficulties in estimating Rint but are themselves a marker of airway status as their amplitude increases (1) with bronchodilator (BD) and decreases with methacholine (2).

To investigate this measurement, we analysed Pmo transients pre- and post-bronchodilator in 13 preschool children with recurrent wheeze on 2 separate visits 4 weeks apart. The median (range) age of the children at the first visit was 52 months (38 to 64 months). The amplitude of the first upward oscillation as a proportion of end-interruption pressure was calculated and compared with Rint calculated by linear back extrapolation. The median value of at least 5 acceptable transients was assessed for amplitude (Posc) and Rint by linear back extrapolation (LBE30/70).

Posc increased significantly (paired t-test) with BD both at visit 1, with mean (SD) pre 1.38 (0.25), post 1.63 (0.32) and visit 2, with pre 1.39 (0.29), post 1.61 (0.37). LBE30/70 decreased significantly with BD both at visit 1, mean (SD) pre 1.08 (0.27), post 0.88 (0.21) and at visit 2, pre 1.08 (0.26), post 0.92 (0.22). However there was no significant relation between Posc change and LBE30/70 change in response to BD (Pearson's correlation coefficient).

These results suggest that Pmo oscillation amplitude after flow interruption may provide an alternative measure of airway mechanics which merits further study.

1. Bridge PD et al. *Pediatr Pulmonol* 2005; 40:420–425.
2. Kivastik J et al. *Clin Physiol Funct Imaging* 2009; 29:45-52

Development of an Eating and Drinking Ability Classification System for Individuals with Cerebral Palsy

Mrs Diane Sellers, Research Speech and Language Therapist, Chailey Heritage Clinical Services, North Chailey

Objective:

To develop a valid and reliable classification system of the functional eating and drinking abilities of children and young people with Cerebral Palsy (CP). This will be done in the context of other functional classification systems such as the GMFCS and the MACS.

Background:

CP is the most common cause of motor disorder and can affect walking, speech, feeding and swallowing. The consequences to health of compromised eating and drinking skills include respiratory disease because of food and fluid directly entering the lungs, episodes of choking and malnutrition leading to poor growth and health. There is no agreement about a severity rating for eating and drinking difficulties, the terms used and whether focus should be at the level of impairment, function, activity or participation.

Design / Methods:

Phase 1: Draft the initial functional eating and drinking classification system, drawing on clinical experience, current literature and assessments.

Phase 2: Examine the system in a series of structured face to face groups of invited experts (including speech and language therapists, parents, children, nurses, dietitians, paediatricians and occupational therapists) until consensus is reached (Nominal Group Process). The system is re-drafted after each nominal group.

Phase 3: Extend discussion to a wider group of experts, parents and young people with CP using several rounds of questionnaires with feedback from participants (Delphi Group Survey) until pre-defined consensus has been reached.

Phase 4: Determine the inter-rater reliability and ease of use of the system. Five pairs of speech and language therapists, each pair working in one of five different special schools, will rate the eating and drinking abilities of twenty children from each school, making a total of 100 different ratings. Parents will be invited to rate their own children. For each group of 20 children, Kendall's coefficient of concordance (W) will be calculated as a measure of the agreement between all raters. Cohen's Kappa will be calculated as a measure of the agreement between two raters.

Results:

The first two phases of the project were expected to be completed by June 2011.

Approaches and Outcomes of Complementary Therapy Interventions with Children in the High Dependency Unit at the Royal Alexandra Children's Hospital, Brighton

Ms Kitty Cava, Shiatsu massage therapist

Ms Kate Murdoch, 'Music for Wellbeing' freelance practitioner

Background:

Two therapists, one Shiatsu Massage Therapist and one Therapeutic Sound Practitioner, took part in a pilot study in 2010/11 looking at whether these therapies are beneficial and safe for children in HDU.

The study also included massage therapy interventions for outpatients with cystic fibrosis (CF). However, the focus of this proposed presentation is on approaches and outcomes of the study in HDU.

Paediatric HDUs look after severely unwell children, and both the underlying condition and the invasive and painful procedures incurred are distressing for the child and family. Limited work has been carried out investigating the benefits of complementary therapy to decrease stress and lower anxiety in paediatric practice. Further research is needed to determine which therapies best meet the needs of patients.

Therefore this pilot study was undertaken to determine the acceptability, medical and psychological benefits of massage therapy and therapeutic sound for children in acute situations.

Method:

We visited the HDU on a weekly basis for 28 weeks, and were directed by nursing staff to patients who were able to receive the interventions. Age, medical condition and the length of stay determined the number and length of interventions with each child.

Safety was assessed by using change from baseline for the routine observations. In addition, a quality of life (QOL) questionnaire was used to assess wellbeing for the massage therapy interventions, and qualitative responses from patients and families were recorded for both therapies where possible.

During the project 36 patients; 20 males and 16 females; received treatment.

The mean age was 6.8 years and the number of treatments received varied from 1 - 8+ sessions depending on the length of stay.

Outcomes:

This small pilot study demonstrated that massage therapy is a safe, welcomed and beneficial intervention that can be used alongside medical treatment in children on HDU.

Data from the therapeutic sound sessions were not included in the final report due to difficulty in gaining consent for patients whose parents were not present at the time, and the involvement of some children under 3 months. In addition, the QOL questionnaire was less suitable for therapeutic sound interventions. However, positive qualitative feedback was also

received.

Qualitative Feedback examples:

“Our 3 year old boy slept for the first time in 60 hours after a Reiki (Shiatsu massage) session. He woke up less scared of his pleural drain and happier”.

“The massage D and I both had from KC, helped reduce our anxiety levels, enabling D to be open to the challenge of the physiotherapy which she has now embraced with courage and challenge rather than fear.”

“I was feeling really irritated, but the music helped to calm me down”.

Content of Presentation:

Background, complementary therapy approaches, and study outcomes.

Presenters:

Kitty Cava is a Shiatsu Massage therapist and in the HDU uses a gentle form of shiatsu massage, which works with the whole energy of the child and helps patients relax and feel more comfortable in their situation. The treatments take up to 30 mins, and she also shows parents some safe and gentle ways to massage their own child. Some parents are offered a massage to help them cope better with stressful situations.

Kate Murdoch offers soothing, comforting, music at patient's bedsides, particularly for babies and younger children, some of whom are alone for long periods of time, including children in isolation. When family members are present, KM encourages them to join in, as an opportunity for connection and fun. The issue of measuring impact of music interventions in acute paediatric settings will be discussed, as an area of current interest in the field of music and healthcare.

Maternal Drug Abuse in Pregnancy, and Baby Outcomes Afterwards

Dr Neil Aiton, Consultant Neonatologist, One Stop Clinic, Royal Sussex County Hospital, Brighton

Drug abuse is common in women of child-bearing age and in Europe is found in greater than 1 in 10 pregnancies.

Substance abuse in pregnancy poses serious health risks to mothers and the developing baby, as well as potentially hindering parents' ability to care adequately for their children. Babies can suffer from consequences of congenital malformations and the adverse effects of drugs on pregnancy, or develop acute drug withdrawal

after birth. Use of some drugs creates additional risks, such as viral infection, because of the mode of delivery. There can also be effects on maternal health and well-being.

Because of the many ways in which substance misuse can affect the pregnant mother and her fetus, determining the outcome after exposure to antenatal substances is therefore complex. The number of studies looking at outcome is limited due to under-reporting of substance misuse, the difficulties of organising systematic long-term follow-up, and the problems of multi-factorial determinants of outcome.

Antenatal management is directed at minimising harm – dealing with the greatest risks first, followed by aiming for stability. Debate continues regarding abstinence versus stability as being the predominant aim.

It is clear that alcohol use is of increasing concern, and may be the commonest cause of preventable future disability.

The Effects of Breastfeeding on Methadone-Treated Mothers

Ms Rosemary Jambert-Gray, PhD student, University of Brighton, and Lead Nurse in Primary Care (Addictions) based at SW London & St George's Mental Health NHS Trust

Emotional pain from traumatic childhood and adult experiences is ameliorated by heroin and offers women one relationship they can trust. Little understood by society and engendering distrust from both sides, these women remain hidden and hard to access. As breastfeeding mothers, they struggle to recreate their identities from drug user to mother in the face of personal and professional doubt.

A longitudinal phenomenological study was used to explore, interpret and explain the experiences of four methadone treated, breastfeeding mothers. They were interviewed four times over a period of four months from late pregnancy to three months following delivery.

Based on the relationship theory of addiction and theory of personal construct psychology, relational maps and drawings of their non/ideal mothers were used as research methods to facilitate conversation and enable women's voices in a non-threatening environment.

The conversations were transcribed with data analysis aided by Atlas.ti to produce 317 relevant statements (quotations). Using abstraction techniques within an iterative process, constantly referring to transcriptions and tapes, helped inform the identification of 52 abstracted codes.

Further interpretation of the codes, with meanings ascribed by the mothers, produced three major headings:

- Internal emotional world of early motherhood
- External world of being treated as 'the other'
- Tension between internal changes and external world as experienced by mothers; becoming good-enough breastfeeding and insightful mothers

The aim of the presentation will discuss these findings and invite the audience to ask questions and offer comments.

Poster Presentations

Complementary Feeding Practices of Long-Term Exclusively Breastfed Infants

Ms Antiopi Ntouva PhD Student, School of Pharmacy and Biomolecular Sciences, University of Brighton (Author not present)A. Ntouva, I. Rogers, A. MacAdam, P. Emmett

Introduction:

In 2001 the World Health Organisation (WHO) issued a public health recommendation that all infants should be exclusively breastfed for the first six months of life. The Department of Health adopted this recommendation in 2003¹. However, as breast milk is very low in iron content (0.3 - 0.5mg/l), there has been concern about the possible impact of this advice on the development of anaemia, a condition that if left untreated could cause irreversible developmental delays². The purpose of this research is to explore the weaning practices (dietary patterns and adequacy) and haemoglobin levels of long term breastfed infants.

Methods:

Twenty pairs of mothers and infants were recruited in Brighton through baby clinics and breastfeeding drop-ins. Eligibility criteria were a full-term, singleton birth and breastfeeding intensity of at least 80%³ for the first six months. The infants were seen twice in their homes at ages 6 and 8 months. At 6 months baseline data including demographic information and weight and length measurements were collected. At 8 months mothers were asked to complete a 3 day food diary and a diet questionnaire. If consent was granted, a heel prick blood sample was also obtained from the infants for haemoglobin measurements.

Results:

The infants (11 male and 9 female) had a mean birth weight of 3502g (SD 518). Haemoglobin was found to be normally distributed (Mean 116.8g/l, SD 7.8, n=14). Two infants (14%) had haemoglobin levels below the WHO cut-off for anaemia of 110g/l. The majority of infants were introduced to solids (of various textures) on or around six months (median: 6 months, IQR 0.5, n=20). Mean intakes of iron (3.6mg, 46% of RNI), zinc (3.8mg/day, 77% of RNI) and vitamin D (1.6ug, 23% of RNI) at 8 months were significantly ($p < 0.001$) below the RNI. The reports from the parents suggest that the majority of infants at 8 months do not have any specific feeding difficulties. When asked if they avoided giving the infants specific foods 32% reported avoiding poultry, 32% beef and 37% any other type of red meat.

Discussion:

In the 2005 Infant Feeding survey⁴, 51% of mothers introduced solids before four months and 2% introduced solids at six months. In this study no infants were introduced to solids before 4 months and 13 infants (65%) were introduced to solids at or after 6 months. Haemoglobin levels in this study were similar to measures at 8 months from the ALSPAC study⁵. Low intakes of iron, zinc and vitamin D are consistent with the current literature and require special attention. Many mothers in this study avoided giving their babies any type of red meat, a very good source of readily absorbable iron and zinc.

Conclusion:

Complementary feeding has been delayed in this group of breastfed infants. They have low vitamin D intakes which if coupled with low sun exposure could lead to rickets. There could also be implications with regard to their low iron and zinc intakes as the requirements increase with age. Intakes of these nutrients by breastfed infants could be a key area for public health intervention.

Dietary Data Collected as Part of the GO-CHILD Study, and Preliminary Results

Dr Imogen Rogers, Senior Lecturer, School of Pharmacy and Biomolecular Sciences, University of Brighton

Background:

GO-CHILD is a birth cohort study designed to investigate the environmental and genetic determinants of asthma, eczema and allergy in childhood. Recruitment of pregnant women to the study began in 2009, and is currently taking place in Sussex, Surrey, Warwickshire, Fife and Tayside. The main method of data collection is via interview administered and self-completion questionnaires from pregnancy onwards. As part of the GO-CHILD study information on diet has been collected at three time points: from the mothers during pregnancy, and from when the infants are 3 months and 9 months of age.

Methods:

Diet in pregnancy is being assessed using a self-completion food frequency questionnaire. This is given to the mothers at recruitment and is based on the food frequency questionnaires used in the Avon Longitudinal Study of Parents and Childhood, updated to take account of recent changes in dietary patterns. At three months diet was assessed using a short feeding questionnaire, based on the questionnaires used in the Infant Feeding Practice Study II in the US with an additional 1-day feeding record where the mother was asked to record all breast feeds, all formula feeds and any solid foods or supplements given over a 24-hour period. At 9 months diet was assessed using a food frequency questionnaire based on those used to assess infant diet in the Southampton Women's Survey.

Results:

Over 800 questionnaires on diet in pregnancy have been returned so far, and data are available from 262 of these. This shows that many women are failing to meet the dietary recommendations for pregnancy. Only 21% of women achieved the target intake of 5 portions of fruit and vegetables a day, with mean fruit intakes of 1.4 portions and mean vegetable intakes of 2.5 portions. Only one in seven women was eating oily fish once a week as recommended. Estimates of folate and vitamin D intake have been derived from these questionnaires. Mean folate intakes in late pregnancy were 213 μ g, below the Reference Nutrient Intake for late pregnancy of 300 μ g, but 64% of women were still taking supplements containing folic acid. Dietary intakes of vitamin D were very low at 4 μ g, and only one in three women achieved the recommended vitamin D intake in pregnancy of 10 μ g through diet and supplementation.

Around 270 of the 3 month feeding questionnaires have been returned and data is available from 90 infants. The mean age of completion of the questionnaire was 127 days, and at this point 33% of infants were exclusively breastfed. 28% of infants had been introduced to foods and drinks other than breast or formula milk at this age. Data are not yet available at 9 months, but preliminary examination of questionnaires returned suggests a considerable increase in the proportion of mothers adhering to the recommendation to delay introduction of solid foods to 6 months compared to the 2005 Infant Feeding Survey.

Breastfeeding Duration and Eczema Prevalence in the Avon Longitudinal Study of Parents and Children (ALSPAC)

**Dr Ali Abd, Research Fellow, Brighton & Sussex Medical School
Abd Ali, Seddon P, Mukhopadhyay S, and Rogers, I.**

Context:

The effect of infant feeding method on the chances of the child developing atopic disorders including eczema is currently unclear. Earlier reviews of the literature found that breastfeeding was associated with a reduced risk of eczema, but a recent meta-analysis found no strong protective effect, and a number of recent studies have found an increased risk of developing eczema among breastfed babies. Failure to account for recall bias and reverse causation may account for these conflicting results. The aim of this study was to investigate the relationship between breastfeeding and eczema in the prospective Avon Longitudinal Study of Parents and Children (ALSPAC).

Methodology:

This study used data collected as part of the Avon Longitudinal Study of Parents and Children, a geographically based birth cohort study of children born in the Bristol area in 1991-92. Information on breastfeeding duration was obtained by self-completion postal questionnaire at 6 months post-natal. Information on eczema up to age 42 months (early eczema) was obtained by parental report of rash at two time points in questionnaires completed at 6, 18, 30 and 42 months post-natal. Information on eczema at age 7y (late eczema) was from observations of flexural dermatitis at research clinics attended by the children at this age. Information on both breastfeeding duration and presence or absence of eczema was available for 8268 children for early eczema, and for 7465 children for late eczema.

Results:

In univariate analyses breastfeeding was strongly and positively associated with both early and late eczema. The increased risk of early eczema with longer breastfeeding duration remained significant on adjustment for a range of confounders including sex, exposure to environmental tobacco smoke, parental history of eczema, age of introduction of complementary milk, maternal education, and presence of filaggrin del 4 or R501X mutations (P-value 0.008, OR for ever versus never breastfed is 1.43, CI 95%: 1.26 -1.61). This association was not explained by longer breastfeeding of infants developing rash in the first six months or with a family history of eczema. However, the association late eczema was lost on adjustment.

Implications:

In this study we found no evidence that breastfeeding protects against eczema. On contrary, there was evidence of more early eczema among infants breastfed for longer. However, the observed positive association between breastfeeding and late eczema risk may be a product of reverse causation, as infants with rash in the first six months were breast fed for longer, presumably in the hope that this would prevent or reduce the severity of their eczema. This shows the importance of considering factors that may affect parental decisions on infant feeding when analysing the relationship between infant feeding and child outcome.

Experiences of a Joint Paediatric Feeding Clinic in the Management and Progression of Disordered Feeding Patterns

**Ms Jane Pettigrew, Senior Specialist Speech and Language Therapist
Royal Alexandra Children's Hospital, Brighton**

Aim:

Primary: to demonstrate positive outcomes for children attending a Joint Feeding Clinic in relation to route of feeding. Secondary: investigate parents' experiences and views of this approach.

Background:

The aetiology of many feeding problems often stem from early medical intervention in infancy. A lack of initial oral sensory input and perception, commonly seen in premature infants or those requiring long periods of hospitalisation, can lead to hypersensitivity and hyperirritability during feeding. The consequences of this can be long term reliance on artificial feeding routes such as nasogastric tubes (NGs), or percutaneous endoscopic gastrostomy tubes (PEGs) and the process of desensitising children and developing age appropriate behaviours takes considerable time. This places additional burden and stresses on the carer, and concerns with nutritional adequacy and growth can be heightened.

Multidisciplinary specialist feeding clinics to address these issues enable more rapid access to appropriate expertise and are widely accepted to be beneficial for both professionals and patients. However, the provision of this approach is variable, often dependant on staffing rather than patient need.

Method:

Children selected for this audit were those seen by the Joint Feeding Clinic (including Specialist Dietician and Speech and Language Therapist) at least twice from March 2010 to July 2011. A case note review was then undertaken to review progress away from reliance on some form of artificial nutritional support which is considered the primarily objective. Children were then categorised into stages of progress from full non-oral to full oral intake, that is: Enteral → Enteral + Oral → Oral. Parent satisfaction was assessed by anonymous postal questionnaire.

Results:

Twenty patients (age range 6 months - 9 years) were identified as being seen by the team between March 2010 and July 2011 with varied complexity of needs, 12 (60%) had issues arising from the neonatal period including prematurity and congenital conditions. A large proportion of the children seen (50%) had severe aversive feeding behaviours defined by local guidelines which were limiting their progression to oral diet. There was a range of underlying medical conditions, but gastrointestinal conditions (e.g. gastro-oesophageal reflux disorder and oesophageal atresia) were most commonly noted.

Six (35%) children out of the 17 with the functional ability to progress achieved or made a step towards full oral intake. Nine of these 17 children had gastrostomies of which 3 were

removed by the end of the audit period as full nutritional requirements were being met orally. This represents the most successful possible outcome for the child and parents in this group.

In total 13 questionnaires were distributed to parents and 8 were received back (62% return rate). Seven out of the 8 parents who responded were very satisfied or satisfied with most aspects of the Joint Feeding Clinic.

Conclusion:

It is well documented that severe aversive/feeding behaviours take years rather than months to progress. In this context the progression seen within our time frame is encouraging. We have described the benefit of progression with feeding and parent/ carer perception on a jointly run specialist feeding clinic. Further work is needed to compare the joint approach to autonomous working.

Cured with a Pinch of Salt: a Neonate with Primary Pseudohypoaldosteronism (PHA)

Dr Siba Prosad Paul & Dr Tim Taylor, Department of Paediatrics, St Richard's Hospital, Chichester

Introduction:

Breast fed babies can lose up to 10% and bottle fed babies up to 5% of birth weight. Babies who lose >10% of birth weight in the first 10 days are referred by the midwives for assessment. Most of these cases are related to feeding issues. Blood investigations are expected to reveal hypernatraemia and raised urea. This case highlights that unexpectedly normal serum sodium and blood urea results in a baby with loss of >10% of birth weight can be falsely reassuring.

Case study:

A formula fed female neonate presented on day 5 with 14% loss of birth weight and was detected to be clinically dehydrated. The serum sodium and urea at admission were low normal. Fed on 150ml/kg/day of formula feeds in the neonatal unit. On day 10 of life baby's weight was unchanged and reassessment included organizing further blood biochemistry (Figs 1, 2). The serum renin was 854 mIU/L and serum aldosterone was >5786 ng/L.

Diagnosis of PHA confirmed on day 12 (hyponatraemia, hyperkalaemia, high aldosterone). Started on sodium supplements @ 3 mmol/kg/day, satisfactory weight gain noted from day 21. At 8 months of age, growing and developing normally (50th centile for weight).

Discussion:

- Neonatal onset, pan-ethnic, male=female, caused by a loss-of-function mutation in the human mineralocorticoid receptor gene (MLR)
- Clinical features range from asymptomatic to severe symptoms within the first 2 weeks of life with poor feeding and vomiting, failure to thrive, weight loss, and dehydration
- Diagnostic features includes hyponatraemia, hyperkalaemic metabolic acidosis, high plasma aldosterone & renin levels
- Management: sodium supplementation with feeding support. Monitor potassium levels to determine adequate sodium supplementation.

Conclusions:

- Excessive neonatal weight loss is most commonly associated with hypernatraemic dehydration.
- Hyponatraemia in a neonate with significant weight loss warrants further investigations to detect less common endocrine causes such as PHA.
- The management of PHA requires sodium supplementation and ongoing monitoring until the child can regulate their own salt intake.

Research and Innovation Outcomes of an Audit on Neonatal Prolonged Jaundice

Dr Siba Prosad Paul & Dr Tim Taylor, Department of Paediatrics, St Richard's Hospital, Chichester

Introduction:

Newborn babies often have jaundice in the first few days of life and those remaining jaundiced at 14 days are considered to have prolonged jaundice. They are referred by community midwives or health visitors. This is usually seen in breast fed babies but serious pathologies like biliary atresia, UTI, etc. are also known to occur.

Material and method: One hundred and twenty-five patients identified from Patient Administration System (SemalHelix®), 111 met inclusion criteria. Data collected on feeding, colour total and conjugated bilirubin, haemoglobin, WCC, neutrophil counts, TFTs, Blood group, DCT, AST, Urine for reducing substances + MC&S. The study (as a clinical audit) was done as a service review and raised research and innovation questions.

Results:

- >80% of the babies found to have jaundice related to breast feeding
- 5 babies found to have neutropenia, no adverse outcome noted
- 4 pathologies detected: 3 babies treated for UTIs, 1 transient hypoadrenalism (treated) and 1 haemolysis
- No TSH abnormalities

Research and Innovation questions:

- Introduction of a question about PIH/PET in the clinic questionnaire template (Innovation)
- Introduction of an Infant Stool Colour Card (Fig 1) in the clinic (Innovation)
- Plan to do a questionnaire survey on asymptomatic neutropenia across the Neonatal Units in the UK to find the prevalent practice (research)
- Arrange for a clinical trial at a later stage (research).

Conclusion:

Clinical audit can pose research questions with potential for future changes of clinical practice.

Infant Stool Color Card

No. of Booklet : _____

Abnormal

It is essential to observe your baby's stool color continuously after discharge from a nursery. If the stool color resembles the numbers 1-3 (white, clay-colored, or light yellowish), the possibility on your baby suffering from biliary atresia is higher. Please take this card and your baby to consult a doctor as quickly as possible. Regardless of what the stool color is, please bring this card to your doctor at 30 days of age for health check. If the baby cannot go back for health check, please fill in the number of the color resembling your baby's stool, along with the following blanks, and mail this card to our registry center.

Normal

The baby's stool color is most like No. ____

Date of this kind of stool _____

Name of the baby _____ Birthday _____

Name of the mother _____ Tel. _____

Address _____

The hospital or clinic where the baby was born _____

If the number is No.1-3, please inform us by fax immediately. We will provide the related information and help you out.

Fax: 02-2388-1798 ; Tel: 02-2382-0886

Infant Stool Color Card Registry Center

Fig 1, Infant Stool Colour Chart will help in early detection of biliary atresia

Systemic Vasculitis: a New Association with Rotavirus Gastroenteritis

Dr Siba Prosad Paul & Prof David CA Candy, Department of Paediatrics, St Richard's Hospital, Chichester

Introduction:

Rotavirus is increasingly being recognised as a systemic disease with associations such as encephalopathy. We report a new association with rotavirus gastroenteritis in the form of vasculitis presenting as non-blanching rashes. 3 cases are reported with the new association.

Case study:

Three children between the ages of 6 months and 3 years presented to the A&E with fever, non-blanching petechial rashes (not in SVC distribution), diarrhoea, vomiting and looking unwell. In view of fever and non-blanching rashes all 3 children were initially treated as suspected meningococcal disease with fluid boluses and IV cephalosporins. The children were initially acidotic which resolved in 12 hours. The blood inflammatory markers were within normal limits. The children recovered within 48 hours and blood culture and meningococcal PCR were reported as negative. Stool cultures were reported as positive in all 3 cases.

Discussion:

- Encephalopathy has been reported as an association
- Fluid resuscitation and replacement is necessary
- Vasculitis has been thought of as a possibility in laboratory based reports
- Only 11% of non-blanching rashes has been reported to be due to a meningococcal disease in some studies
- Stool sample should be sent if a child presents with petechial rashes and gastroenteritis.

Conclusions:

- Rotavirus is a systemic disease
- It is important to recognise other causes of a non-blanching petechial rash
- A new association with rotavirus is reported in the form of vasculitis.

Evaluation of Maternal Alcohol Consumption during Pregnancy

Dr Lyn Ventilacion, Specialist Paediatric Registrar, Neonatology, Trevor Mann Baby Unit, Royal Sussex County Hospital

Background and purpose:

Exposure to alcohol in pregnancy has been known to cause Fetal Alcohol Spectrum Disorders (FASD) with significant impact on the lives of affected children and their families. Drinking alcohol during the first three months of pregnancy also increases the risk of miscarriage. A significant proportion of women of child-bearing age are known to drink >14 units of alcohol per week and drink on a regular basis. We evaluated maternal alcohol consumption before and during pregnancy and reviewed current documentation in our unit.

Methods:

Data was collected during a 2-week period (28/02/2011 - 07/03/2011) with a total of 132 cases. The section on alcohol intake in the antenatal booking form was reviewed using a standard pro-forma. There were two versions of the antenatal booking form: the old, which did not contain any question regarding pre-pregnancy alcohol consumption; and the new, which inquired after both pre-pregnancy and antenatal alcohol consumption. The booking forms were filled out by the mothers during their antenatal screening appointment.

Results:

There were a total of 132 case-notes reviewed. Out of the 132 cases, forty-five (34%) did not have any documentation of alcohol intake in the notes. Twenty case-notes out of the forty-five did not contain an antenatal booking form, while twenty-five had the booking form but was left blank. Eighty-seven of the 132 case-notes (66%) had appropriate documentation and antenatal booking forms. Among those who had documentation on alcohol intake in the notes, thirty (34%) drank alcohol pre-pregnancy, fifteen (17%) did not, and the rest had ambiguous responses. During pregnancy, fourteen of the eighty-seven women (16%) admitted to continue drinking, with five of them consuming between 5-10 units per week. Sixty-nine out of the eighty-seven (79%) did not drink alcohol during pregnancy, and the rest had responses which were difficult to interpret.

Conclusion:

The documentation of maternal alcohol intake in our unit is poor, with only 66% of the reviewed case-notes containing appropriate forms with responses. There is also a poor response rate with 20% of women leaving the question on alcohol intake blank. The reason for this may be due to complex psychosocial issues surrounding maternal alcohol consumption during pregnancy, thus affecting midwives' and mothers' view on open questions regarding this. Although the reflected maternal alcohol consumption during pregnancy in our data is 16%, because of poor documentation, true alcohol consumption of pregnant women in our unit is difficult to ascertain.

Assessment of the Vaginal Birth after Caesarean (VBAC) Clinic. A Patient's Perspective – is an Appointment at the VBAC Clinic Useful in the Decision-Making Process Regarding Mode of Delivery?

Matilda Johansson (Brighton and Sussex Medical School), Miss Heather Brown PhD, MRCOG (Brighton and Sussex University Hospitals Trust)

Background:

In late 2010 the VBAC clinic (Birth Options Clinic) at the Brighton and Sussex University Hospitals (BSUH) Trust was restructured in line with promoting less medicalised, more patient-centred care. A novel model of care was developed, that is distinct from that used in other centres, with a midwife seeing women mid-pregnancy and only referring to an obstetrician if there are any concerns or there is interest in having a repeat Caesarean section. This qualitative study aims to evaluate the impact of the Birth Options Clinic and what factors influence women's delivery mode choice.

Methods:

Thirteen women were interviewed (one-to-one) after their attendance at the clinic. A guideline was used to structure the interviews. Data was manually analysed using a framework approach to look for key themes.

Results:

The data suggests that overall women find the clinic appointment to be a valuable and positive experience. Despite this, most women did not feel the information discussed influenced their choice. The majority of women had already made up their mind beforehand.

The main factor contributing to the delivery mode decision was past experiences. Additional factors mentioned were: wanting a "natural" birth experience, the advantages of a quick recovery with VBAC, and the predictability of a planned Caesarean.

Conclusions:

Women find the VBAC clinic to be a positive and valuable experience, even if it does not necessarily influence their decision. Factors that influence choice are related to past experiences, wanting a "natural" birth, wanting a "predictable" birth and advantages for family life.

Red Cell Transfusion Requirements: are Preterm Twins Different?

Dr Dushyant Batra, Consultant Neonatologist, Croydon University Hospital

Background:

Preterm infants often require red cell transfusions (RCT). Repeated blood sampling, poor substrate availability, infection and physiological decline contribute to these requirements. Many studies have described this in preterm infants but to our knowledge, no study has described the requirement in infants who are preterm and of twin or higher order.

Methods:

We retrospectively reviewed the patient records for preterm twin and higher order infants admitted to regional tertiary neonatal unit at Royal Sussex County Hospital from 01 January 2008 to 30 June 2009. The data was compared with records of preterm singletons that were subjected to cord milking four times before clamping. Both groups received similar neonatal care in terms of nutrition, supplements and thresholds for RCT.

Results:

A total of 65 babies were identified being born as twins or triplets at gestation below completed 33 weeks. Both groups were comparable with regards to birth weight, gestational age, sex distribution and mode of delivery.

Fifty-eight percent of all infants in multiple gestation group and 30.7% of infants in singleton group needed RCT (P value 0.02). Multiple gestation infants required significantly more RCTs (2.4 ± 3.6 multiples Vs 0.9 ± 1.5 in singletons; P value 0.003). Multiple gestation infants spend more than double the time in hospital as compared to their singleton counterparts (56 ± 33 days multiple Vs 28 ± 25 days in singletons; P value 7×10^{-6}).

Conclusions:

Preterm infants born as twins or higher order have higher red cell transfusion requirements as compared to singletons. We need to develop strategies to reduce these requirements.

What are the Factors that Influence Women's Experiences of Birthing Full Term, Singleton and Vaginal-Born Breech Presenting Babies?

Ms Jenny Davidson, Practice Development/Audit Lead Midwife & PhD Student,

Brighton & Sussex University Hospitals NHS Trust Maternity Services

(Author not present)

Research into the care and method of delivery for cephalic (head down) birth has been considerable and diverse. In comparison, care and advice for breech (bottom or feet down) birth has been dominated by a single large scale randomised controlled trial (Hannah et al, 2000) that concluded that it is safer for breech presenting babies to be born by Caesarean section than a vaginal birth. Despite considerable criticisms of the study the recommendations have been swiftly incorporated into clinical practice leading to a situation where very few women with breech presenting babies give birth vaginally. Since 2001 recommendations from the Royal College of Obstetrics and Gynaecology (RCOG, 2006) have advised that all breech presenting babies should be delivered by Caesarean Section.

Regardless of recommendations, some women continue to birth their breech presenting babies vaginally. Some women make an informed choice and for others the late discovery of the baby's presentation during labour or the lack of facilities means a Caesarean section is not possible.

Anecdotal evidence and literature demonstrates there is considerable passion within obstetrics and midwifery about breech birth compounded by the conflicting research evidence, personal clinical experiences and individual perceptions of risk (Banks, 1998). This research will explore the experience of vaginal breech birth within the context of social interactions, relationships and other potential influences such as the media and information given and sourced throughout women's birth journey.

Additionally, the research will consider culture within the services provided for childbearing women and explore the influences of gender and the use of knowledge and power and their relationship to women and their birth experience (Leap, 2009).

Fundamentally the research aims to gain an understanding of the experience of vaginal breech birth for women.

Banks, M. (1998). *Breech birth Woman-wise*. Birth spirit books, New Zealand

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