

was 4% (n = 6). Details of these cases can be seen in table 1. Isolated IUGR, isolated prematurity, uncomplicated multiple birth and a gestational age of greater than 34 weeks were not associated with a severe abnormality.

**Conclusions** Our study found a 4% severe anomaly rate in moderately preterm infants screened with CUS. But we found the infants in our study with a severe anomaly had clinically significant indications for scanning other than their prematurity and we believe they would have required scanning no matter their gestational age. These results suggest targeted screening may have been adequate to identify those at high risk. Further studies are required to delineate the true overall rate of CUS abnormalities in late preterm infants and to correlate these with neurodevelopmental outcomes.

**PO-0616 A MULTICENTER, RANDOMISED, CONTROLLED TRIAL OF OSTEOPATHIC MANIPULATIVE TREATMENT ON PRETERM INFANTS**

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**Background** It is still uncertain if osteopathic manipulative treatment improves preterm clinical outcomes.

**Methods** The present multi-centre randomised single blind parallel group clinical trial enrolled newborns who met the criteria for gestational age between 29 and 37 weeks without any congenital complication from 3 different public neonatal intensive care units. Preterm infants were randomly assigned to usual prenatal care (control group) or osteopathic manipulative treatment (study group). The primary outcome was the mean difference in length of stay between groups.

**Results** A total of 695 newborns were randomly assigned to the study group (n = 352) and to the control group (n = 343). A statistical significant difference was observed between the two groups for the primary outcome (13.8 and 17.5 days for the study and control group respectively,  $p < 0.001$ , effect size: 0.31). Multivariate analysis showed a reduction of the length of stay of 3.9 days (-5.5 to -2.3,  $p < 0.001$ ). Furthermore, there were significant reductions with treatment as compared to usual care in cost (difference between study and control group: 1,586.01€; 1,087.18 to 6,277.28;  $p < 0.001$ ) but not in daily weight gain. The relative risk of developing any respiratory problem during the study period was 0.53 (0.42 to 0.64). Moreover, the estimated research period attributable risk was 47%. There were no complications associated to the intervention.

**Conclusions** Osteopathic treatment reduced significantly the number of days of hospitalisation and costs on a large cohort of preterm infants.

**PO-0617 QUALITY IMPROVEMENT REVIEW OF UNINTERRUPTED POWER SUPPLY FOR CRITICAL CARE EQUIPMENT IN NEONATAL UNITS IN NORTHERN IRELAND**

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**Introduction/background** Intensive care equipment is dependent on an uninterrupted power supply (UPS) in the event of power failure. It is important that medical and nursing staff have a basic knowledge of critical care equipment and are aware of guidelines/protocols in place, to prevent possible harm to patients in the event of mains power failure.

**Method** A questionnaire audit was performed amongst medical and nursing staff in all five neonatal intensive care units in Northern Ireland. The aim was to look at current practice, identify areas of staff knowledge regarding UPS principles and how to maintain critical care equipment in the event of power failure.

**Results** Eighty-eight (44%) questionnaires were returned. The results were as follows:

- 73% of respondents were aware their unit had UPS.
- 25% were unsure which items should be plugged into UPS.
- 58% were aware of the presence of back up batteries in critical care equipments.
- In the event of power failure 81% of respondents said they would contact the nurse in charge whilst a technician was the next frequent point of contact, but there was no clear procedure beyond the initial contact.

**Conclusions** The results showed wide variation in staff knowledge regarding the availability of UPS, the presence of an internal back up battery and which equipment should be plugged into UPS circuits. There was also lack of guidance regarding whom to contact in the event of power failure. This study resulted in training, staff education and development of guidance regarding UPS circuits.

**PO-0618 FIRST PERSON PERSPECTIVE ENHANCES PROCEDURAL METRICS**

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**Background** Procedural videos are used to enhance training. Recording of procedures and video coaching may enhance procedural skills. These typically are from third person perspective.

**Aim** To determine if first person perspective procedural video recording of pigtail catheter insertion in a rabbit model enhances procedural based metric development compared to standard video recording.

**Methods** Four neonatologists were filmed in real time using the trocar technique to insert a pigtail catheter chest drain in a rabbit model, under sterile conditions. Each participant was recorded using a stationary recording device, while also wearing point of site video recording glasses (similar to spectacles without lenses). Stationary video recordings were considered to provide third person perspective. Video recording glasses provided first person perspective. All videos were independently scored on a predefined 15 item procedural metric.

**Results** Third person video recording failed to identify 40% (20–50%) of key intra-procedural components; inserting the needle, using the trocar, inserting the guide wire and dilator. Where as, only 10% (0–10%) was not identified from first person perspective.

Video recording, both first and third person, highlighted other components not previously identified in the original metric, such as important interactions with the assistant. Consistent opinions contributed towards compiling a new best-practice

procedural teaching aid. No participants were distracted by equipment worn for recording purposes.

**Conclusion** First person perspective was superior to third person perspective for identifying all key components. This has resulted in the development a new procedural metric. Future potential video coaching should consider first person recording.

**PO-0619 ASSOCIATION BETWEEN PRE-PREGNANCY BODY MASS INDEX AND FIRST TRIMESTER VITAMIN D**

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**Background and aims** Vitamin D deficiency during pregnancy has important health implications for the mother and infant. The aim of the present study was assess the effect of pre-pregnancy BMI on 25-hydroxyvitamin D [25(OH) D] concentrations.

**Methods** One hundred and eighty women aged between 19- 39 year, in a first trimester of pregnancy were enrolled serially from a referring university hospital in Tehran. Serum 25(OH) D was measured at the first trimester. The normal range for serum 25 (OH) D was 25–125 nmol/L (10–50 ng/mL). Spearman rank correlation coefficient was used to test for correlations between pre-pregnancy BMI and serum 25 (OH) D levels.

**Results** Mean maternal serum 25(OH)D was  $21.4 \pm 1.34$  nmol/L. The prevalence of hypovitaminosis [25(OH) D  $\leq 25$  nmol/L] was 62.4%. In this study half of the participant had BMI  $>30$  kg/m<sup>2</sup> and the others had BMI  $<30$  kg/m<sup>2</sup>. Almost forty percent-age (38%) of women with a pre-pregnancy BMI  $>30$  and 24.4% BMI  $<30$  had vitamin D deficiency. Hypovitaminosis D was independently associated with conception of dairy, eggs, fish  $<$ twice a week. There was no significant association between vitamin D deficiencies, parity, gravity, age was seen. There was a moderate, negative correlation between pre pregnancy BMI and serum 25(OH) D in first trimester ( $r = -0.38$ ;  $p < 0.001$ ).

**Conclusion** These findings support the need to balance pre-pregnancy weigh to decrease the risk of mother and infant health complications and higher-dose supplementation is needed to improve maternal and neonatal vitamin D nutriture.

**PO-0620 ANTENATAL HYDRONEPHROSIS – WHAT DOES IT MEAN POSTNATALLY?**

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**Background and aims** There has been an increase in reporting of antenatal hydronephrosis with increasing use of antenatal sonography. It is known that renal pelvic dilatation (RPD) occurs in 1% of fetuses. This study was aimed to ascertain the postnatal outcome associated with antenatal RPD or other renal abnormality and to recommend a guideline for postnatal management.

**Methods** We retrospectively analysed data of 50 infants born between August 2011 and July 2013. 49 infants had renal tract abnormality detected on antenatal sonography. Inclusion criteria were presence of renal tract anomaly or isolated RPD  $\geq 7$  mm on prenatal sonography, postnatal ultrasound and at least one

follow up in designated Consultant clinic. All infants with RPD  $\geq 7$  mm were started on prophylactic Trimethoprim.

**Results** Out of 50 infants, 16 (32%) had normal postnatal scan. 11 (22%) infants had transient/idiopathic hydronephrosis. The second most common diagnosis was Unilateral Pelvi ureteric Junction (PUJ) anomaly found in 9 (18%) infants. Out of these 9 infants, 5 (55.5%) had antenatal RPD  $\geq 15$  mm. Only 4 infants were noted to have Vesico Ureteric Reflux (VUR). In total, 11 out of 50 (22%) infants required urological intervention. None of 49 infants have had a culture positive urinary tract infection.

**Conclusion** These data support that most cases of antenatal RPD, especially isolated unilateral RPD  $\leq 10$  mm resolve spontaneously. In contrast, infants with RPD  $\geq 15$  mm either unilateral or bilateral had significant uropathy requiring intervention. We also recommend that antibiotic prophylaxis be targeted to high risk infants (RPD  $\geq 10$  mm).

**PO-0621 CORD PILOT TRIAL: CORD CLAMPING WITHIN 20 SECONDS VERSUS CLAMPING AFTER AT LEAST 2 MINUTES FOR VERY PRETERM BIRTHS**

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**Background** Deferring cord clamping allows blood flow between the placenta and baby to continue for a few minutes after birth; net flow is known as ‘placental transfusion’. The Cochrane Review suggests deferring cord clamping for preterm births may be beneficial.

We have developed strategies for providing initial neonatal care at the mother’s bedside with the cord intact. The Cord Pilot Trial aims to assess whether it is feasible to conduct a large randomised trial of timing of cord clamping in the UK.

**Methods** Women expected to have a live birth before 32 weeks are eligible. Allocation is to cord clamping either within 20 seconds or after at least 2 min (with neonatal care at the bedside). Consent is by two pathways; written consent during pregnancy, or oral assent at time of birth with written consent after birth. Follow up is until the children are age two years (corrected). The target for feasibility is to recruit 100–110 women at 8 sites over one year.

**Results** Overall 125 women were recruited between March 2013 and February 2014; data are available for 124. Of these, 35 (28%) were recruited via the oral assent pathway; 20 (16%) were  $<26$  weeks gestation and 75 (60%)  $<30$  weeks; 11 (9) were twin pregnancies; and 75 (60%) had a Caesarean section. Median time to cord clamping was 10 seconds (IQR 10–15) versus 120 (30–135). 15/134 (8.9%) babies died before discharge.

**Conclusions** A large multicentre trial would be feasible, implications for design and conduct will be discussed.

**PO-0622 MATERNAL NON-COMPLIANCE IN A WELL-BABY NURSERY: FAMILY CHARACTERISTICS AND OTHER REASONS**

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