Abstract PO-0725 c Table 2 Correlations between the liver-spleen dimensions and gestational age, height, weight

Maximum		Mean	Median	Minimum	Percentile		
					5th	95th	
Liver (mm)	Longitudinal	60.9±4.9	61.0	49.0	77.0	53.0	69
	Anteroposterior	44.1±4.5	44.0	31.0	57.0	38.0	52
Spleen (mm)	Longitudinal	38.2±4.3	38.0	28.0	54.0	32.0	45
	Anteroposterior	21.7±2.8	22.0	15.0	29.0	17.0	27

***Statistically significant at $p < .001$ **Statistically significant at $p < .01$ *Statistically significant at $p < .05$

0.05). Longitudinal and anteroposterior dimensions of liver and spleen showed no correlation with the gestational age. All dimensions of liver and spleen showed a high correlation with the height and weight. Weight was the best correlated with all dimensions.

Conclusions The reference values of spleen and liver lengths and diagrams from this study may be useful in the sonographic evaluation of spleen and liver in newborns.

PO-0725d RED CELL TRANSFUSION REQUIREMENT IN PRETERM INFANTS OF TWIN OR HIGHER ORDER

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Background Preterm infants often require red cell transfusions (RCT) during their neonatal unit stay. Recently many studies have focussed on reducing the transfusion requirements e.g. delayed cord clamping, cord milking. Majority of these studies do not include the preterm infants that are of twin or higher order. This study was designed to investigate if the transfusion requirements in twins were different from singletons.

Method Retrospective data was collected from patient records for preterm infants below 32 weeks gestation admitted to regional tertiary neonatal unit at Nottingham City Hospital from October 2011 to February 2013. We compared transfusion requirements in singletons versus neonates of twin or higher order. All infants, singletons or twins, received similar neonatal care in terms of nutrition, supplements and thresholds for RCT.

Results A total of 113 infants (37 twins group and 76 singleton group) were identified at gestation below 32 weeks. Groups were comparable in terms of weight, sex distribution, haemoglobin at admission and mode of delivery.

48.6% of preterm twin and higher order infants required RCT compared to 53.9% of singleton infants ($p = 0.6892$) and on an average requiring 1 transfusion compared to 1.4 RCT per infant who were singleton. Outcomes at 6 weeks were comparable between the 2 groups.

Conclusion We conclude that preterm twin and higher order infants have comparable RCT requirements to singleton infants. This emphasises the need to focus on strategies to impact on the use of RCT in this population subgroup.

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PO-0725e CEREBRAL TISSUE OXYGENATION AT BIRTH IN TERM INFANTS: COMPARISON BETWEEN EARLY AND LATE CORD CLAMPING

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Background and aims The aim of our study is to compare the postnatal cerebral tissue oxygenation values in babies with early versus late cord clamping born after elective C/S.

Methods In this prospective, observational study, we included term newborns delivered by elective C/S. Babies were segregated into two groups as early (within 15 seconds) and late cord clamping (at 60th seconds). Peripheral arterial oxygen saturation (SpO₂) and heart rate were measured using pulse oximetry (Nellcor N200) and regional oxygen saturation of the brain (rSO₂ brain) were measured (Invos 5100) between the 3rd and 15th minutes and recorded every minute. Fractional tissue oxygen extraction (FTOE) was calculated for each minute (FTOE = pulse oximetry value - rSO₂ / pulse oximetry value). The measurements were compared for both groups.

Results The demographical characteristics, SpO₂ levels, heart rates and umbilical cord blood gas values were not significantly different between the groups ($p > 0.05$). Cerebral oxygenation measurements and FTOE values were significantly higher for each minute in the late cord clamping group ($p < 0.05$). Bilirubin and hematocrit levels were also statistically higher in this group ($p < 0.05$) without the need for phototherapy. The increase in rSO₂ was faster and the rSO₂ plateau was reached earlier in the late cord clamping group (Figure).

Conclusions In our study we found that rSO₂ brain measurements and FTOE values were higher in the late cord clamping

Abstract PO-0725e Figure 1

group without the need for any therapy as a result of high bilirubin and hematocrit levels.

Neonatal Pulmonology

PO-0726 INTERNATIONAL SURVEY ON PERI-EXTUBATION PRACTICES IN EXTREMELY PREMATURE INFANTS

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Background Weaning of mechanical ventilation (MV), assessment of extubation readiness and provision of post-extubation support are critical steps in the care of extremely preterm infants (< 28 weeks). The use of evidence-based practices during the peri-extubation phase is paramount for ensuring successful outcome.

Objective Determine the peri-extubation practices used in extremely preterm infants internationally.

Methods From Oct 2013 to Feb 2014 a structured questionnaire with 15 questions related to peri-extubation practices was circulated to the clinical directors of 162 neonatal intensive care units across Canada, USA, Ireland, Australia and New Zealand.

Results 112 directors responded to the questionnaire (69%). The majority of units do not have written protocols for any aspect of MV (64%). The decision to extubate is generally made by the attending neonatologist (99%) or neonatal fellows (71%), based on ventilator settings, blood gases and haemodynamic stability; 16% of units extubate infants based on Spontaneous Breathing Trial (SBT). The SBT's varied on definitions of failure and durations; from <5 min (59%) to >10 min (35%). The majority of infants are extubated ≤3 days of life (76%) to nasal CPAP (84%). The failure rate was estimated to be 10–30%, but there was lack of consensus on the definition of failure (re-intubation within 24, 48 or 72 h after extubation). The decision to reintubate was almost always based on clinical judgement of physicians (88%), rather than well defined re-intubation criteria.

Conclusions Peri-extubation practices in extremely preterm infants are not always evidence based and frequently physician-dependent. High quality trials are required to inform guidelines and standardise practices for this important aspect of neonatal intensive care.

PO-0727 PREDICTORS OF DIFFICULT ENDOTRACHEAL INTUBATION OF INFANTS IN NICU-KAMC, RIYADH, KSA

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Background and aim Intubation in NICU is a daily procedure, that may be associated with serious complications. We studied the effect of different factors that may contribute to the difficulty and success of semi elective endotracheal intubation of sick infants managed at NICU of KAMC-Riyadh.

Methods A retrospective review of prospectively collected data of infants that had semi elective endotracheal intubation from 1/1/2010 till 1/7/2011. The studied factors were : experience of intubating physician, body weight and post conceptional age (PCA) of the infants, premedication. Success of intubation was assessed by number of trials, pain score, and occurrence of bradycardia and or desaturation.

Results 180 infants had semi elective intubation. Birth weight (490–4995 gms), PCA (25 to 53 weeks). Premedication was used in 108 infants; Fentanyl:66, Midazolam : 33 infants, and both medications: 9 infants.

Univariate analysis showed that difficult intubation (need for ≥3 trials of intubation) positively correlates with junior intubating physicians ($p < 0.001$) and bradycardia (heart rate <80/min) was associated with smaller body weight ($p: 0.036$).

Multilogistic Regression analysis showed independent correlation between difficulty of intubation and total number of attempts of intubation with the junior (RI, and R2 & Service physicians of less than 12 months experience) intubating physician ($p 0.001$ and 0.01).

Using premedication had no contribution to success of intubation, number of attempts of intubation and occurrence of Bradycardia and/ or desaturation.

Conclusion The only predictor of difficult intubation of infants in NICU in our study was having intubation by junior physician, while premedication did not contribute to the success of intubation.

PO-0728 LUNG LAVAGE WITH DILUTE PORCINE SURFACTANT FOR MECONIUM ASPIRATION SYNDROME: A RANDOMISED CONTROLLED STUDY, A PRELIMINARY REPORT

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Background and aims Meconium aspiration syndrome (MAS) is an important cause of severe respiratory failure in newborn infants. The aim of this study was to evaluate the efficacy of lung lavage with dilute porcine surfactant in ventilated infants with MAS.

Methods In this prospective randomised controlled study ventilated infants with MAS with a gestational age ≥36, birth weight ≥2000 g included. Enrolled infants randomised into two groups; in group 1, two sequential 15 mL/kg aliquots of dilute porcine surfactant (Curosurf, Chiesi Farmaceutici S.p. A., Parma, Italy) with a phospholipid concentration of 5 mg/ml were instilled into the lung. In group 2, 100 mg/kg of porcine surfactant were administered as a bolus. Infants in both groups were evaluated and compared with regard to efficacy, morbidity and mortality.

Results Fourteen infants were randomised. There were no significant differences between two groups in term of demographic characteristics. Median duration of respiratory support was longer in bolus surfactant group, although the difference was not statistically significant (2.2 vs. 7.2 days, $p = 0.18$). Similarly, duration of oxygen therapy and hospital stay length were shorter in lung lavage group but the difference was statistically insignificant (8.0 vs. 12.7 days, $p = 0.32$, 11 vs. 18.5 days $p = 0.15$, respectively). There were no differences in requirement for high frequency ventilation and nitric oxide between the groups.