Neonatal General

PS-192 NEONATAL TRANSFUSIONS IN NEW SOUTH WALES, AUSTRALIA: A POPULATION BASED STUDY

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Background Previous reports of transfusion practices in neonates have focused predominantly on premature neonates admitted to neonatal intensive care units (NICU). Population data on neonatal transfusions is limited.

Methods This study used linked population-based data from New South Wales (NSW) birth and hospital discharge data to determine rates of blood and blood product transfusion in the first 28 days of life. The study included all livebirths of at least 23 weeks gestation in NSW between 2001 and 2011, providing data on one-third of all Australian births.

Results Of 989491 livebirths, 6436 received a blood product transfusion (6.5 per 1000 births). 56% were born < = 32 weeks gestation (n = 3594, 272/1000 births) and 44% were >32 weeks gestation (n = 2842, 2.9/1000 births). 8% received transfusions in a hospital without a neonatal or paediatric ICU.

The rate of transfusions of blood and blood products in neonates increased between 2001 and 2011 (5.7/1000 to 7.0/1000, $p < 0.001$).

High transfusion rates were seen in neonates with a prior in-utero transfusion (667/1000), congenital anomaly requiring surgery (437/1000) or haemolytic disorder (132/1000). 48% received red cells alone, 29% received red cells plus other blood products and 24% received other blood products without red cells.

Conclusions High rates of transfusions are seen in preterm neonates and in those undergoing surgery or with haemolytic disorders. Rates of neonatal transfusion increased in NSW between 2001 and 2011, primarily due to reported increased use of plasma and gamma globulin.

PS-193 QUANTITATIVE CRANIAL ULTRASOUND (CRUS) ANALYSIS IN RELATION TO OUTCOME AT 2 YEARS OF AGE IN PRETERM INFANTS

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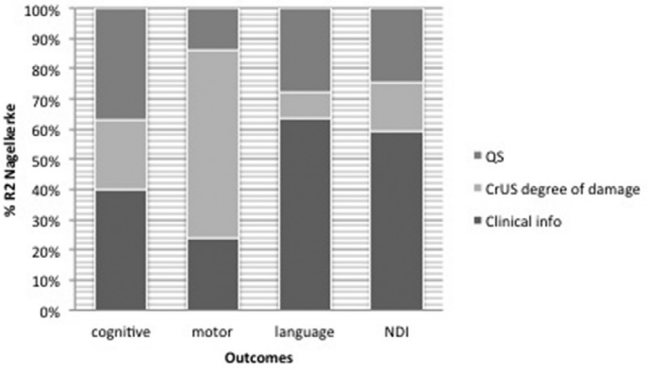
Introduction CrUS is an important prognostic variable in prematurity, although with some limitations. Quantitative CrUS techniques might have the potential to overcome some of those limitations.

Objectives To investigate whether a semi-quantitative method of CrUS analysis correlated with developmental outcome at 2 years in a cohort of preterm infants, and to compare this method with clinical variables and CrUS qualitative evaluation.

Methods Cohort of 88 <33 weeks gestational aged (GA) infants underwent several CrUS scans from birth to term. This last scan was analysed using a quantitative texture method (LBR), eventually obtaining 3 Quantitative Scores (QS). Outcome variables included abnormal Bayley Scales of Infant Development (3rd edition): Motor, Cognitive, and Language composite scores (<1SD); and Any Developmental Impairment (any abnormal previous result or a vision or hearing impairment).

Abstract PS-193 Table 1

	AUC	Significance	Sensitivity	Specificity
Cognitive	0.81	0.005	0.62	0.85
Motor	0.68	0.064	0.40	0.80
Language	0.68	0.021	0.50	0.83
NDI	0.65	0.044	0.35	0.76



Abstract PS-193 Figure 1

Results Mean GA was 29,0 (SD 2,2). Hearing and vision deficits were present in 3 patients. Abnormal scores occurred 9.1% in cognitive, 11.4% motor, 18.2% language and 23.9% NDI. QS significantly correlated to all outcome variables (p values: cognitive = 0.003, motor = 0.011, language = 0.015, NDI = 0.036). ROC analysis is shown in table. When clinical information and CrUS abnormalities were added in logistic regression analysis, QS added significant information (R2 Nagelkerke) in all but motor outcome (Figure).

Conclusions Quantitative analysis of CrUS may add significant information to standard qualitative evaluation with regards to outcome at 2 years in preterm infants.

PS-194 THE EFFICACY OF NON-NUTRITIVE SUCKING AND SUCROSE FOR THE RELIEF OF PAIN DURING EYE EXAMINATIONS FOR RETINOPATHY OF PREMATURITY: A RANDOMISED CONTROLLED TRIAL

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Background and aims Screening of eyes is necessary in infants at risk of retinopathy of prematurity (ROP). Although local anaesthetic drops are administered before eye examination, most infants are highly scored on validated pain scores such as the Premature Infant Pain Profile (PIPP) during examination. We aimed to determine the efficacy of oral sucrose combined with non-nutritive sucking (NNS) for reducing pain during eye examination.

Methods This was a randomised, controlled study of infants for ROP screening. All infants enrolled in the study met the criteria