

Methods We compared DR resuscitation practices (obtained from the neonatal database) of infants born between 25+0 and 28+6 weeks gestation at RWH between 2003–2006 and 2007–2012.

Results 1013 infants were included in the study, 97% of which received respiratory support in the DR during the ten-year period (Figure 1). Mean gestation (SD) and birth weight (SD) were 27+0 (1.11) weeks and 947(244) grams, respectively. There was a substantial decrease in the number of newborns intubated in the DR between 2003–2006 (58%) and 2007–2012 (47%) ($p = 0.05$). The number of infants intubated in the DR remains highest at lower gestational ages.

Conclusion There has continued to be an increase in the use of CPAP instead of intubation in the DR since completion of the COIN trial, suggesting a change in clinical practice.

PO-0696 **BASELINE COAGULATION TIMES DO NOT INFLUENCE LIKELIHOOD OF INTRAVENTRICULAR HAEMORRHAGE (IVH) IN EXTREMELY PREMATURE NEONATES**

¹E Neary, ²F Ni Ainle, ²M Cotter, ¹N McCallion. ¹Paediatrics, Rotunda Hospital, Dublin, Ireland; ²Haematology, Rotunda Hospital, Dublin, Ireland

10.1136/archdischild-2014-307384.1335

Background Derangements of haemostasis are implicated in IVH. Prothrombin time (PT), activated partial thromboplastin time (APTT) and fibrinogen level are frequently monitored in premature infants. Neonates frequently receive frozen plasma (FP) in attempt to correct perceived haemostatic abnormalities based on laboratory results.

Methods Prospective observational study was performed. Blood was drawn into citrated tubes from neonates (<30/40) on admission ($n = 76$) from non-heparinised lines. Platelet poor plasma was obtained by centrifugation of whole blood; PT, APTT, and fibrinogen were measured and correlated with IVH.

Results Infants with IVH ($n = 30$) had no significant difference in PT ($p = 0.949$), APTT ($p = 0.405$) and fibrinogen ($p = 0.560$) than those without IVH ($n = 46$). There was no association between IVH grade and APTT ($p = 0.937$). There was no significant difference in APTT in those with or without IVH, excluding infants with IVH on admission ($p = 0.534$). Of patients administered FP, there was no significant difference in IVH ($p = 0.38$). FP is frequently administered when APTT >100 s. In this subgroup; IVH rates in those that received FP ($n = 17$) vs. those that did not ($n = 4$) was not significantly different ($p = 0.447$). There was no significant difference in IVH development in high risk (APTT >100 s, Administered FP) vs. low risk infants (APTT <100 s, No treatment), ($p = 1.00$) or when comparing infants with lesser degrees of coagulopathy (APTT 60 s-80 s vs. 80 s-100 s, $p = 0.6334$).

Conclusions Justification of FP based on coagulation values is unclear. In this study, IVH rates following FP administration was not increased. Coagulation values were not predicative of IVH, indicating lack of therapeutic window for intervention.

PO-0697 **AN EDUCATIONAL INTERVENTION TO IMPROVE NURSE'S UNDERSTANDING OF PAIN IN CHILDREN**

¹AR Dongara, ¹SM Nimbalkar, ²AG Phatak, ¹DV Patel, ³AS Nimbalkar. ¹Department of Pediatrics, Pramukhswami Medical College, Karamsad, India; ²Central Research Services, Charutar Arogya Mandal, Karamsad, India; ³Department of Physiology, Pramukhswami Medical College, Karamsad, India

10.1136/archdischild-2014-307384.1336

Background and aims Accurate assessment of pain and its management is important but challenging aspect of paediatric care. Nurses, usually the primary care-givers showed inadequate knowledge and restrictive attitudes towards pain assessment. We evaluated feasibility of an educational intervention to improve the situation.

Methods Workshops targeted at overall understanding of pain, its assessment and management strategies were conducted for nurses working in paediatric/neonatal wards and intensive care units and paediatric cardiac intensive care unit. A modified and consensually validated "Knowledge and Attitudes Survey Regarding Pain questionnaire-2008" consisting 25 True/False questions, 8 Multiple Choice Questions and 2 case scenarios was administered before, immediately after and 3 months after the workshops to evaluate the impact of the intervention. Descriptive statistics, paired t test and test of proportion were used to depict the results.

Results Eighty-seven (all females) nurses participated in the study. Mean (SD) age and experience was 27.7(6.4) and 4.04 (5.9) years respectively. About half (49.4%) of the nurses had not previously heard of pain scales while 47.1% reported using a pain scale in their routine practice and 37% felt they could assess pain without any scale. A statistically significant improvement was observed between the pre-test and post-test total score (15.69[2.94] vs. 17.51[3.47], $p < 0.001$) as well as the pre-test and retention score (15.69[2.94] vs. 19.40[4.6], $p < 0.001$).

Conclusions The educational intervention was successful and better retention test scores suggest cascading effect. Pain assessment and management in children should be incorporated in the nursing curriculum and should be reinforced in all paediatric units.

PO-0698 **NEONATAL RESUSCITATION PRACTICES IN THE DELIVERY ROOM IN INDIA: AN AUDIT USING VIDEOGRAPHY**

SM Nimbalkar, DV Patel, AS Nimbalkar, AR Dongara, AG Phatak, R Vasa. Department of Pediatrics, Pramukhswami Medical College, Karamsad, India

10.1136/archdischild-2014-307384.1337

Background and aims Care given to a newborn in the first few minutes of life following delivery is protocol driven. Yet there are deviations which do occur. Deviations may be due to unrealistic expectations from the protocol. We audited practices of managing patients in relation to guidelines for neonatal care.

Methods Observational Study. Continuous video recording occurred at the warmer where babies are routinely placed after delivery. The videos were downloaded and analysed as per steps related to neonatal resuscitation guidelines 2010.

Results In all the 77 videos assessed, pre-delivery arrangements were made appropriately and in time. The post-delivery care was provided by a single person in 24 (31.2%) cases. In most cases this was provided by first year residents (53) and nurses (34). Wearing gloves, providing routine care, drying the baby and changing the wet sheet was followed in 100% cases. The mean (SD) time required to provide routine care was 6.97 (2.07) minutes. Heart Rate was not assessed in 30 (39%) cases whereas Respiratory Rate was not assessed in 28 (36.4%) cases. The mean (SD) time at which heart rate and respiratory rate was assessed were 6.31 (9.17) and 4.16 (1.68) minutes. PPV was required in just one case and it was done properly.

Conclusions Fairly short duration of routine care was provided to neonates with absence of major issues. However regular

training of residents and debriefing on resuscitations should be considered as a method to improve the quality of care provided.

PO-0699 ESTIMATION OF ADHESION MOLECULES INTRAUTERINE GROWTH RETARDATION (IUGR) NEWBORNS

P.Orujova, S Huseynova, S Hasanov, S Alasgarova, S Mukhtarova. *Neonatology, Azerbaijan Medical University, Baku, Azerbaijan*

10.1136/archdischild-2014-307384.1338

Aim To investigate the endothelial dysfunction in term newborns with Intrauterine growth retardation (IUGR).

Methods For this purpose 30 term infants were examined and divided in two groups: control group included 15 healthy newborns, main group-15 infants with IUGR. In order to determine endothelial dysfunction sICAM-1 and sVCAM-1 was detected by Usbn (Life Science Inc., USA) kits in 1st-3rd and 5th-7th days. The Student *t*-test and the Mann-Whitney test were used for comparison of parametric and non-parametric parameters.

Results On the 1st-3rd day the levels of the both adhesion molecules was higher in main group than the control group. The level of sVCAM in the main group increasing twice in the 5–7 th days became accurate ($p > 0,05$). The level of sICAM-1 in the 5–7 days increased less than control group and was inaccurate by statistic.

Conclusion Growth of sVCAM-1 in the main group bowth in the 1–3rd days and 5–7 th days indicates ongoing influence of damaging factor. The less increase of sICAM-1 in the main group indicates the reduction of compensator mechanism of immun system in this children.

PO-0700 PREVALENCE AND RISK FACTORS FOR LOW BIRTH WEIGHT IN INDIA: FROM A DISTRICT GENERAL HOSPITAL IN DAVANGERE, KARNATAKA

¹R.Patil, ²MK Kulkarni, ³VK Patil. ¹Medicine, St Mary's Hospital, Newport Isle of Wight, UK; ²Pediatrics, JJM Medical College, Davangere, India; ³Allergy Centre, St Mary's Hospital, Newport Isle of Wight, UK

10.1136/archdischild-2014-307384.1339

Background Prevalence of Low birth weight (LBW) in India shows regional variations. Factors associated with LBW are multidimensional. We aim to describe the prevalence of LBW and to investigate the associated risk factors in a district hospital in a South Indian town, Davangere.

Methods Data was collected from births in Chigateri-district-hospital; 1000 bedded hospital with rural and urban catchment area. LBW was defined as birth weight of <2.5 kg. Maternal age (teenage; ≤ 19 years), haemoglobin (Hb), gravida, gestational age (preterm; <37 weeks) and sex of the child were analysed. Moderate to severe anaemia (MS-A) defined as Hb <9.9 gms/lt. Logistic regression analysis was used to explore the associations and then factors with significant association were entered into a multivariate regression.

Results 6539 births over 5 years were analysed. Prevalence of LBW was 27.5%. Teenage pregnancy was 11.4%, MS-A was 71.9% and preterm birth rate was 11.4%. On individual testing teenage pregnancy, MS-A, preterm birth and female sex were significantly associated with LBW. On multivariate regression only preterm birth and sex remained significant. Number of gravida was not significantly associated with LBW. Results with odds ratios are given in the table.

Conclusion LBW is still prevalent and remains a challenge for public healthcare in India. Interventions aimed at reducing teenage pregnancies and maternal anaemia will be helpful. Further research needs to focus on prevention of preterm births and to understand the biological reason for LBW associated with sex of the neonate.

PO-0701 CAUSES OF FETAL GROWTH RESTRICTION AND EARLY NEONATAL OUTCOME

E.Petkovska. *Department of Neonatal Intensive Care and Therapy, University Clinic of Gynecology and Obstetrics, Skopje, Macedonia*

10.1136/archdischild-2014-307384.1340

Background and aims Normal fetal growth depends on the genetically predetermined growth potential and its modulation by the health of the fetus, placenta and mother. If any of these factors is deficient, adverse pregnancy outcome and/or fetal growth restriction (FGR) may be the consequence-condition when a fetus is unable to achieve its genetically determined potential size. Although FGR is probably a physiologic adaptive response to various stimuli, it is associated with neonatal mortality and distinct short or long-term morbidity.

Methods During the period of 3 years, causes and early neonatal outcome of 160 fetal growth restricted pregnancies were studied. We used late versions of SPPS and Statgraf for Win statistical programs. Results were compared by Person Chi-Square (<0.05) and logistic regression analyses.

Results Compared with normally grown fetuses, those who were growth restricted (GR) were more frequently exposed at

Abstract PO-0700 Table 1

Factor	LBW	No LBW	OR (95% CI)	P value	Adjusted OR (95% CI)	Adjusted p value
			1.26		1.17	
Teenage pregnancy	13.2% (229/1736)	10.8% (497/4602)	(1.06–1.49)	0.008	(0.95–1.45)	0.131
			1.16		1.03	
Mod to severe anaemia	74.1% (1216/1640)	71.1% (3131/4402)	(1.02–1.32)	0.020	(0.89–1.20)	0.671
			0.74			
No of gravida (>2)	98.1% (1264/1289)	98.6% (3348/3397)	(0.46–1.20)	0.225	NA	NA
					15.35	
Preterm birth	33.5% (522/1559)	3.3% (138/4231)	14.93 (12.23–18.23)	<0.001	(12.4–19.0)	<0.001
			1.35		1.39	
Female sex	53.7% (934/1740)	46.2% (2091/4528)	(1.21–1.51)	<0.001	(1.21–1.59)	<0.001