growth measurement and growth chart plotting requires improvement.

P468

ADMISSION TEMPERATURE OF OUTBORN NEWLY BORN INFANTS FOLLOWING NEONATAL TRANSPORT: A LITERATURE REVIEW

^{1,2}Katie Cunningham*, PF Colm ^{1,2}O'Donnell, ^{1,2}Lisa K McCarthy. ¹National Maternity Hospital, Holles Street, Dublin, Ireland; ²School of Medicine, University College Dublin, Dublin, Ireland

10.1136/archdischild-2019-epa.804

Background Infants born at hospitals without neonatal intensive care (NICU) facilities that are transferred to a NICU after birth are referred to as outborn. Ideally all outborn infants are transferred by dedicated neonatal transport services. Abnormal temperature in newborn infants is associated with increased morbidity and mortality. It is an important function of transport teams to maintain normal body temperature (36.5°C–37.5°C) during transport. The aim of this review was to assess the prevalence of abnormal admission temperature in outborn infants following neonatal transport.

Methods We searched PubMed (NCBI) and Web of Science from inception to April 2018 using the following search terms; (newborn OR neonate OR 'new born' OR 'premature infant' OR 'preterm infant') AND ((temperature OR hypothermia) NOT ('therapeutic hypothermia' OR 'passive hypothermia' OR 'hypothermia, induced')) AND ('interhospital transport' OR 'inter-hospital transport' OR 'interfacility transport' OR 'inter-facility transport' OR 'neonatal transport'). We planned to include randomised trials, case-control studies, prospective and retrospective cohort studies and case series. We excluded studies of infants undergoing therapeutic hypothermia and articles published in a language other than English.

Results The initial search identified 66 articles. Twenty articles met inclusion criteria. A further 9 were identified from reference lists. Studies spanned a 45-year period (1973–2018). Definitions of hypo- and hyper-thermia varied considerably, as did patient inclusion criteria with combinations of preterm and term infants, and infants with or without congenital anomalies. Specialised transport services featured in 16 (55%) studies, with a reported incidence of hypothermia ranging from 0.2%–70%. There was significant correlation between birth weight and admission temperature, and gestation and admission temperature, such that incidence of hypothermia on admission increased with decreasing weight and gestation.

The reported incidence of hyperthermia ranged from 0%–19%. Death was more commonly seen in infants who were hypothermic on admission, with moderate hypothermia (32°C–36°C) identified as an independent risk factor for death. Mortality rates appeared to improve when transfers were performed by neonatal transport teams.

Conclusion Maintaining normal body temperature in outborn newly born infants during neonatal transport continues to pose challenges for neonatal transport teams. Risk factors for hypothermia and associated adverse outcomes include prematurity, very-low birth weight and transfer by non-specialised transport teams. This is especially so in developing countries without established transport services. Hyperthermia also occurs, but is less frequently reported. Using standardised definitions, further study examining temperature in neonatal transport is required.

P469

OUTCOMES OF BABIES WITH BIRTH WEIGHT UNDER 500 GRAMS IN A NEONATAL INTENSIVE CARE UNIT

Fateh Singh, Nikita Gulati, Niranjana Mahalingam, Shree Vishna Rasiah*, Anju Singh. Birmingham Women's and Children's NHS foundation Trust, Birmingham, UK

10.1136/archdischild-2019-epa.805

Background Determining the limits of viability for resuscitating a baby is important to avoid un-necessary interventions. Establishing these boundaries is an ethical dilemma that has been under constant debate. There is greater clarity and guidance on gestational age for limits of viability as compared to weight criteria.

Aims To evaluate the in-hospital mortality and morbidity in babies born under 500 grams.

Methods Retrospective data was collected from Badger database over a 9 year period from April 2009 to March 2018 looking at the mortality and morbidity in babies with birth weight under 500 grams in a neonatal intensive care unit.

Results There were 28 babies in the study cohort. The mean gestational age was 25 weeks (range 22+6–28+4) with 46% survival. There were 12 males and 16 females, with higher mortality in males (75% versus 38% in females). 3 babies had oesophageal perforation with nasogastric tube which was managed conservatively. In the survivors 8 babies had necrotising enterocolitis and none required surgery. There were 2 surviving babies with grade 2 or above intraventricular haemorrhage and 2 babies required laser therapy for retinopathy of prematurity. 2 of the surviving babies (15%) were discharged home on oxygen. The average hospital stay for the surviving infants was 111 days. Of the babies who died, 4 had necrotising enterocolitis and 8 babies with grade 2 or above intraventricular haemorrhage.

Conclusion Despite advances in neonatal practice, our single center data shows that the outcome of babies born with a birth weight of under 500 grams remains very poor. The mortality was significantly higher in the male babies. The management of these babies is challenging with multiple comorbidities requiring significant neonatal resources.

P470

SPONTANEOUS INTESTINAL PERFORATION IN AN EXTREMELY LOW BIRTH WEIGHT INFANT: A CASE REPORT

¹Ayşe Pervanlar, ²Ayça Sözen, ¹Tuğba Erenur Ercan*, ¹David Terence Thomas. ¹Maltepe University Faculty of Medicine, Istanbul, Turkey; ²Akdağmadeni State Hospital, Yozgat, Turkey

10.1136/archdischild-2019-epa.806

Spontaneous intestinal perforation(SIP) usually occurs in the first 10 days of life primarily in preterm infants with very low birth weight (VLBW) and extremely low birth weight (ELBW). The risk is 2–3% and 5% in VLBW infants and ELBW infants, respectively.

Herein, we present a case of a 410 g female infant born at 25 weeks of gestational age who developed SIP on the 7th postnatal day. The patient was born by emergent cesarean delivery after the diagnosis of chorioamnionitis in the mother. She was intubated in the delivery room due to insufficient respiratory effort and surfactant was administered. The infant was admitted to the neonatal intensive care unit (NICU) and she was mechanically ventilated in SIMV mode. Her

chest x-ray was compatible with respiratory syndrome. A venous umbilical catheter was placed, parenteral nutrition was initiated. Minimal enteral nutrition (MEN) was started on 3rd day of life with mother's own milk (1 ml every 6 hour). She was tolerating MEN and no increment was done in the amount of milk. Until the postnatal 6th day no abdominal distension or any intolerance of MEN was detected. On postnatal 7th day there was a bluish discoloration of the abdominal wall and abdominal distension was detected. In abdominal x-ray, free air under the diaphragm was detected suggestive of perforation. She was an ELBW infant in the first week of life with bluish discoloration and distention of the abdomen without any radiographic evidence of NEC as pneumatosis intestinalis or portal venous gas on the abdominal x-ray. Therefore, diagnosis of SIP rather than NEC was made. The primary peritoneal drainage (PPD) was performed at the bedside due to the unstable condition of the patient. She was started inotropic support due to development of hypotension and IV antibiotic therapy was changed. Despite all the supportive therapy, the patient died on the 8th postnatal day.

Severe placental chorioamnionitis appears to be an antenatal risk factor for SIP. A black-bluish discoloration of the abdominal wall is often seen in SIP, and is not typical of NEC. The clinical diagnosis for SIP is based upon the clinical presentation and physical findings. Abdominal radiographs that demonstrate pneumoperitoneum without pneumatosis are supportive of the diagnosis. SIP is a separate clinical entity from necrotizing enterocolitis and it is the most severe gastrointestinal complication of preterm infants. Therefore, prompt diagnosis is important because of management considerations.

P471 HIRSCHSPRUNG'S DISEASE IN NEW BORN (ABOUT 17 CASES)

¹Chiraz Regaieg*, ¹Dhouha Kamoun, ¹Amel Ben Hmed, ²Hayet Zitouni, ¹Amira Bouraoui, ¹Manel Charfi, ¹Nedia Hmida, ²Riadh Mhiri, ¹Afe Ben thabet, ¹Abdellatif Gargouri. ¹Department of neonatology, Hedi Chaker Hospital, Sfax, Tunisia; ²Department of pediatric surgery, Hedi Chaker Hospital, Sfax, Tunisia

10.1136/archdischild-2019-epa.807

Introduction Hirschsprung's disease is a congenital intestinal paralysis due to absence of ganglion cells in enteric plexuses. We aim to describe the specificities of the neonatal form.

Patients and methods It is a retrospective study of 17 cases of Hirschsprung's disease hospitalized in our unit between 2006 and 2018. Diagnosis was based on radiological and/or pathological signs.

Results A male predominance was noted. Two newborns were premature. Two newborns had a congenital heart disease. One of them had Trisomy 21. Another newborn had hypothyroidism. An emission delay of meconium (average of 46 hours) was noted in all cases. The disease was revealed by a lower digestive occlusion in 7 cases, an acute enterocolitis in 2 cases and a bowel perforation in one case. The contrast enema practiced in 15 cases, was pathognomic in 13 cases. Rectal biopsy performed in 6 cases, confirmed histological diagnosis in all cases. Surgical treatment was performed in 9 cases with a median time between symptoms and surgery of 19 days. It was a colo-anal lowering in 7 cases, a resection of the right colon with double colostomy in one case and a right transverse colostomy in four cases. Outcome was favorable in 12 cases. Four newborns died consecutively to severe congenital heart disease in one case and severe sepsis in other cases.

Conclusion Hirschsprung's disease is the most common cause of digestive occlusion in the newborn. The main complications in the neonatal form are acute enterocolitis and intestinal perforation.

P472 MAKING THE DELIVERY ROOM SAFER FOR NEW BABIES

Carmel Maria Moore*, Hilda Wall, Martina Cronin, Anna E Curley. *National Maternity Hospital, Dublin 2, Ireland*

10.1136/archdischild-2019-epa.808

Aim The 7th edition of the Neonatal Resuscitation Programme (NRP) from the American Academy of Paediatrics (AAP) is used as the safe standard of neonatal resuscitation in the Republic of Ireland. The NRP details minimum resuscitation equipment requirements. Anecdotal reports in our tertiary maternity hospital suggested a lack of adherence to this minimum equipment list, and suggested that the delivery room environment may be an unsafe place for neonates. Delayed neonatal resuscitation could have significant clinical and medicolegal consequences. Audit demonstrated poor compliance with these standards with no delivery room completely stocked. We aimed to improve this and demonstrate lasting change by improving the proportion of fully safely stocked resuscitaires in the delivery rooms.

Methods The initial audit and all subsequent re-audits were prospective and unannounced. Intervention – a laminated wall-mounted list of required equipment – was implemented by delivery unit staff. Run charts were used to monitor weekly progress.

Results Initial audit results were concerning with no resuscitaire safely stocked with all required equipment. The best stocked resuscitaire contained 88% of required equipment, with all resuscitaires missing vital equipment – including laryngoscopes, pulse oximeters and stethoscopes. The proportion of vital equipment available increased from a baseline of 66% to 98.4% the first week and 100% in subsequent weeks. The proportion of fully safely stocked resuscitaires increased from 0% at baseline to 80% the first week and 100% in subsequent weeks.

Conclusion A laminated wall-mounted checklist significantly improves the proportion of delivery rooms that are appropriately stocked with neonatal resuscitation equipment.

P473 IMPETIGO IN PEDIATRIC POPULATION: A RETROSPECTIVE 6-YEAR REVIEW

Joana Carvalho*, Sofia Aroso, Georgeta Oliveira. *Hospital Pedro Hispano, Matosinhos, Portugal*

10.1136/archdischild-2019-epa.809

Background Impetigo is the most common skin infection in pediatric age and has the highest incidence increase relative to other skin infections observed in children. The reported incidences in the literature are between 1.65–2.8%, being evident a seasonal variation with peak of incidence during summer and autumn. The aim of this study is to characterize hospitalizations for this pathology in a pediatric population covered by a level II hospital.

Methods Observational cohort study on impetigo hospitalizations over a period of 6 years between 2012 and 2017.