

### G129(P) CAN A COMBINED TOOL WITH PAEDIATRIC ILLNESS SEVERITY ASSESSMENT AND PAEDIATRIC EARLY WARNING SCORE BE USED AS A SAFE TOOL FOR DISCHARGE OF PATIENTS FROM OBSERVATION AND ASSESSMENT UNIT?

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**Aim** Our aim is to evaluate if Paediatric Illness Severity Assessment (PISA) and PEWS can be used as a combined tool for safe discharge of patients from Paediatric Observation and Assessment unit (POAU).

**Method** We reviewed the PISA and PEWS scoring on patients attending our POAU over a busy winter on three randomised days. All patients routinely had PEWS assessed by nursing staff at the time of admission, discharge and as needed in between these two. PISA was calculated from the clinical notes. The combined tool was used to assess whether patient needed admission or discharged home. If discharged home, data was collected if there were any complications or readmissions.

**Results** A total of 52 patients were studied. Their age range varied from 1 day to 15 years. 37 patients were discharged home and 15 were admitted to the hospital. All of the children who were discharged had an initial PEWS score of or less than 4 or had good response with the PEWS score dropping to 0 to 2 with intervention, while their PISA grading suggested mild or moderate risk. There were no major complications in those who were discharged home. One patient was readmitted, which the parent was already cautioned. 5 patients who were admitted to the hospital had PEWS score of 0 to 2 but their PISA grading was moderate to severe risk, indicating the need for hospital admission. All those with an initial PEWS scoring above 4 or those with persistent score above 3 needed hospital admission and their PISA grading suggested moderate risk. The combined PISA and PEWS tool, in our study, when used for discharge, had a sensitivity (the probability of the child being discharged) of 100% and specificity of 97.3% with a PEWS scoring below 2 and PISA grading of mild risk.

**Conclusion** The Combined tool with PISA and PEWS provides clinical guidance in safely discharging patients home from the observation and assessment unit. We recommend performing a prospective study to validate this combined tool in a larger study population.

### G130(P) AIRWAY AND NUTRITIONAL MANAGEMENT IN PIERRE ROBIN SEQUENCE: A REGIONAL EXPERIENCE

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**Aims** To describe the airway and nutritional management strategies used in a regional cohort of infants with Pierre Robin Sequence (PRS), their associated syndromes and anomalies, and their subsequent outcomes regarding growth, development and mortality.

**Methods** Setting: Regional Cleft-Lip and Palate Network. A tertiary referral Service. Retrospective case note study.

**Participants** 55 sequential infants with Pierre Robin Sequence (as defined by the triad of micrognathia, Cleft-Palate and Glossoptosis) identified between January 2003 and December 2009; including 4 infants who transferred out of area and 4 infants who died.

**Interventions** Airway management consisted of Positioning, Nasopharyngeal Airway, Continuous Positive Airway Pressure, Ventilation and Tracheostomy. Nutritional management consisted of oral feeding, nasogastric tube feeding and Percutaneous Endoscopic Gastrostomy.

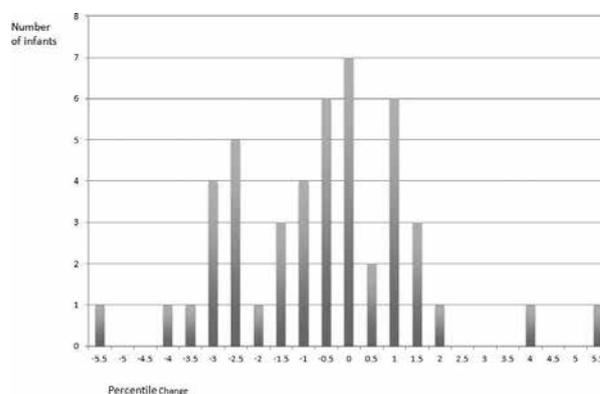
Main outcomes: Weight and growth percentile as measured at birth and cleft palate surgery. Grommet insertion. Developmental Delay. Mortality.

**Results** 13 (23.6%) of infants had syndromic PRS (sPRS), 17 (30.9%) had other associated anomalies and 25 (45.4%) had isolated PRS (iPRS) (n = 55). The majority of infants had their airways managed with prone positioning 40 (73%) (n = 55).

**Abstract G130(P) Table 1** Total number of infants undergoing airway-management strategies

	Total	Percentage
Positioning only	40	73%
NPA only	4	7%
Trache only	1	2%
CPAP only	4	7%
Vent only	2	4%
NPA and Trache	0	0%
NPA and CPAP	0	0%
NPA and Vent	0	0%
Trache and CPAP	0	0%
Trache and Vent	1	2%
CPAP and Vent	1	2%
NPA, Trache, CPAP and Vent	2	4%

The majority of infants 26 (55%) (n = 47) fell to a lower growth percentile by the time of cleft-palate surgery (figure 1).



**Abstract G130(P) Figure 1** Change in growth percentile from birth to cleft-palate surgery (n = 47)

13 (24%) had documented developmental delay (n = 55). There were 4 deaths (Mortality rate 78 per 1000 PRS births) (n = 55).

**Conclusions** Infants with sPRS and aPRS appear at greater risk of death than infants with iPRS. Airway management with positioning alone appears to be associated with a higher rate of mortality and failure to thrive in this cohort than other published techniques; its use should be reviewed. However there is inconsistent data reporting in the published literature. Future studies should include a published mortality rate; use standard definitions for iPRS, aPRS and sPRS; document weight gain in terms of growth percentiles and ideally use polysomnography to determine airway obstruction. Given that the practise of positioning is widespread and data inconsistent a national study including the above may be necessary to provide accurate data.

### G131(P) THE EFFECT OF CONSULTANT DELIVERED SERVICES ON PATIENT CARE IN PAEDIATRIC ASSESSMENT UNIT

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**Aim** To look at the effect of the consultant delivered care in comparison to the registrar delivered care on the clinical services, patient care, satisfaction and staff opinion.

**Method** All the patients attending our paediatric assessment unit between 1130 am and 2100 were assessed on three consecutive days for two weeks. The parameters compared were the length of time taken to make a clinical decision from the time the patient was seen, investigations performed, any readmissions, patient outcome, any significant incidents, patient satisfaction and nursing staff opinion.

**Results** A total of 51 patients were analysed. 21 of them were seen by the consultants and 29 were seen by the registrars. The time taken for Consultants to make the clinical decision and management plan varied from 15 to 100 minutes with a median of 30 minutes and mean of 39.6 minutes. The registrars took 90 to 480 minutes for the clinical decision with a median time of 250 minutes and mean of 233 minutes. 4 (19%) and 16 (55%) patients seen by consultants and registrars had investigations respectively. 2 patients, seen by registrars, with Paediatric Early Warning Score of more than 4 were admitted after 280 min. One of these patients needed HDU admission and was transferred to specialist hospital. Another patient was diagnosed to have sepsis and had acute deterioration. 16 (76%) patients were discharged home and 5 (24%) patients were admitted by consultants. In the group seen by registrars or speciality trainees, 10 patients (34.5%) were sent home, 17 were admitted (59%) and 2 were transferred out. There was one readmission from the group seen by the speciality trainees Patients' satisfaction survey was similar in both groups. Nursing staff in POAU felt there was quicker decision making and more precise plans when seen by the Consultants.

**Conclusion** The consultants made faster decision, performed less investigations and discharged more patients home with no readmissions or clinical incidents.

#### G132(P) USE OF NASAL CPAP IN INFANTS WITH BRONCHIOLITIS IN THE SOUTH OF ENGLAND: A MULTICENTRE, PROSPECTIVE, OBSERVATIONAL STUDY

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**Aim** Bronchiolitis is a common respiratory illness in childhood with 64 million cases of RSV bronchiolitis worldwide every year. In England, 2.8% hospital admissions in children <1 year of age are due to RSV bronchiolitis with upto 5% of these patients going on to develop respiratory failure.

The Aim of this study was to review the use of nasal continuous positive airway pressure (nCPAP) in infants with bronchiolitis. A secondary aim was to identify predictive factors for CPAP failure resulting in endotracheal intubation and mechanical ventilation

**Methods** A prospective, multicentre, observational study was undertaken from 1 November 2008 to 28 February 2009. Seven Paediatric Units in the South of England participated in the study. Data was collected on indications for nCPAP, respiratory rate and blood gases prior to nCPAP, total number of days on nCPAP and length of hospital stay.

**Results** A total of 51 infants with the clinical diagnosis of bronchiolitis required nCPAP during the study period. The main indications were increased work of breathing (47.0%), apnoeas (39.2%) and increasing oxygen requirements (23.5%). Among them 16 were ex-preterm (31.37%). Prior to nCPAP the mean respiratory rate was 63/min (range 28 to 120), mean oxygen saturations 85% (70 to 98%), mean pH 7.25 (7.03 to 7.36) and mean PCO<sub>2</sub> 10.42 (4.36 to 19.0). The average time on nCPAP was 2.6 days (2 hours to 11 days) and the average length of hospital stay was 10.96 days (5 to 22 days). There were no reported deaths. 11 out of the 51 infants failed trial on nCPAP requiring intubation (21.5%). The main indications were apnoeas (45.45%), CO<sub>2</sub> retention (36.36%) and increasing work of

breathing (36.36%). Subgroup analysis revealed that 7 out of the 11 infants requiring intubation were ex-preterm (63.6%) and 8 had significant PCO<sub>2</sub> rise (>8) prior to the trial of nCPAP (72.72%).

**Conclusions** nCPAP has a good success rate in bronchiolitis. In our study, predictive factors associated with nCPAP failure were prematurity and high CO<sub>2</sub> retention prior to trial of nCPAP. The authors recommend the availability of nCPAP facilities in all paediatric units and appropriate training of medical and nursing staff in its optimal use.

#### G133(P) MANAGEMENT OF PROLONGED JAUNDICE IN NURSE-LED CLINICS – 10 YEARS OF A SAFE AND EFFICIENT SERVICE

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**Aims** Prolonged jaundice in babies is common and usually harmless but a very small number of cases have serious pathology, such as biliary atresia, in which early detection is vital. Many “well” babies with prolonged jaundice undergo extensive investigations with a very low yield of important positive results. Our aim was to assess the safety, efficiency and cost effectiveness of a nurse-led prolonged jaundice clinic which has been in operation at our district general hospital for ten years, performing minimal investigations compared to standard practise.

**Methods** We collected data retrospectively for all babies <3 months of age in whom a conjugated bilirubin level was measured at ≥14 days of age (term) or ≥21 days (preterm) from January-August 2011, excluding babies on the neonatal unit. We reviewed clinic proformas completed for each baby seen with prolonged jaundice, medical notes and hospital results system to establish whether the baby was managed in the nurse led prolonged jaundice clinic or elsewhere by doctors, investigations undertaken and clinical outcomes.

**Results** 91% (176) of 194 babies were managed in the nurse led prolonged jaundice clinic; 5.6% (10) had additional investigations which identified one case with significant pathology. Of the 9% (18) of babies seen elsewhere by doctors (A&E/outpatients/inpatients/daycare), 77% (14) had additional investigations. 3 babies had serious pathology including one case of biliary atresia which presented late (48 days old).

**Conclusion** For the last ten years we have managed the vast majority of babies with prolonged jaundice in our nurse-led clinic, successfully avoiding unnecessary, time-consuming and expensive investigations for well babies whilst promptly identifying cases with serious pathology.

Our district general hospital has recently merged with two local community health services to form an Integrated Care Organisation, providing a unique opportunity to move the nurse-led prolonged jaundice clinic into the community. Based on our well established model, such clinics could be conducted in local health centres by midwives or community paediatric nurses, supervised by a consultant paediatrician. This would allow further cost savings and be more convenient for families.

#### G134(P) LUMBAR PUNCTURES IN CHILDREN: A SURVEY OF CURRENT PRACTISE

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**Aims** Lumbar puncture (LP) is a common procedure in children used to diagnose infection and various neurologic processes. We want to survey current clinical practises, in terms of positioning and use of analgesia, in paediatric LPs.

**Methods** A survey questionnaire was designed for distribution to staff on the wards of 10 paediatric departments in one city. The