skin not responding well to standard treatment. Genetic tests helps in making a diagnosis in the child and detection of carrier state in mother who is asymptomatic. This helps in counselling regarding the peripartum risks associated with future pregnancies and the recurrence risk for the offsprings.

431 EPIDEMIOLOGY OF RESPIRATORY VIRAL INFECTION ADMISSION AMONG CHILDREN WITH DOWN SYNDROME WITHIN THE FIRST 2 YEARS OF LIFE

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Background Respiratory viral infections (RVI) among children with Down syndrome (DS) is a common cause of hospital admissions. Due to the underlying co-morbidities, the severity and length of hospitalization is high in this population.

Objectives We estimated and described the burden of RVI admission among infants with Down syndrome within the first 2 year of life.

Methods This is a single-centre cohort study that includes all infants diagnosed with Down Syndrome in our centre. Data on laboratory-confirmed RVI were extracted from the microbiology database and linked to the hospital Down syndrome database. Clinical data and details of hospital admission from 2006–2017 were extracted.

Results There was a total of 34 RVI admissions from 29/227 children (12.8%) in this cohort during the study period. Seven children (24.1%) had more than 1 RVI. Respiratory Syncytial Virus (RSV) was the main causative pathogen, accounting for 61.8% of all admissions (21/34). Parainfluenza virus (6/34, 17.6%) and Metapneumovirus (5/34, 14.7%) infection were the other common infections. Five infants (14.7%) required admission to the high dependency unit/intensive care unit, all with RSV infection. Thirteen infants (38.2%) required respiratory support during their admission, ranging from nasal cannula to continuous positive airway pressure (CPAP). The median length of hospitalization was 6 days (range 2–41 days) and the median length of stay in the high dependency/intensive care unit was 8 days (range 3–18 days). A total of 29/34 (85%) who had co-morbidities, of which 6 had more than 1 morbidity.

Conclusions Up to 13% of children with Down Syndrome required admission due to RVI in our cohort. RSV infections was the predominant causative infection, accounting for up to 62% of all admission and all admission to high-dependency/intensive care unit.

432 REDUCING DELAYS IN THE TIME TO FIRST-FEED FOR BABIES WITH POLYHYDRAMNIOS: A QUALITY IMPROVEMENT PROJECT AT A UK DISTRICT GENERAL HOSPITAL

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Background Polyhydramnios is an obstetric complication with increasing incidence due to increased prevalence of maternal risk factors such as diabetes. Nasogastric-tube (NGT) placement has been used to confirm oesophageal patency and exclude associated anomalies such as oesophageal atresia. Delayed time-to-first-feed has considerable negative impacts with delayed bonding and increased risk of neonatal hypoglycaemia.

Objectives To assess the cause of delays to first-feed for babies born with polyhydramnios, compare our practice with that of other neonatal units in the UK and implement changes to reduce time to first-feed.

Methods We sought to identify a practice consensus in the postnatal assessment of babies born with polyhydramnios using a convenience sample of UK hospital local guidelines.

We then retrospectively evaluated the time intervals to first-feed for all patients born with polyhydramnios over a three-month period at our hospital. The primary outcome measure was time-to-first-feed from birth with a target of one hour as is commonly accepted in neonatal practice.

Data was anonymised at collection. The PDSA methodology was used to implement sequential changes to practice and repeated measures to improve performance. The project was registered locally.

Results Our convenience sample included 18 UK Neonatal units, of which 13 were Level 3 intensive care units and the remainder were local neonatal or special-care baby units. Only 2 units (11%) did NGT placement with x-ray for all babies born with polyhydramnios. Over half (56%, n=10/18) of all units carried out NGT placement but only performed confirmation x-ray if high-risk features were present or if acceptable pH aspirate unobtainable. The remaining third (33%, n=6/18) performed no investigations for the sole purpose of postnatal evaluation of polyhydramnios if no high-risk features.

Between February-April 2020 35 babies were born with polyhydramnios who all underwent NGT placement on NICU and x-ray. The mean minimum time-to-first-feed was 2.76 hours.

Initial interventions were then implemented with junior neonatal doctors trained in NGT placement on NICU and x-ray only done if acidic pH unobtainable. Re-audit data of 13 patients in July-August 2020 after the first cycle found a reduction in mean time-to-first-feed of one hour to 1.78 hours.

Subsequently implemented changes include: adopting a newly designed local protocol in-line with best available evidence including junior doctors placing NGT on labour ward to avoid separation; educating maternity and medical staff on the changes; ongoing practical skills teaching; and engaging in multidisciplinary discussion to improve patient care collectively.

Further data from August 2020-January 2021 showed that although overall mean time to first feed was essentially static at 1.83 hours, for those only needing an NGT it had dropped to 1.26 hours from 1.83 hours in prior cycle.

Since the change to only doing x-ray if needed, less than half of patients (n=14/31) of combined patients from past two PDSA cycles required x-ray confirmation resulting in overall reduced radiation exposure and cost. We will now target reducing time to first-feed for those babies requiring an x-ray.