G295(P) DEVELOPMENTAL DELAY IN CHRONIC KIDNEY DISEASE – SERVICE EVALUATION

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Background Chronic kidney disease (CKD) is strongly associated with developmental delay (DD). The underlying condition leading to CKD may include DD as the usual presentation and/or disease progression (e.g. VACTERL, congenital nephrotic syndrome). Also, children with CKD require increased levels of medical intervention with significant associated cardiovascular, haematological and gastrointestinal co-morbidities. Growth can be impaired due to CKD, with a secondary effect on the child's ability for normal development.

Aims To analyse whether children with CKD seen in our tertiary paediatric nephrology clinics have associated DD. Is developmental progression being considered during reviews? And what is being done when a delay is identified?

Methods Twenty CKD patients from our database were randomly chosen for analysis. Paper and electronic records were analysed, using a standardized data collection form. Information collected included: demographics, age when first known to our services, underlying diagnosis, identified DD and referrals made, history of renal transplant, social and safeguarding concerns contributing to difficulties.

Results Age range at time of project: 12 months – 6 years. Most patients (n=14) had first appointment with paediatric nephrology within 4 weeks of life. Most had congenital nephrotic syndrome (n=5), renal dysplasia (n=5) or posterior urethral valves (n=3). VACTERL association, Lowe syndrome, nephrogenic Diabetes insipidus, Wilms tumour, atypical Haemolytic-uraemic syndrome and prematurity with early bowel surgery were also present. Four children had received a kidney transplant. Eight children had DD identified early. Eight patients had neurodevelopmental and six had general paediatric follow up. Social issues were identified in 4 cases and 6 had safeguarding concerns. Two children were removed from biological parents at birth.

Conclusions DD is common in CKD, especially at the severe end of the spectrum, therefore developmental progression should be part of the general assessment of children with CKD. Timely referral to neurodevelopmental paediatrics is strongly advised, if a form of delay is expected as part of their underlying condition or identified along the way. Because the sooner we start supporting these children in the community, in education, the better for their long-term prognosis.

A referral pathway was developed to aid timely referral to neurodevelopmental services in our region.

G296(P) OUTCOME OF NON-INVASIVE VENTILATION (NIV) USED IN PICU PATIENTS

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Retrospective study Paediatric Intensive Care Unit in a tertiary care hospital.

54 Patient's data reviewed between April 2016 to March 2018.

Data was collected from Electronic patient record (EPR) and Metavision and reviewed for different variables as below.

Results Most of the children who received NIV were between 0 – 1 year of age which make up 53.7% of the all who received NIV. Children between 2–5 years make up 24.1%. Percentage of males and females was 66.7 and 33.3 respectively. 37% of the children's weight was between 5–10 kg and 25.9% were 2–5 kg. Major diagnosis was bronchiolitis. Other major diagnosis was LRTI both made up 38.9% and 27.8% respectively. Total 21/54 i.e. 38.8% of the patients had different comorbidities like Genetic problems, metabolic problems, Head injury, neuromuscular problems etc.

34/54 (62.9%) patients were stepped down from mechanical ventilation to NIV. 34/54 (62.9%) patients were escalated from High flow nasal cannula to NIV.

Nasal mask was used in 46% of cases. Face mask was used in 18.5% of the cases.

While using CPAP, 73% of time the fio2% used was less than 50% and only 5.5%-time fio2 was more than 70%. 54% of time the peep used was 8–10 cm of H2O and 43% it was between 5 and 7. When BIPAP was used, EPAP used was 5–6 for 56% and IPAP was used between 18–20 for 63% cases.

In 1/3 cases NIV was used for less than 24 hours. In another 1/3rd NIV was used for up to 3 days. Significant improvement in clinical observations (Especially HR & RR) were noted after starting on NIV.

In 10% of the cases contraindications were present, a degree of upper airway obstruction and a reduced level of consciousness.

Most patients (92.6%) were successfully weaned from NIV. Only 7.4 percent required escalation of support to mechanical ventilation.

1 patient on NIV died as a consequence of a brain tumour.

Conclusion(s) NIV use was effective in avoiding invasive mechanical ventilation in a significant number of patients/inpatients admitted in PICU. NIV was successfully used in patients after stepping down from invasive mechanical ventilation. Close monitoring was the key to the success. Apart from skin damage, no other complications were documented.

G297(P) HYPERTONIC SALINE- AN OPTION FOR TREATMENT OF BRONCHIOLITIS-A LITERATURE REVIEW

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Bronchiolitis is most common lower respiratory tract infection in children up to 2 years of age. It is most common during the winter months and leading cause of hospitalization of children worldwide. Bronchiolitis is caused by Respiratory syncytial virus (RSV) most of the time but there are other pathogens including adenovirus, rhino/entero virus etc. The current management is minimal handling, oxygen supplementation and NG feeding/intravenous fluids. Many studies and randomized control trials(RCTs) have been done and many are still going on for many years to find other medical solutions for the cure of bronchiolitis. Nebulized hypertonic saline(HS) is one of them which has been under many trials.

The aim of this study was to review the current knowledge of HS regarding its efficacy, safety, clinical effects and