Background Central venous catheter (CVC) associated sepsis is a common complication in children with intestinal failure on long-term parenteral nutrition, and is associated with significant morbidity and mortality.

We aimed to examine whether a strategy of using daily prophylactic antibiotic line locks (Gentamicin, Vancomycin or Amikacin) in children with intestinal failure on long-term parenteral nutrition, at high risk of CVC-associated sepsis, reduced rates of CVC-associated sepsis and antibiotic usage.

Methods Retrospective review of clinical notes of 12 children in whom antibiotic line locks have been used in the preceding five years, analysing rates of suspected and confirmed (blood culture or bacterial DNA positive) CVC-associated sepsis and in-patient antibiotic days, off and on antibiotic line locks using each child as their own historical control. Data was analysed using STATA version 10, using Cox proportional hazards survival models.

Results The twelve children studied received parenteral nutrition for a total of 8003 CVC days over the study period (5709 off lock, and 2294 on antibiotic line lock.) There were 99 episodes of suspected CVC-associated sepsis, and 43 episodes of confirmed (blood-culture/bacterial DNA positive) CVC-associated sepsis.

Children on antibiotic line locks had reduced rates of confirmed CVC-associated sepsis from 6.1 to 3.5 episodes per 1000 CVC days but this was not statistically significant ($p = 0.2$.) They also had reduced rates of suspected CVC-associated sepsis from 14.7 to 8.7 episodes per 1000 CVC days ($p = 0.04$.) Mean rates of in-patient antibiotic days were reduced on antibiotic locks; 148 compared with 89 days/per 1000 CVC days, $p = 0.8$.

Younger children were at higher risk of having an episode of suspected CVC associated sepsis than older children. Children under two years of age had significantly higher rates of gram-negative sepsis than children over two years of age ($p = 0.034$.) Given the high mortality associated with gram-negative sepsis this group may benefit the most from prophylactic antibiotic line locks

Conclusion Antibiotic line locks may reduce rates of CVC-associated sepsis and in-patient antibiotic days in children with intestinal failure on long-term parenteral nutrition. In view of the potential implications of these findings, further larger randomised studies are required to evaluate this approach.

G366(P) IMPEDANCE MONITORING IN PAEDIATRIC GASTRO-OESOPHAGEAL REFLUX DISEASE: AN EVALUATION OF ITS USE AND CLINICAL VALUE

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We sought to evaluate the use of combined oesophageal multi-channel intraluminal impedance and pH (MII-pH) monitoring in the Paediatric department of a large tertiary hospital, and to determine whether there is added value of MII-pH monitoring beyond that of conventional pH monitoring.

We conducted a retrospective study of all paediatric patients who underwent MII-pH monitoring during a two year period (01/01/2012–31/12/2013) in a large tertiary hospital. We analysed the demographics, indications for investigation and

II-pH results for each patient. We assessed the effect of anti-reflux treatment on MII-pH results and compared the relative contribution of MII data with pH data in each test.

96 studies were performed on 96 patients (mean age 3 years 8 months, range 2 months to 16 years, 55 male, 41 female). 57 studies produced interpretable results of greater than 20 h' duration. Respiratory symptoms were the most common indication for study. Patients who had taken anti-reflux medication at any point in the week prior to the study were significantly less likely to have an abnormal reflux index (RI; $p < 0.05$) but were not less likely to have positive symptom correlation. When considering patients off treatment in the week prior to the study, patients with an abnormal RI were found to have a significantly higher frequency of both total reflux and acid reflux events compared to those with a normal RI ($p < 0.001$), and were also more likely to have a positive correlation between their symptoms and impedance-detected reflux events ($p < 0.01$). 19 patients had both an interpretable MII-pH study and a contemporaneous oesophageal biopsy; however, no significant correlation was seen between biopsy result and any of the MII-pH indices.

This study provides a comprehensive review of the use of MII-pH monitoring in a large tertiary centre. It reinforces previous literature findings that anti-reflux medication reduces oesophageal acid exposure, but does not necessarily reduce total reflux frequency or symptom correlation. The value added by MII-pH monitoring beyond that of conventional pH monitoring remains to be established. The results here support the use of RI (derived from pH monitoring) as an indicator for reflux disease in patients off treatment.

G367(P) A CHUBBY CHILD: IS THIS A SIGN OF HEALTH OR MALNUTRITION?

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A fifteen month old British girl presented with severe anaemia, anasarca, dermatitis, hepatomegaly, hypo-pigmented hair, hair loss and global developmental delay. Initial examination revealed the patient to be of appropriate weight however her height was severely stunted. Blood tests revealed severe iron deficiency anaemia, Vitamin B12 deficiency, and various other vitamin/mineral deficiencies, low albumin and total protein levels. A dietary history revealed she was mainly breastfed from a strict vegan mother. A diagnosis of Kwashiorkor was made and management was commenced. There was no evidence of other pathology and safeguarding procedures were implemented to support the family.

This case illustrates a classical diagnosis commonly made in developing countries of the World as a result of malnutrition. It is not commonly encountered in the developed world due to a strong vigilant network of support for all children in the community and financial support for people with lower socioeconomic status in countries such as the UK.

Whilst Kwashiorkor's and other forms of protein-energy malnutrition are commonly encountered in developing countries, clinicians and other healthcare providers training in the West have often not encountered them in clinical practice. This depicts the importance of constant learning and maintaining a broader vision when assessing children.