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.

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 where 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.