## P-25

### Case Series of Parenteral Nutrition-dependent Children with Thiamine Deficiency from Withholding Intravenous Multivitamin due to Factitious Disorder Imposed on Another

Huang A[1], Rungvivatjarus T[2], Herdes R[1], Mouat L[2], Kerner J[1], Bernard L[2]
[1]*Stanford Lucile Packard Children's Hospital,* [2]*UCSD Rady Children's Hospital*

**Introduction:** We present the first known case series of thiamine deficiency (TD) in two total parenteral nutrition (TPN)–dependent children from withholding multivitamin infusion (MVI) due to Factitious Disorder Imposed on Another (FDIA), or Munchausen by proxy.
**Methods:** Case 1: A teenager with TPN-dependence from feeding intolerance and chronic pain presented with lethargy and in physiological shock. She had pancytopenia, severe lactic acidosis, coagulopathy, acute kidney injury. Her echocardiogram showed low left ventricular systolic shortening. Her undetectable thiamine level indicated wet beriberi. Medical supply staff noted unused MVI bags during their home visits.
Case 2: A child with TPN-dependence due to presumed dysmotility and wheelchair bound of unknown etiology presented with vertical nystagmus/saccadic eye movements. She had severe lactic acidosis, coagulopathy, electrolyte derangements and low thiamine level. Magnetic resonance imaging of the head with spectroscopy showed involvement seen in Wernicke's encephalopathy.
In both cases, the patients improved after thiamine replacement. A multidisciplinary team relayed FDIA concerns to Child Protective Services (CPS), leading to separation from the alleged perpetrators. Both patients are now consuming 100% of their calories enterally with no clinical concerns.
Consent was not obtained due to the primary caregivers being the alleged FDIA perpetuators. This case series fulfills ethical requirements due to de-identification of the patients.
**Results:** Our patients' TD diagnosis was based on symptoms, laboratory values/imaging, and resolution of symptoms with thiamine. TD in TPN-dependent children has only been reported during MVI shortage, lack of MVI use in the standard of care, and human error corrected with reeducation. Both cases displayed red flag indicators of FDIA. A multidisciplinary team was critical in the assessment of the clinical histories, communication of expert testimonial to CPS, and removal of patients from the caregivers' custodies.
**Conclusion:** TD in a TPN-dependent child is rare and should elicit concern for non-compliance or FDIA. Prompt recognition of FDIA is imperative for intestinal rehabilitation providers. FDIA should be addressed with a multidisciplinary team to improve victims' outcomes.

## P-26

### Preoperative Personalised Surgical Planning for Patient Undergoing Spiral Intestinal Lengthening and Tailoring: A Mathematical Approach

Mussi E[2], Coletta R[1,3], Morabito A[1,2]
[1]*Meyer Children's Hospital,* [2]*University of Florence,* [3]*University of Salford*

Autologous gastrointestinal surgical procedures are an important surgical tool for patient suffering SBS. However, these surgical procedures need extensive experience due to the limited number of cases and their high risk of complications.
Despite LILT and STEP have developed large experience, SILT has been proposed only in the recent years and no long term follow up is still reported so far.
One of the key characteristics of SILT is the longitudinally elongation of intestine by sliding one flap over the other using a spiral incision of the intestinal wall. At the present time, the SILT spiral incision seems to be influenced by surgical experience in AGIR, making this procedure very difficult to reproduce safely.
To overtake this limit, we developed and validated a mathematical model, tailored on patient's specific anatomical data, which aims to help the surgeon in defining the optimal incisions to perform SILT.
Using this mathematical preoperative model, it is possible to predict the final shape of selected intestinal segment. Such tool can assist the physician in surgery room, improving the procedure and reducing surgical times.