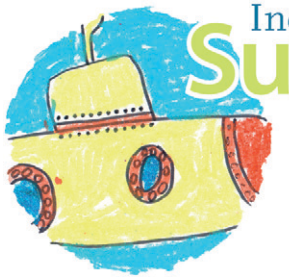

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4 Failure to Thrive and Electrolyte Abnormalities in a 3-year-old Girl

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PRESENTATION

A 3-year-old girl presents to the emergency department after being referred from a pediatric gastroenterologist for failure to thrive. The girl's foster mother reports that she has been noticing the child losing weight since she received her custody 7 months earlier. The girl has no significant medical history and, per her biological mother's report, had been developing normally until the previous year. The biological mother supplies photographs and videos to support this claim; however, recent growth charts cannot be obtained. The only growth charts in the record show her at the 50th percentile for length and the 25th percentile for weight at 6 months of age. The foster mother reports frequent choking while eating but denies fever, headache, cough, abdominal pain, gross motor abnormalities, or changes in appetite.

The girl's weight is 9,000 g (<3rd percentile for age) and height is 33.5 in (85 cm) (1.53rd percentile for age). Her vitals are stable. On physical examination, she is an extremely thin child with very little subcutaneous fat and visible bony prominences. She is pale. Her abdomen is distended and tense but nontender. Her liver is enlarged. All other physical examination findings are normal.

The patient is hospitalized. An abdominal ultrasound shows hepatomegaly, with the right lobe of the liver measuring 4.9 in (12.5 cm) in cephalocaudal length. Overnight, she becomes tachycardic to 150 beats/min, tachypneic to 33 breaths/min, and febrile to 100.5°F (38.0°C). Her blood pressure and oxygen saturation level are normal. On examination, she is not in respiratory distress, and her lungs are clear to auscultation without any adventitious sounds. Cardiac examination findings are normal.

Laboratory evaluation at this time shows that since initial presentation, her phosphorus level has dropped from 3.3 to 2.2 mg/dL (from 1.07 to 0.71 mmol/L) and her magnesium level from 1.80 to 1.40 mEq/L (from 0.90 to 0.70 mmol/L); her glucose level has increased from 134 to 238 mg/dL (from 7.4 to 13.2 mmol/L). Electrocardiography shows sinus tachycardia, and a chest radiograph is normal. Owing to abnormalities in vital signs and concerns about electrolyte shifts, the patient is placed on monitors and given nothing by mouth. She is evaluated by a critical care physician, who recommends close monitoring on the floor and slow advancement of diet. Further questioning that evening reveals that since arriving in the emergency department several hours ago, the foster mother has given the girl 1 L of nutritional drink (PediaSure®; Abbott Laboratories, Abbott Park, IL). After being made nothing by mouth, the patient remains stable and is kept on the floor.

The Case Discussion and Suggested Readings appear with the online version of this article at http://pedsinreview.aappublications.org/content/38/3/142.

Case 4: Failure to Thrive and Electrolyte Abnormalities in a 3-year-old Girl

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