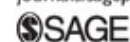


# More Than an Itch: An Unusual Cause of Severe Anemia in a 5-Year-Old

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## Case Report

A 5-year-old girl was brought in to the emergency department (ED) by emergency medical services after a syncopal episode. She was at home with family, sitting in the living room, when she stood up and quickly fell to floor. A family member felt her pulse, reported it to be weak and performed cardiopulmonary resuscitation for 2 minutes, she then started to arouse. Prior to this event, she was fatigued with decreased oral intake and nonspecific abdominal pain for several days. She complained of shortness of breath earlier that day and also had one episode of nonbloody, nonbilious emesis. Prior to this event, she was in her usual state of health except for an active head lice (*Pediculosis capitis*) infestation over the last 2 months. Her mother used an over-the-counter permethrin rinse 3 times, followed the instructions for repeat applications a week apart and combed out the lice as directed but it did not resolve and in fact her family also had head lice infestations. Despite the failed treatment, the patient never saw her pediatrician or a school nurse as she was currently learning from home during the ongoing coronavirus pandemic.

In the ED, she was tachycardic to the 150s with blood pressures within normal limits and febrile up to 38.8°C. Physical examination was concerning for generalized and conjunctival pallor, tachycardia, thready radial pulses, 1/6 vibratory systolic murmur, mild tachypnea, and delayed capillary refill in addition to a severe lice burden consisting of live organisms and eggs visualized in her scalp, hair, and extending down the length of her hair. There was hyperpigmentation on the nape of the neck with healed excoriations. Complete blood cell count (CBC) was remarkable for microcytic anemia, with hemoglobin of 2.5 g/dL and mean corpuscular volume of 65.3 fL. Iron studies were then added as there was a concern for severe anemia secondary to iron deficiency versus possible malignancy (Table 1). Upon further questioning, the patient's diet history was reported

to be varied including vegetables, fruits, meats, and cheeses. Her mother stated she did not drink much milk and although she liked to eat ice chips, she denied ingestion of nonfood substances. Her electrocardiogram was remarkable for sinus tachycardia at 144 bpm but otherwise negative. Chest x-ray was negative for cardiomegaly but did show a left lower lobe opacity which was questionable for pneumonia versus atelectasis. Hematology was then consulted for further management. Slow replenishment with packed red blood cells at a dose of 5 ml/kg was recommended. Given the degree of anemia with persistent tachycardia, she was admitted to the pediatric intensive care unit for further observation and management.

## Hospital Course

She was treated with a total of 434 mL packed red blood cell transfusion and started on daily iron and Vitamin C. Her vitals improved and hemoglobin slowly trended upward. Echocardiogram was obtained to evaluate for cardiac dysfunction given she was at risk for cardiac failure secondary to severe anemia. Her findings were notable for left atrial dilation but otherwise within normal limits. Additional lab work showed an elevated erythrocyte sedimentation rate of 81 mm/h, lactate dehydrogenase of 333 U/L, and mildly elevated reticulocyte count of 3.5%. These findings were discussed with hematology who expressed no concern for bone marrow suppression. Other etiologies of blood

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