Like other “great mimickers,” lead toxicity presents with a diverse set of signs and symptoms that include central and peripheral neuropathy, as well as GI, renal, and hematologic manifestations.

Geophagy is a form of pica that increases risk of exposure to heavy metal ingestion.

Case Description

HPI: 44 year old Spanish-only speaking woman presented to the ED after 1 week of abdominal pain, nausea, vomiting and diarrhea. For 2 days prior to admission she has been constipated and unable to tolerate oral intake. She also notes that she has had worsening pain in her legs for the last week, and has chronic paresthesias in her hands. She has no recent sick contacts, exposure to wildlife, streams, chemicals or antibiotics.

Exam: Vital signs were within normal limits. The remainder of her exam was notable for pale skin, lethargy and tenderness in her LLQ and bilateral feet.

Laboratory Studies

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MCV 68.3
RDW 17.6

• U/A – 5.5, 1.006, trace LE, no blood/nitrite
• UPT – negative

Blood smear
Note microcytic, hypochromic erythrocytes with basophilic stippling (arrows).

On further questioning, the patient and daughter admitted that immediately prior to symptom onset, the patient had consumed part of a small, glazed ceramic pot:

Blood lead level: 109 mcg/dL

Hospital Course

• The patient underwent whole bowel irrigation and started succimer 10 mg/kg PO tid.
• She improved clinically, and was discharged from the hospital 6 days later on 14 additional days of oral succimer treatment.

Discussion

Lead poisoning

• Lead poisoning is common in children, rare in adults.
• Most adult exposures are occupational.
• Absorption via respiratory and oral routes.
• Acute toxicity: constipation, colic, hemolytic anemia and encephalopathy.
• Chronic toxicity: Fatigue, abdominal pain, encephalopathy, neuropathy, anemia, nephrotoxicity, hypertension.

Geophagy

• Practice of eating clay, soil or chalk.
• Common in animal and human world.
• Most widely described among pregnant women.
• Case reports from across the globe:
  • Proposed reasons for geophagy:
    o Alleviate hunger.
    o Treatment for GI distress or infection.
    o Detoxification of food sources.
    o Source of micronutrients.
  • Studies of commonly ingested clays:
    o Provides free Ca, Mn, Mg
    o Binds Fe
    o Samples high in Pb, As, Cd, Hg

References & Acknowledgements