CLINICAL VIGNETTE

Acute Nausea, Vomiting, and Diarrhea Presenting as Eosinophilic Gastroenterocolitis

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Case Presentation

A 24-year-old male presented to the emergency department with 10 days of diarrhea, nausea, vomiting, and abdominal pain. He reported onset of 3-4 watery, melanotic stools that eventually became non-bloody. He also noted bloating, early satiety, and upper abdominal pain, as well as postprandial non-bloody emesis. He had no fevers, weight loss or dysphagia. There was no known sick contacts or recent international travel. He had traveled to another state two weeks prior. He was seen in urgent care 4 days after symptoms started and given loperamide which helped resolve his diarrhea.

The patient had no significant prior medical history, he was not taking prescription medications and had no significant alcohol, tobacco or drug use. He was sexually active with men using condoms and had no history of prior sexually transmitted infections.

Vital signs in the emergency department, included afebrile, heart rate 98/min, blood pressure 109/77 and oxygen saturation of 100% on room air. Initial labs indicated elevated white blood cell count of 27.5 K with 9700 eosinophils.

Due to eosinophilia, hematology/oncology (heme/onc) and infectious disease (ID) were consulted. Infectious causes were excluded including Strongyloides, Schistosoma, Trichinella and Coccidioides, as well as HIV. Malignancy evaluation included unremarkable BCR-ABL and flow cytometry, and subsequent heme/onc testing was unrevealing. Autoimmune testing including ANA, ANCA, and fecal calprotectin was negative. CT chest/abdomen/pelvis with contrast showed distal thickening of esophagus and diffuse small bowel thickening. Gastroenterology (GI) was consulted and performed push enteroscopy and colonoscopy. Findings included erythema throughout the stomach, ileum, and right/left colon. Biopsies showed increased eosinophils in these areas consistent with eosinophilic gastrointestinal disease.

His symptoms improved with ondansetron as needed for nausea/vomiting, and he was advanced to a regular diet with more formed stools. He was discharged home with ID, heme/onc, and GI follow-up.

Discussion

Eosinophilic gastrointestinal diseases (EGID) include eosinophilic esophagitis, gastritis, enteritis and colitis depending on the affected segment of the GI tract, although they frequently overlap.[1] It is defined by eosinophil-rich inflammation in the absence of other causes for eosinophilia, such as parasitic infections or malignancy.[2] Eosinophilic esophagitis appears to be more prevalent and separate from gastritis, enteritis, and colitis.[3] Our patient's diagnosis of eosinophilic gastroenterocolitis was based on the areas of involvement. The precise incidence is unclear due to lack of epidemiological data as fewer than 300 cases have been reported.[3] In western countries, it may range from 5 to 8 per 100,000 people.[4] The median age of diagnosis is 30 to 50 years of age with increased prevalence in males.[3]

Clinical manifestations include abdominal pain, gastric dysmotility, diarrhea, vomiting, and dysphagia.[2] If the colon is involved, it can present as bloody diarrhea or obstruction.[4] Our patient presented with melena. Diagnostic evaluation includes complete blood count and differential, although patients may have normal blood eosinophil counts. IgE levels may help exclude other causes of eosinophilia along with other infectious testing of stool and blood.[2] Peripheral eosinophil count was not helpful for estimating disease activity or determining response to therapy as it may remain elevated.[1] There is no gold standard for diagnosis. Biopsies from upper and lower gastrointestinal endoscopy showing eosinophilic infiltration support the diagnosis.[2] Treatment includes glucocorticoids, despite limited evidence, as well as elimination diets for inflammation and food allergies.[4]

The natural history of eosinophilic gastroenteritis is largely unknown, with limited follow-up studies. A French study followed patients for 13 years and reported 3 different disease patterns: a single flare present for less than 6 months without relapse; a recurring course defined by at least 2 flares; and continuous disease with persistent symptoms for more than 6 months without remission.[5]

Our young male presenting with acute diarrhea, nausea, and vomiting had persistent elevated peripheral blood eosinophilia which led to further investigation resulting in diagnosis of eosinophilic gastroenterocolitis. Endoscopy showed eosinophil infiltration of the stomach, ileum, and colon. Eosinophilic gastroenterocolitis should be on the differential diagnosis when evaluating gastrointestinal symptoms with persistent elevated eosinophil counts and unrevealing testing for infectious or parasitic etiologies.

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