Eosinophilic Ascites: Rare Presentations of Eosinophilic Gastroenteritis (EGE)

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Case Presentation

A 33-year-old male with schizophrenia and suspected familial adenomatous polyposis (FAP) was admitted with 2 days of nausea, vomiting, and diarrhea associated with 10 lbs. weight loss over the past 2 weeks. Exam was notable for abdominal distension with shifting dullness and diffused tenderness. Initial labs showed normal electrolytes and liver chemistries, WBC $13.8x10^3/\mu L$ ($4.3\text{-}10x10^3/\mu L$) with eosinophil predominance (60%, $8.29X10^3/\mu L$ ($0.04\text{-}0.54X10^3/\mu L$), CRP 17.43mg/L (0-3mg/L), and creatinine 1.5mg/dL (0.7-1.3mg/dL). Stool studies were negative for bacterial, ova, and parasitic infection. Further blood work showed normal IgE, fecal calprotectin, and strongyloides IgG. Flow cytometry did not reveal any myelolymphoproliferative findings. Abdominal ultrasound showed hepatosplenomegaly with large ascites. He underwent paracentesis revealed WBC 12,154 with 97% eosinophil count and negative gram stain and AFB culture. He underwent push enteroscopy which showed esophagitis, duodenitis and normal jejunum, and flexible sigmoidoscopy which showed distal colonic edema with patchy erythematous mucosa (Figure 1). Random biopsies were obtained from different parts of the gastrointestinal tract revealed increased eosinophils (up to 50 eosinophils/HPF) in duodenum consistent with eosinophilic gastroenteritis (EGE) (Figure 2). Patient was started on 14 days of prednisone 40mg daily with taper. Patient was seen in clinic 2 weeks later with normal eosinophil count and resolution of symptoms.

Discussion

EGE is a rare disorder characterized by eosinophilic infiltration of the gastrointestinal tract in the absence of other causes of intestinal eosinophilia.[1] Clinical presentations of EGE are related to the layers and the extent of the bowel involved.[2] While eosinophilic infiltration on endoscopic biopsy suggest predominantly mucosal disease, patient with subserosal involvement typically presents with eosinophilic ascites. Our patient has evidence of both mucosal and subserosal involvement which eventually response to steroid therapy.

Conclusion

Eosinophilic gastroenteritis should be suspected in patient presenting with gastrointestinal symptoms associated with eosinophilic ascites and peripheral eosinophilia. Endoscopic evaluation should be pursued to confirm the diagnosis.

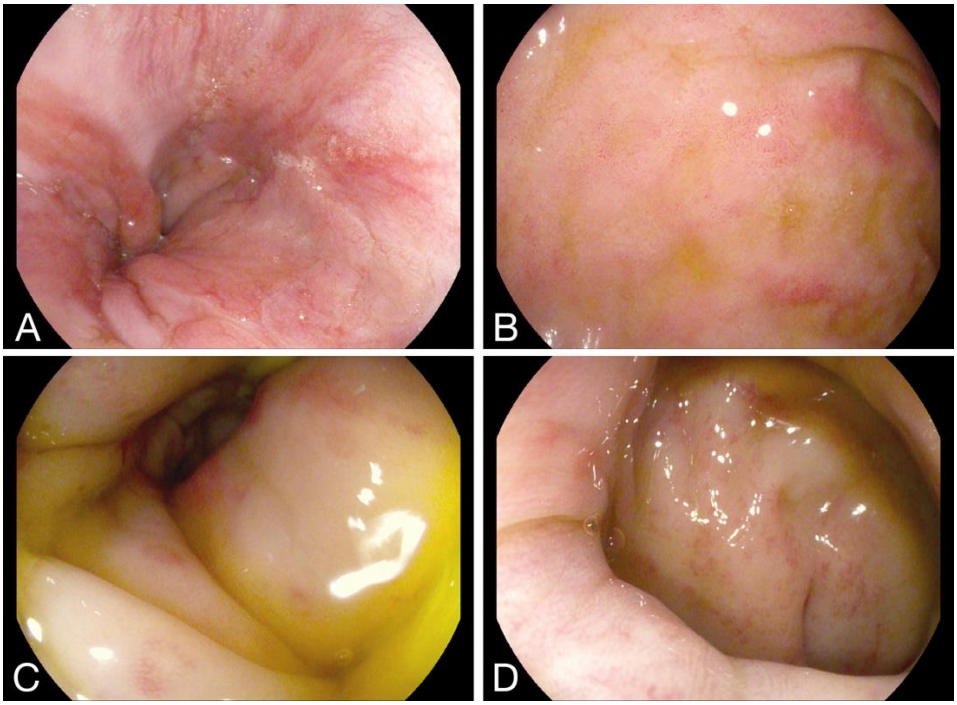

Figure 1. A) esophagitis, B) duodenitis, C & D) distal colonic edema with patchy erythematous mucosa

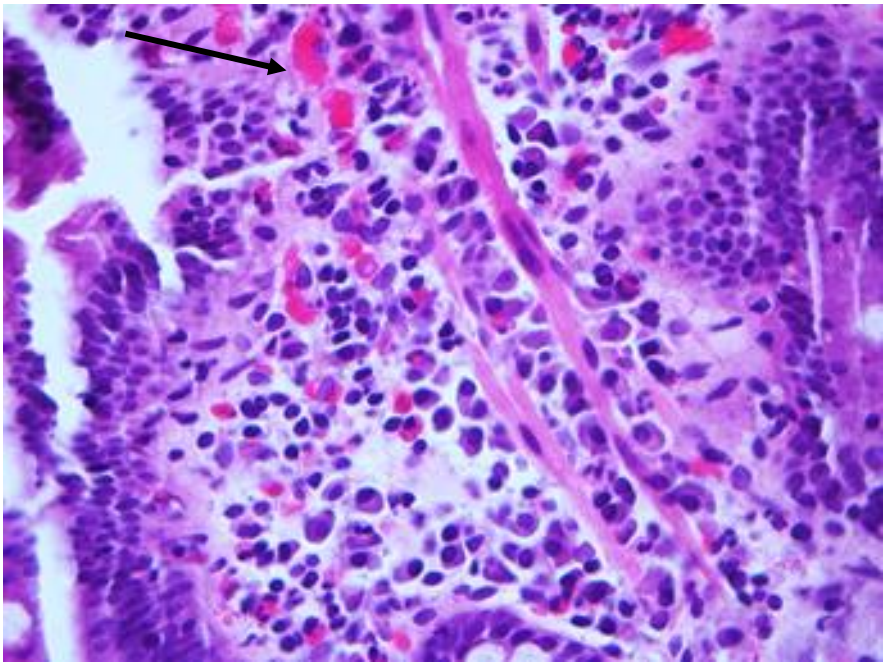

Figure 2. Eosinophilic infiltration (arrow) in mucosal layer of duodenum

References:

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2. Talley NJ SR, Phillips SF, Zinsmeister AR. Eosinophilic gastroenteritis: a clinicopathological study of patients with disease of the mucosa, muscle layer, and subserosal tissues. Gut 1990:54-58.