Eosinophilic Ascites: Rare Presentations of Eosinophilic Gastroenteritis

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INTRODUCTION

Eosinophilic gastroenteritis (EGE) is a rare disorder characterized by eosinophilic infiltration of the gastrointestinal tract in the absence of other causes of intestinal eosinophilia.[1]

We presented a case of eosinophilic gastroenteritis complicated by eosinophilic ascites

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

- Normal electrolytes and liver chemistries
- WBC 13.8x10^3/μL with eosinophil predominance (60%, 8.29X10^3/μL) (see **Figure 1** for trend)
- CRP 17.43mg/L
- Creatinine 1.5mg/dL

Stool studies were negative for bacterial, ova, and parasitic infection. Also negative for fecal calprotectin, and strongyloides

Further blood work showed normal IgE. 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, AFB, and fungal 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 2**). Random biopsies were obtained from different parts of the gastrointestinal tract revealed increased eosinophils (up to 50 eosinophils/HPF) in duodenum consistent with EGE (**Figure 3**).

Patient was started on 14 days of prednisone 40mg daily with taper with significant improvement of eosinophilia and symptoms on day 2 (**Figure 1**). Patient was seen in clinic 2 weeks later with normal eosinophil count and resolution of symptoms.

EOSINOPHIL TREND

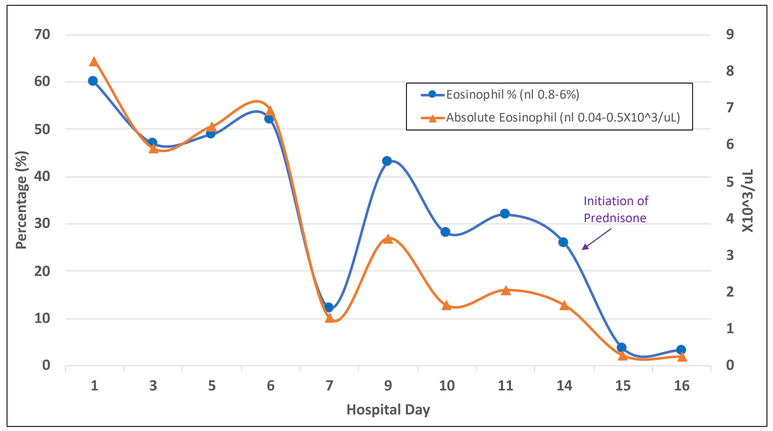

Figure 1. Eosinophil trend during hospitalization with significant improvement after initiation of steroid

ENDOSCOPIC FINDING

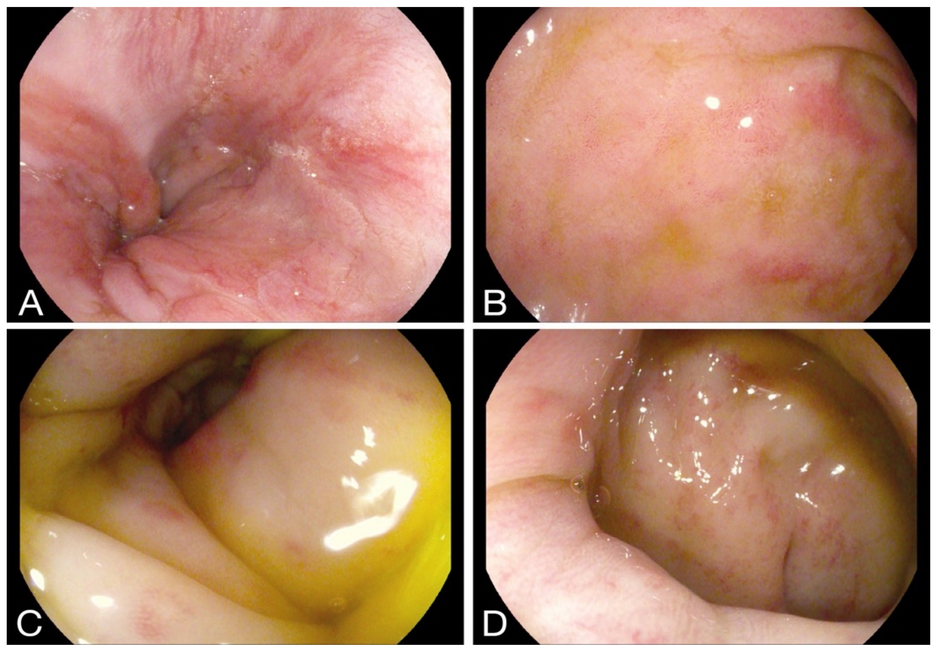

Figure 2. A) esophagitis, B) duodenitis, C & D) distal colonic edema with patchy erythematous mucosa

PATHOLOGY

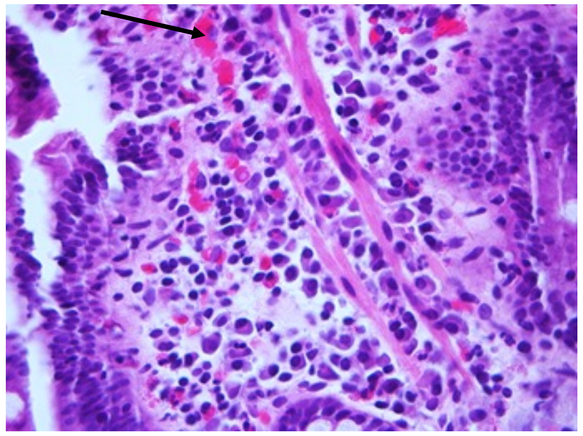

Figure 2. Eosinophilic infiltration (arrow) in mucosal layer of duodenum

DISCUSSION AND CONCLUSION

The diagnosis of EGE requires histological demonstration of eosinophilic infiltration into the GI tract or presence of high eosinophil count in ascetic liquid, and exclusion of other causes of tissue eosinophilia [2]

Clinical presentations of EGE are related to the layers and the extent of the bowel involved [3] While eosinophilic infiltration on endoscopic biopsy suggest predominantly mucosal disease, patient with subserosal involvement typically presents with eosinophilic ascites

Treatment of EGE includes diet modification (eg six food elimination diet) with glucocorticoid use reserved in moderate to severe disease.

Our patient has evidence of both mucosal and subserosal involvement which eventually response to steroid therapy

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