A case of early eosinophilic gastroenteritis with dramatic response to steroids

Dear Sir,

Eosinophilic gastroenteritis is a rare disorder that can present with various gastrointestinal manifestations depending on the specific site and specific layer of the gastrointestinal tract involved. Majority of the cases involve stomach and proximal small bowel. The diagnostic criteria include demonstration of eosinophilic infiltration of bowel wall, lack of evidence of extra intestinal disease and exclusion of other causes of peripheral eosinophilia.1

The therapeutic role of steroids and antihelminthic drugs in the treatment of eosinophilic gastroenteritis is not established. In a few cases, steroids have produced symptomatic improvement in controlling malabsorption syndrome.2

We report a case, wherein mucosal eosinophilic gastroenteritis was confirmed on endoscopic biopsy and which responded dramatically to steroids thus preventing possible grave complications that could have developed in later stages of the disease like ascites and intestinal obstruction needing surgical intervention.

A 21 year old female was admitted to Y. C. Rural Hospital, Latur with complaints of abdominal pain, dyspepsia, nausea, vomiting and diarrhea since 4 months. The case was previously diagnosed as chronic gastritis at another clinic and treated accordingly with antacids and antibiotics, in vain. After thorough clinical examination at our centre, she was advised routine hematological and serological investigations, stool examination, endoscopic examination and endoscopic biopsy of the gastrointestinal tract. Hemogram performed on an ADVIA-VX revealed a raised total WBC count of 30700/cmm with a differential count of P42%L20%M02%E36%B00%. The absolute eosinophil count was 11,052/cmm. There was no evidence of any parasite on peripheral blood smears. The stool examination was positive for occult blood. No parasite was detected. Stool culture was also sterile. On endoscopic examination of upper GI tract, the esophagus was normal. The pyloric end of stomach and duodenum showed small, superficial ulcers with inflammation (Fig. 1). The CT abdomen and chest X-ray were normal. A diagnosis of early eosinophilic gastroenteritis was made after excluding other causes of peripheral eosinophilia. The diagnosis was confirmed on histopathological examination of gastric and duodenal biopsies, both of which revealed dense eosinophilic infiltrates (Fig. 2) in the lamina propria and submucosa. The muscularis and serosa did not reveal any infiltration. Furthermore, the diagnosis was strongly supported by raised IgE levels on serum immunoelectrophoresis.

Based on these findings, a final diagnosis of early eosinophilic gastroenteritis was made by excluding other causes of peripheral eosinophilia with the help of clinical and laboratory data. The patient was put on steroid therapy and she responded well. After 6 months a follow up endoscopy with a review biopsy was performed. The biopsy did not reveal any eosinophilic infiltrate in the mucosa and lamina propria (Fig. 3). The patient is doing well till date. Hence, the diagnosis was confirmed as early eosinophilic gastroenteritis that showed dramatic response to steroids.

Eosinophilic gastroenteritis is an uncommon inflammatory disease first described by Kaijser in patients with syphilis who were allergic to neoasphenamine.3 Since then a little less than 300 cases have been reported in the literature. Klein classified the disease, according to the predominance of eosinophilic infiltration in the different layers of the gastrointestinal tract namely mucosa, muscularis and subserosa.4 Clinical manifestations vary according to the inflammatory involvement of different layers. Mucosal disease presents as protein losing enteropathy, bleeding or malabsorption. Involvement of muscle layer may cause bowel wall thickening and intestinal obstruction. The subserosal form usually presents as eosinophilic ascites. The present case had mucosal involvement, and had presented as malabsorption syndrome.

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Figure 1  Endoscopy showing superficial ulcers in antrum of stomach.
Eosinophilic gastroenteritis can involve any part of gastrointestinal tract from esophagus down to the rectum. The stomach and duodenum are the most common sites of involvement.\textsuperscript{4–7} The etiology and pathogenesis is not well understood. There is evidence to suggest that a hypersensitivity reaction may play a role.\textsuperscript{8} The presence of peripheral eosinophilia, abundant eosinophils in the gastrointestinal tract and dramatic response to steroids provide some support that the disease is mediated by a hypersensitivity reaction.\textsuperscript{9} More ever a study at Mayo clinic showed that 50\% of patients with eosinophilic gastroenteritis give history of allergy such as asthma, rhinitis, drug allergy and eczema. In the present case there was no history of allergy.

Four criteria are required for the diagnosis of eosinophilic gastroenteritis namely presence of gastrointestinal symptoms, eosinophilic infiltration of gastrointestinal tract, exclusion of parasitic disease and absence of other systemic involvement. The presence of peripheral eosinophilia is not a universal phenomenon.\textsuperscript{10} The role of steroids and antihelminthic drugs is not well established. However, in a few cases, steroids have been reported to produce symptomatic improvement in controlling diarrhea and protein loosing enteropathy. Our case responded dramatically to steroids and is doing well after 6 months. The post treatment biopsy is unremarkable.\textsuperscript{2}

To conclude, every case presenting as malabsorption, with or without peripheral eosinophilia, should be viewed with a high index of suspicion for eosinophilic gastroenteritis as early endoscopic biopsy and low dose steroid therapy can prevent grave complications and morbidity of this disease.

\textbf{References}


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