Title: Steroid-Refractory Eosinophilic Gastroenteritis Responsive to a Leukotriene Inhibitor.

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Eosinophilic gastroenteritis is characterized by gastrointestinal symptoms and eosinophilic infiltration of the gastrointestinal tract. This is a rare and likely underreported condition. Clinical manifestations depend upon the involved portion of the GI tract. More than 90% of cases respond to steroids, and several case reports have described the successful use of montelukast as a steroid sparing agent. We report what we believe to be the first case of steroid-refractory eosinophilic gastroenteritis responding to a leukotriene inhibitor for acute remission.

A 28 year old man was referred to the gastroenterology service with recurrent severe epigastric postprandial abdominal pain, nausea, vomiting and progressive weight loss of 60 lbs over 3 months. He denied pruritus, skin lesions, fever, night sweats, dyspnea, hemoptysis, chest pain, joint pain or hematuria. The patient's past medical history was unremarkable. He took no medications and had no allergies. He reported a history of intravenous drug use with cessation one year earlier, cigarette smoking and occasional alcohol use. He worked as a flooring installer. There was no family history of inflammatory bowel disease or GI malignancy.

The patient's absolute eosinophil count was 7,300 with a normal CBC profile. There was no evidence of parasitic or other intestinal infection based on stool studies. An esophagogastroduodenoscopy was grossly normal, but eosinophilic infiltration of the lamina propria was evident on duodenal biopsy. Due to the severity of his symptoms, he was prescribed one week of prednisone, 40mg daily, with no improvement in his symptoms,and an increase in his absolute eosinophil count to 12,000. An EGD with random biopsy was repeated, and was again consistent with eosinophilic gastroenteritis. He was subsequently hospitalized and given hydrocortisone 100 mg TID for 72 hours without significant benefit. He did not tolerate a trial of oral cromolyn sodium, and was prescribed montelukast sodium 10mg daily upon hospital discharge. He reported dramatic improvement after 24 hours. His GI symptoms resolved, and he began to gain weight.

Corticosteroids have been reported to be effective in greater than 90% of cases of eosinophilic enteritis. Other drugs such as cromolyn sodium and montelukast sodium have been used in an attempt to limit steroid exposure. This is to our knowledge the first reported case of steroid-refractory eosinophilic gastroenteritis responsive to montelukast sodium, a competitive cysteinyl leukotriene-1 receptor antagonist. This case suggests a potential role for montelukast in patients with eosinophilic gastroenteritis failing to respond to corticosteroids, and further study may be indicated.