GI PATHOLOGY UPDATE
ESINOphILIC GASTROENTERITIS

Case history: A 79 year old man with history of diabetes mellitus, hypothyroidism and right hip prothesis was admitted with small bowel obstruction. An 11cm enterectomy of a thick inflamed bowel was performed. One month after enterectomy the CBC revealed WBC 3.81 with 17% eosinophils.

Endoscopic Findings: Normal stomach and duodenum, both 18 months before the episode of obstruction (Fig. 1) and 4 months after the enterectomy (Fig. 2).

Diagnosis: Eosinophilic Gastroenteritis (EGE)

Discussion: Primary EGE is a rare disorder characterized by eosinophil rich inflammation of one or more gastrointestinal segments. Although peripheral eosinophilia (PE) is not required for confirmation, suspicion should be high when PE is associated with GI symptoms and a history of allergy. Originally described by Kajser in 1937, EGE affects all age groups, predominantly affecting the 3rd and 4th decades of life with variably involved GI segments. In 1970, Klein classified EGE in 3 types: mucosal, mural and serosal, with the respective clinical and pathologic features:

<table>
<thead>
<tr>
<th>Mucosal</th>
<th>Protein losing, Diarrhea, hemorrhage</th>
<th>Mucosal eosinophils, crypt abscesses, villous blunting</th>
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</thead>
<tbody>
<tr>
<td>Mural</td>
<td>Abdominal pain, obstruction, nausea and vomiting</td>
<td>Thick wall, mural eosinophils, normal</td>
</tr>
<tr>
<td>Serosa</td>
<td>Abdominal pain, obstruction, ascites, nausea and vomiting</td>
<td>Serosal and ascitic eosinophils</td>
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Of unknown pathogenesis, a history of allergy is common in all types. The most common allergies being drug, asthma and food intolerance.

Diagnosis of mucosal EGE can be frustrating since eosinophils are normal inhabitants of the GI mucosa with the exception of the esophagus. However, numerous intraepithelial eosinophils with crypt abscesses, erosion or ulceration favor Mucosal type EGE. The patchy infiltrates require multiple biopsies for confirmation. The small bowel villi may be blunted or normal. Eosinophils may infiltrate the muscularis mucosa and submucosa. Mural type EGE is characterized by an eosinophil infiltrate limited to submucosa and a diagnostic ascitic fluid with abundant eosinophils.

The differential diagnosis includes the following conditions: parasites, vasculitis, Crohn disease and Gluten sensitive enteropathy (GSE). Some patients with EGE develop GSE and Dermatitis Herpetiformes on follow up.

Three possible types of disease progression have been described: Initial flare without relapse, multiple flares separated by periods of full remission and chronic disease. Steroid therapy remains the cornerstone of treatment with most patients having a good response.

References:

Carmen González Keelan, MD
cgonzalez@prpathlab.com

Emilio González, MD
Ergt2002@yahoo.com