The Gallbladder Houdini: A Rare Presentation of Eosinophilic Cholecystitis and Gastroenteritis

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Introduction

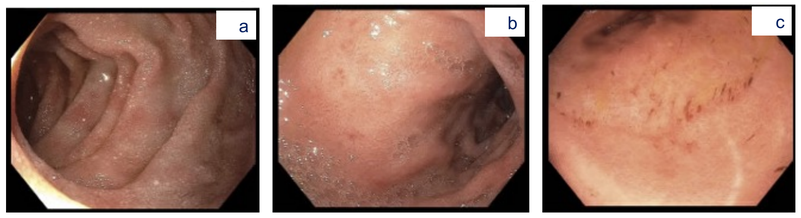
- Eosinophilic gastroenteritis (EG) is an inflammatory condition with eosinophilic infiltration of the GI tract, but biliary tract involvement is rare
- We report a rare case of eosinophilic gastroenteritis with concurrent eosinophilic cholecystitis (only 5 other reported cases)

Case Presentation

- A 24-year-old female with a history of Samter's triad (nasal polyposis, asthma, aspirin allergy) managed with dupilumab presents with chronic LUQ abdominal pain, nausea/vomiting, dysphagia, diarrhea, & weight loss
- **Labs**: Normal LFTs, elevated WBC to 13.6k with 9.2% eosinophils
- **Imaging**: RUQ US showed fatty liver and cholelithiasis with normal caliber CBD.
- **Initial Diagnosis & Management**: Symptoms were thought to be due to gallbladder pathology, leading to a laparoscopic cholecystectomy
- **Repeat presentation**: She had persistent symptoms with follow up labs showing increasing WBC to 26k with 67% eos. Repeat CT abd/pelvis was unremarkable.
- **Initial EGD**: Gastritis with distal esophageal biopsies showing 100 eos/hpf- started on PPI

Case Presentation (cont)

- **Repeat endoscopic workup due to persistent symptoms:**
  - EGD: gastritis & duodenitis with biopsies remarkable for eosinophilia of the stomach and duodenum.
  - Colonoscopy with TI intubation: endoscopically and histologically normal.



Erythema/hyperemia in the second part of the duodenum (a) and the duodenal bulb (b); gastric antrum erosion (c)

- **Surgical pathology from gallbladder**: Early acute on chronic cholecystitis with extensive eosinophilic inflammation.
- **Management**: PPI for eosinophilic esophagitis and prednisone taper for eosinophilic gastroenteritis with symptom resolution.

Discussion

- **Prevalence**: Highest in children but can occur in adults often with concomitant atopic disease in the 3rd-5th decades.
- Presentation can vary depending on the location of involvement & depth of inflammation in the GI tract (mucosal, muscular, or serosal).

Discussion

- **Symptoms**: May include abdominal pain, N/V, diarrhea, and weight loss.
- **Diagnosis**: Based on pathology obtained during endoscopy or surgery.
  - Obtain multiple biopsies given patchy disease
  - Consider transmural biopsies to identify disease limited to the muscular layer.
  - Imaging may show non-specific bowel wall thickening or inflammation.
  - Peripheral eosinophilia is present in ~80% of cases.
- **Management**: The mainstay of therapy is corticosteroids.
  - 90% symptomatic response.
  - Azathioprine can be considered as a steroid sparing agent.
- **Prognosis**: can have single outbreak, recurrent disease, or chronic disease

Conclusion

- Eosinophilic cholecystitis has rarely been reported but often in association with other illnesses.
- Eosinophilic cholecystitis with concurrent EG is rare
- EG should be considered in patients with atopic disease, vague GI symptoms, & peripheral eos