Refractory Case of Malignant Eosinophilic Colitis leading to Ischemic Colitis

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Background

- Eosinophilic colitis (EC) is a rare inflammatory condition involving eosinophilic infiltration of the mucosa in the absence of a secondary cause or peripheral eosinophilia
- Presents with non-specific symptoms including chronic watery diarrhea, abdominal pain, nausea and vomiting
- There is not a well-established diagnostic criteria
- There are no approved FDA therapies

Case

- 30 year old male with a history of EC on azathioprine, pulmonary embolism, and superior mesenteric vein (SMV) thrombus on rivaroxaban presented as a transfer from an outside hospital
- He had multiple admissions at this outside facility for abdominal pain and hematochezia over the past three months
- Labs were significant for AST 1165 U/L, ALT 1165 U/L, sCr 1.6 mg/dl (baseline of 0.7 mg/dl) and venous lactate 1.86 mmo/l
- A flexible sigmoidoscopy showing friability, contact bleeding, surface ulceration, and sloughing of mucosa (Figure 1)
- Colonic biopsies were consistent with active colitis without evidence of chronicity, and 60 eosinophils/hpf
- CT abdomen and pelvis showed no bleeding, but noted a thrombus at the portosplenic confluence extending into the main portal vein and heterogeneous appearance of the liver (Figure 2).
- Patient underwent a subtotal abdominal colectomy with end ileostomy
- His clinical status improved significantly post colectomy with normalization of hepatic and renal function
- After discussion with allergy/immunology, he was initiated on the interleukin-5 (IL-5) inhibitor benralizumab and steroid taper
- Patient was also subsequently started on vedolizumab
- He continued to have rectal bleeding with minimal improvement since discharge.
- Repeat flexible sigmoidoscopy showed diffuse severe erythema, contact bleeding and friable mucosa throughout the rectal pouch (Figure 3)

Endoscopic and Radiological Images

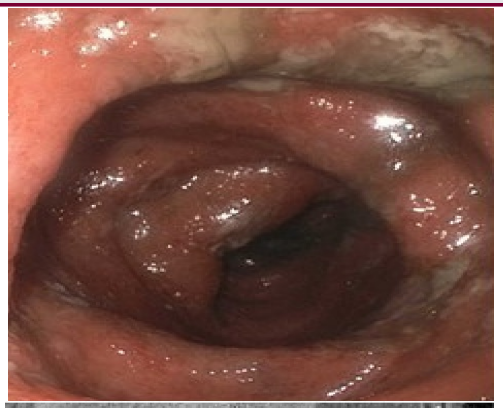

Figure 1. Friable colonic mucosa with aphthous ulceration

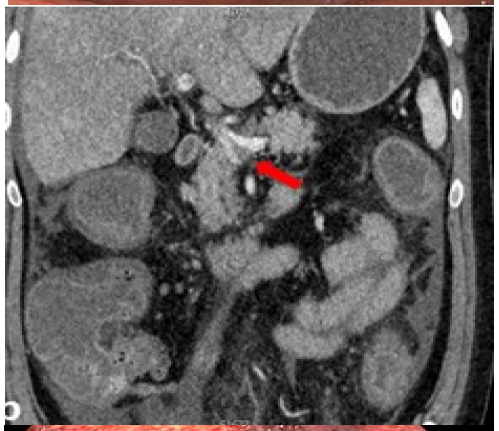

Figure 2. Thrombus at the portosplenic confluence

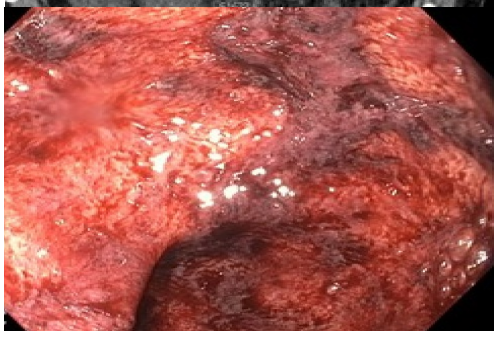

Figure 3. diffuse severe erythema, contact bleeding and friable mucosa throughout the rectal pouch

Discussion

- EC lacks a well-established diagnostic criteria making the exact prevalence of the disease difficult to determine
- Diagnosis of EC must include:
  - Presence of GI symptoms
  - Infiltration of eosinophil into the bowel wall
  - Exclusion of other potential causes
- Symptom severity is largely determined by depth of mucosal eosinophilic invasion
- Endoscopy with subsequent histologic evaluation remains the preferred modality for diagnosis
- There are no FDA approved management options for EC.
  - The available data for biologic therapies is mostly found in treatment of eosinophilic esophagitis
- The IL-5 inhibitor Benralizumab is FDA approved for treatment of eosinophilic asthma and is currently being studied as a therapy for EOE and eosinophilic gastritis
- Vedolizumab is a monoclonal antibody that inhibits the trafficking of T-lymphocytes and eosinophils into the intestinal mucosa

Conclusions

- This is the first case of a patient with severe refractory EC that lead to the development of ischemic colitis. Despite combination therapy for salvage, the patient ultimately underwent a total proctocolectomy with permanent end ileostomy.
- More studies need to be done in treating patients with severe refractory cases of EC.

References

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