Sevelamer Related Colitis Presenting as Painless Hematochezia

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OVERVIEW

Sevelamer-related colitis (SRC) is rarely reported in the literature and likely under recognized as it presents in patients with complex medical comorbidities that confound the diagnosis and can masquerade endoscopically as colonic ischemia. We present two cases of suspected SRC.

CASE PRESENTATIONS

Case 1:

- **58-year-old male with end stage renal disease on hemodialysis (HD) and sevelamer for secondary hyperparathyroidism who presented with two days of painless, large volume hematochezia.**
- **Objective data:**
  - **Vital signs:** within normal limits
  - **Exam:** soft, non-tender abdomen
  - **Laboratory data:** Hgb 9.2g/dL (baseline 15g/dL)
- **Colonoscopy performed with biopsies sent for histology. *(Figures 1A and 2)***

Case 2:

- **60-year-old male with ulcerative pancolitis in deep remission on infliximab hospitalized for necrotizing pancreatitis complicated by acute renal failure and persistent hyperphosphatemia who developed acute-onset painless hematochezia following treatment with sevelamer.**
- **Objective data:**
  - **Vital signs:** Tachycardic to 110s, otherwise normal
  - **Exam:** soft, non-tender abdomen
  - **Laboratory data:** Hgb 7.7g/dL (at baseline)
- **Flexible sigmoidoscopy performed with biopsies sent for histology. *(Figures 1B and 2)***

ENDOSCOPIC FINDINGS

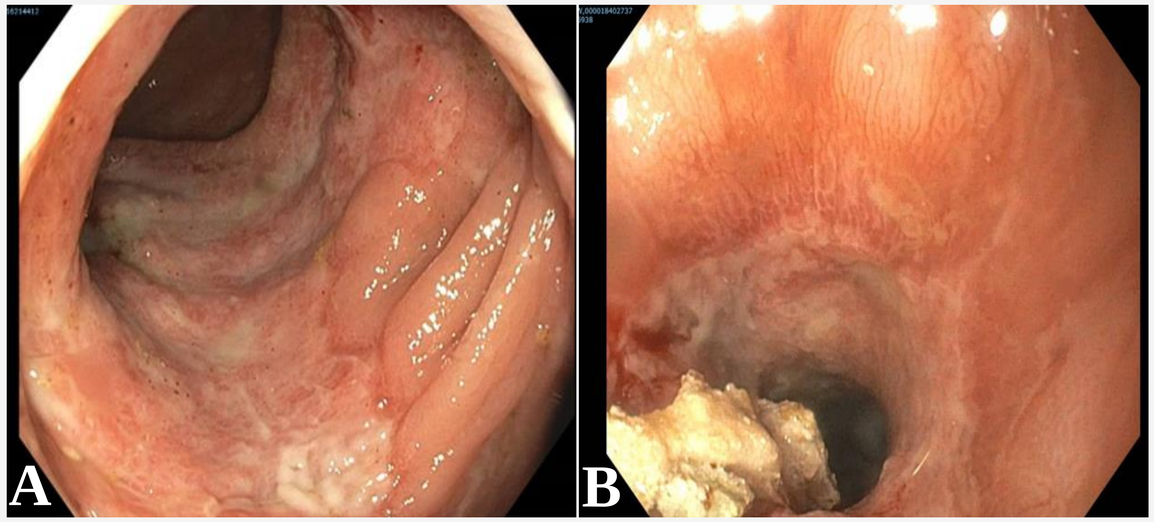

Figure 1: A) Distal transverse colon with 2 cm circumferential ulcer with edema and friability. B) Distal sigmoid colon stricture with luminal narrowing to 9 mm in diameter and circumferential ulcerations and friability.

HISTOLOGIC FINDINGS

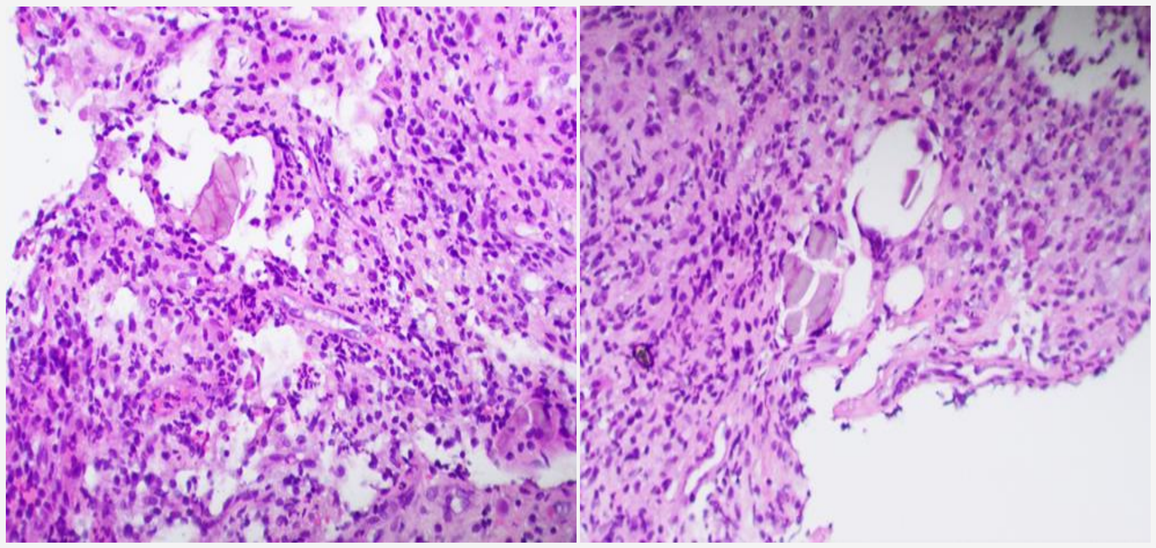

Figure 2: H&E stain, 20x objective: markedly active colitis with crypt architectural distortion, extensive ulceration, fibrinopurulent exudate, and occasional foci of pill crystalline fragments embedded within the fibrinopurulent exudate. These crystalline structures are two-toned in color with an eosinophilic pink hue and rusty yellow coloration, classic for the appearance of sevelamer.

DISCUSSION

- **Sevelamer carbonate is commonly prescribed to patients with chronic kidney disease for treatment of secondary hyperparathyroidism.**
- **By binding dietary phosphate, this anion exchange resin forms an insoluble crystal complex to prevent phosphate's absorption from the GI tract.**
- **When these crystals accumulate, they exert direct mucosal toxicity leading to inflammation, necrosis, and ulceration within the colon.**
- **While typically the colitis associated with sevelamer presents with abdominal pain, these atypical cases highlight the broad spectrum of potential presentations of this disease.**
- **In patients with chronic kidney disease on resin-based phosphate binders presenting with gastrointestinal symptoms, crystal-associated mucosal injury should be considered on the differential as treatment requires discontinuation of the offending medication.**

PATIENT OUTCOMES

In both patients, hematochezia resolved with discontinuation of sevelamer carbonate. An alternative phosphate binder was used.

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