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IMAGE | COLON

Colonic Mass Secondary to Sevelamer-Associated Mucosal Injury

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CASE REPORT

In patients with chronic kidney disease, sevelamer is used to treat hyperphosphatemia; the mechanism of action is intestinal binding of phosphate and subsequent fecal clearance. Known gastrointestinal (GI) side effects include nausea, vomiting, diarrhea, dyspepsia, and, more rarely, abdominal pain and constipation.[1] A 42-year-old woman with hyperphosphatemia secondary to end-stage renal disease was being treated with 800 mg sevelamer every 8 hours. She presented with left lower quadrant abdominal pain and watery diarrhea. Stool cultures and polymerase chain reaction were negative for *Clostridium difficile* infection. Esophagogastroduodenoscopy revealed grade D esophagitis (histochemical staining was negative for cytomegalovirus, herpes simplex virus, and sevelamer crystals) and a 3-cm hiatal hernia but was otherwise normal. Colonoscopy showed a 6 cm, fungating, oozing mass in the proximal sigmoid colon with no evidence of obstruction (Figure 1). Biopsy of the mass showed necrotic tissue with bacterial overgrowth. Acid-fast and periodic acid-Schiff stain highlighted eosinophilic fish-scale crystals consistent with sevelamer deposition (Figure 2).[2] After sevelamer was discontinued, repeat colonoscopy at 3 months showed normal pink mucosa with healthy blood vessels throughout the entire colon (Figure 3).

Sevelamer is a non-absorbable, phosphate-binding resin that acts in the GI tract to limit the absorption of phosphate. It has shown great clinical efficacy in patients with hyperphosphatemia secondary to chronic kidney disease.[1] While GI side effects have been well described, only rare cases have reported serious GI sequelae. One case described a case of colonic fecolith obstruction secondary to sevelamer use given the accumulation of crystals in the biopsy specimen.[3] Patients have been described with ulceration of the sigmoid colon.[4] On histology, sevelamer crystals were also discovered; however, these

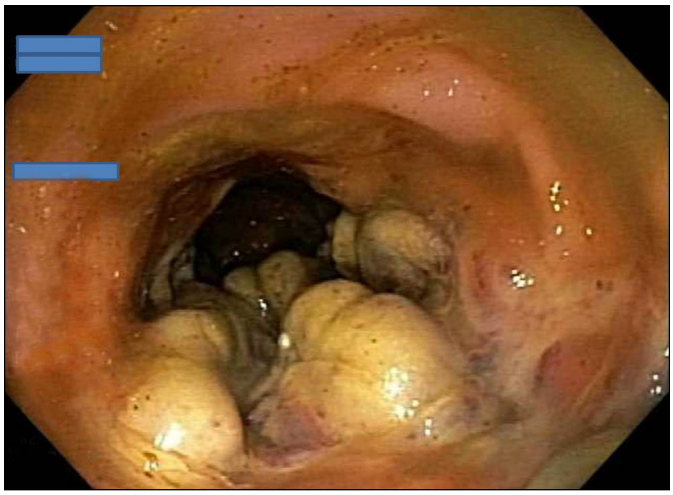

Figure 1. Colonoscopic image of fungating mass in the proximal sigmoid colon.

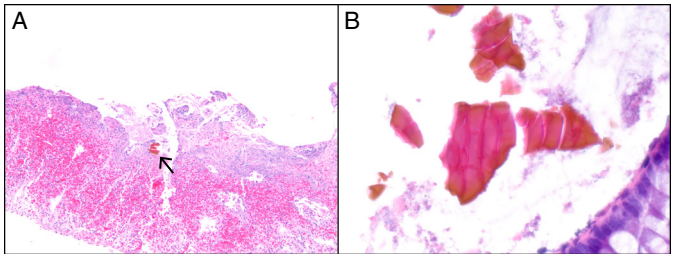

Figure 2. (A) Biopsy of specimen showing inflammatory, necrotic debris, and sevelamer crystals (arrow). (B) Magnified view of sevelamer crystals.

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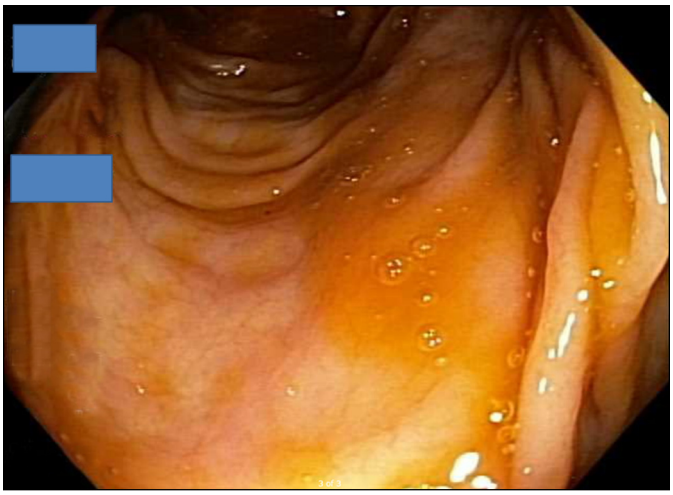

Figure 3. Follow-up colonoscopy at 3 months showing healthy mucosa throughout the colon.

crystals were not associated with the formation of an obstruction or mass. A similar case reported a patient with nonbloody diarrhea found to have a colonic mass secondary to sevelamer ingestion.[5] Unfortunately, follow-up colonoscopy was not reported in this case. To our knowledge, ours is the first case to show complete remission of colonic mass after sevelamer discontinuation.

DISCLOSURES

Author contributions: V. Bansal and P. Aggarwal collected the data, and wrote and edited the manuscript. A. Mittal, P. Aggarwal, and M. Vachhani critically revised the manuscript. N. Aggarwal critically revised the manuscript and is the article guarantor. V. Bansal and P. Aggarwal share first authorship of this manuscript.

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