

BACKGROUND

Drug-induced mucosal injury affecting the gastrointestinal tract is a common presentation with distinct endoscopic and histologic findings.

Sevelamer is a well-known oral phosphate binder used in chronic kidney disease and for patients who have hyperphosphatemia¹.

Sevelamer is usually well tolerated by the patients, but sevelamer crystal deposition within the gastrointestinal tract leading to mucosal injury has been infrequently reported.

CASE DESCRIPTION

34-year-old male with a history of hypertension, obesity class III status post sleeve gastrectomy, and COVID-19, was admitted to the medical intensive care unit for acute hypoxemic respiratory failure.

The hospital course was complicated by bright red blood per rectum four weeks following the initiation of hemodialysis and Sevelamer.

He was initiated on PPI therapy and transfused with packed red blood cells in accordance with acute gastrointestinal bleeding guidelines.

RESULTS

CTA abdomen pelvis and mesenteric angiogram were negative for an active bleeding source.

Upper GI endoscopy showed a Forest Class III duodenal bulb ulcer.

Colonoscopy showed a region of asymmetric severe friable ulcerated mucosa with loss of vascular pattern in the cecum and ascending colon (figure 1). Biopsies demonstrated mucosal ulcerations with granulation tissue and Sevelamer crystal deposits (figure 2).

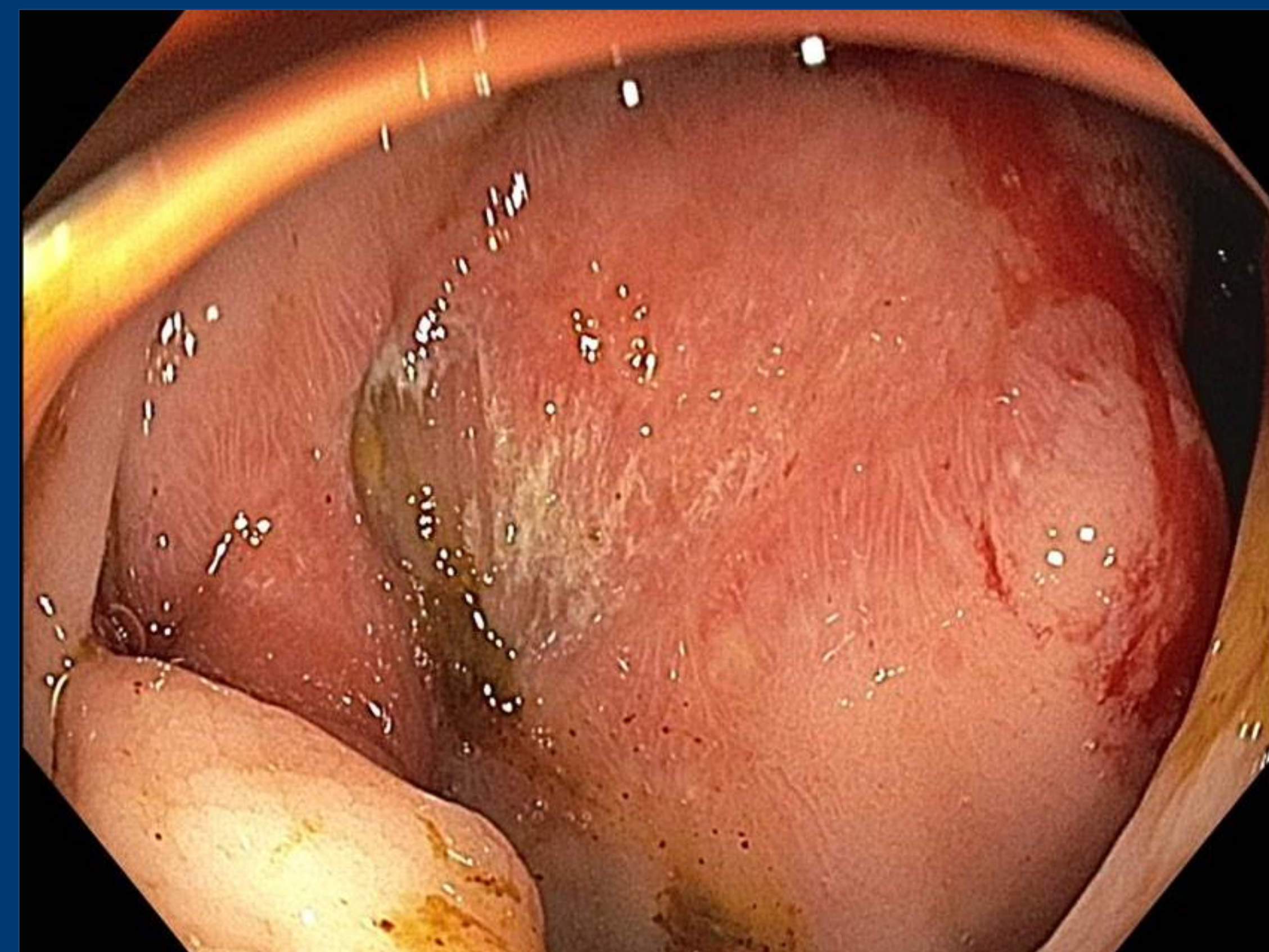


Figure 1. Colonoscopic findings demonstrating erythematous ulcerated mucosa in the proximal ascending colon

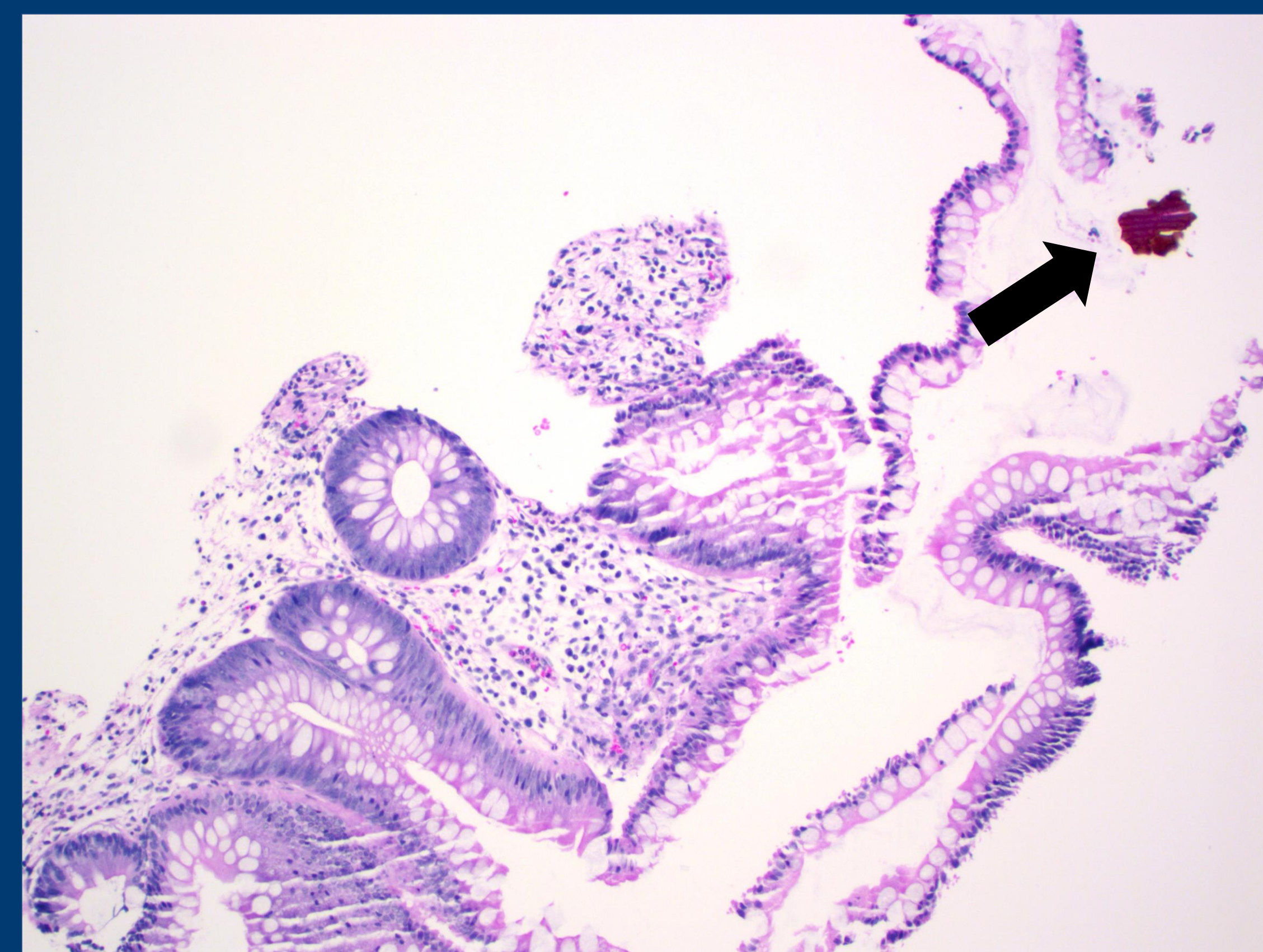


Figure 2. Biopsy from the proximal ascending colon showing granulation tissue with ulceration. Black arrow indicates the Sevelamer Crystal, with the characteristic "Fish Scale" pattern

DISCUSSION

Crystal induced colonic mucosal injury has been reported with the use of oral resin-based binders such as sevelamer and kayexalate¹.

Sevelamer is an anion exchange resin, which upon activation in the acidic milieu of the stomach, binds with phosphate and prevents its absorption in the intestine¹.

Sevelamer induced colitis can cause colonic ulcerations, lower GI bleeding, pseudo polyps, and colonic stricture formation².

Risk factors for Sevelamer induced colitis include chronic constipation and uncontrolled diabetes².

CONCLUSION

As with prior reports, we show similar endoscopic and histological findings from our patient consistent with this rare entity.

REFERENCES

¹Swanson BJ et al. Sevelamer crystals in the gastrointestinal tract (GIT): a new entity associated with mucosal injury. *Am J Surg Pathol.* 2013, 37(11):1686-1693. PMID: 24061514.

²Yuste C et al. Gastrointestinal complications induced by sevelamer crystals. *Clin Kidney J.* 2017, 10(4):539-544. PMID: 28852493.