ACG CASE REPORTS JOURNAL

IMAGE | ENDOSCOPY

Colonic Venous Blebs Secondary to Gastrointestinal Amyloidosis

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CASE REPORT

A 72-year-old woman, without prior gastrointestinal disease, presented to clinic with abdominal pain, nausea, vomiting, poor appetite, fatigue, and weight loss. She denied melena or hematochezia. Her past colonoscopy, at the age of 55 years, was unremarkable.

Upper endoscopy seemed normal. Colonoscopy demonstrated noninflamed colonic mucosa with multiple venous blebs throughout the colon (Figure 1). One small venous bleb was resected with a cold snare for histopathologic analysis. A clip was placed at the site of resection because of concern for bleeding. Hematoxylin and eosin staining revealed extensive submucosal band-like deposition of pink amorphous material involving the blood vessels in the lamina propria and muscularis propria (Figure 2). Congo red staining under polarized light revealed apple-green birefringence, consistent with amyloidosis (Figure 2). Random duodenal and colonic biopsies similarly revealed amyloidosis. There were no postprocedural complications.

Serum protein electrophoresis showed a lambda free light chain of 8,429 mg/L and a kappa chain of 17.4 mg/L. Bone marrow biopsy of the left iliac crest demonstrated 20% monoclonal plasma cells. The patient was diagnosed with gastrointestinal amyloid light chain (AL) amyloidosis, secondary to multiple myeloma, and chemotherapy was initiated. After 1 month, the patient's lambda free light chain fell to 145 mg/L and her gastrointestinal symptoms improved. There were no follow-up colonoscopies. The patient ultimately developed progressive diastolic heart failure from cardiac amyloidosis (diagnosed based on clinical signs of heart failure and decreased global longitudinal left ventricular strain, with sparing of the apex, on echocardiogram). She unfortunately died a year after diagnosis.

Approximately 10%–15% of multiple myeloma patients have AL amyloidosis.[1] Gastrointestinal involvement of amyloidosis is not uncommon. In a study of 2,334 patients with amyloidosis of any subtype, 3% had biopsy-proven involvement of the gastrointestinal tract.[2] Another analysis of 769 patients with AL amyloidosis indicated that biopsy-proven gastrointestinal amyloidosis

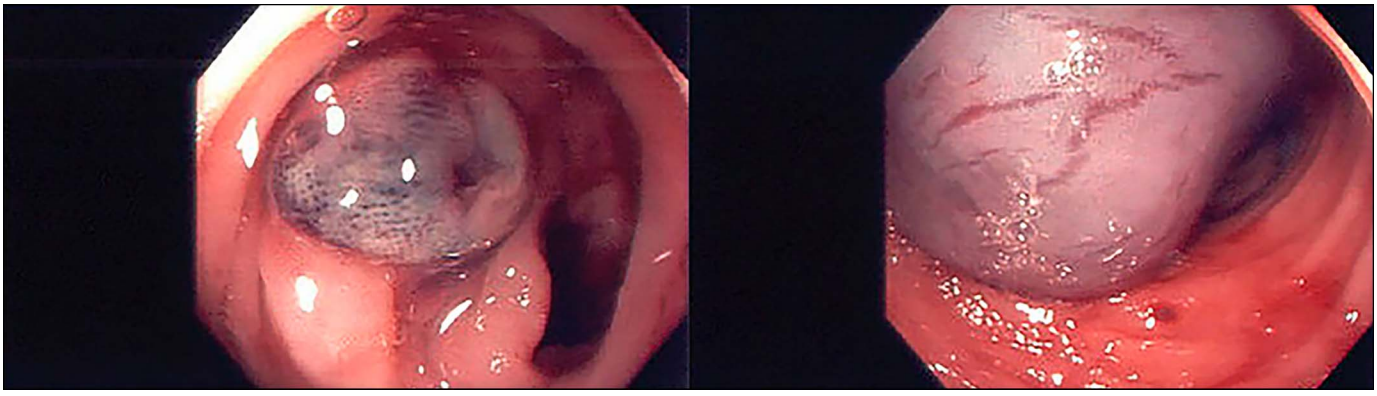

Figure 1. Colonic venous blebs as noted on colonoscopy.

ACG Case Rep J 2022;9:e00783. doi:10.14309/crj.0000000000000783. Published online: June 1, 2022

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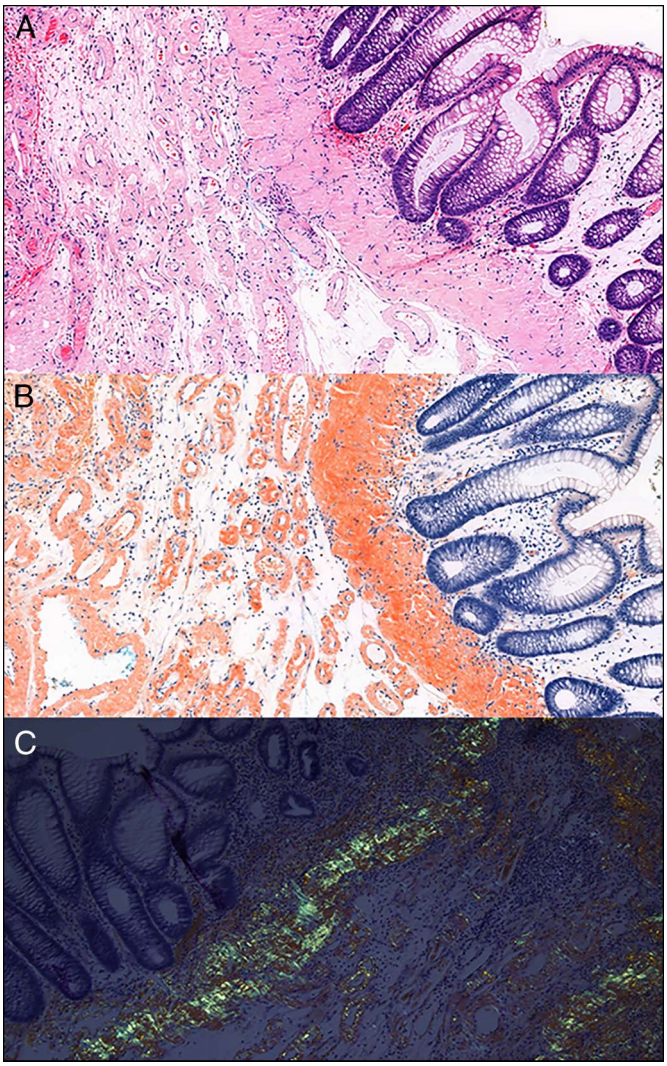

Figure 2. (A) Biopsy of colonic venous bleb stained with hematoxylin and eosin stain at ×10 shows amorphous material deposits in a band-like pattern in the lamina propria and extends to involve the blood vessels, consistent with amyloid. (B) Congo red stain of colonic venous bleb shows amyloid deposits in the lamina propria and around the blood vessels. (C) Congo red stain of colonic venous bleb under polarized light shows the classical apple-green birefringence.

was found in 8%.[3] Among those with gastrointestinal AL amyloidosis, 50% had small bowel involvement, 44% had gastric involvement, 32% had colonic involvement, and 12% had esophageal involvement.[2] Endoscopic findings of AL amyloidosis include submucosal hematomas, ulcerations, erosions, and inflammation.[4] There are no reports of venous blebs associated with AL amyloidosis to date.

This case suggests that diffuse colonic venous blebs may be a manifestation of gastrointestinal AL amyloidosis. Random colonic biopsies may reveal amyloidosis, and resection of venous blebs can be considered only when diagnosis is unclear. The differential diagnosis for colonic venous blebs includes blue rubber bleb nevus syndrome, arteriovenous malformations, cavernous hemangiomas, and vascular ectasias.

DISCLOSURES

Author contributions: S. Prakash wrote the article and compiled the endoscopy images. M. Obeidat provided and described the pathologic images. AR Murali revised, edited, and approved the final version of the article and is the article guarantor.

Financial disclosures: None to report.

Informed consent was obtained from the patient's next of kin.

Received June 24, 2021; Accepted February 2, 2022

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