Capsule retention in a patient with eosinophilic gastroenteritis mimicking diaphragm disease of the small bowel

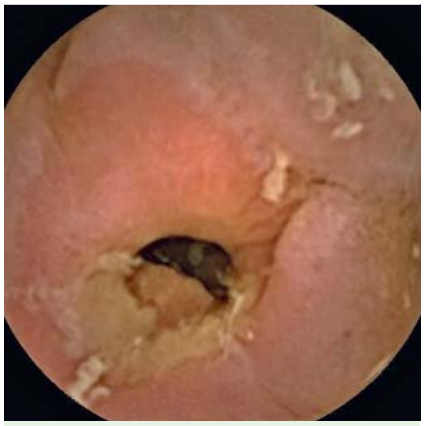

Fig. 1 Ulcerated stenoses with mucosal fissuring seen on video capsule endoscopy.

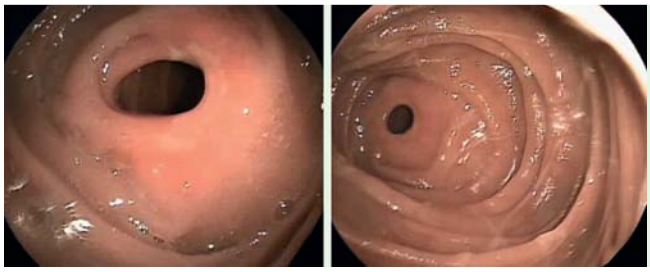

Fig. 2 Ulcerated stenoses with mucosal fissuring, and interposed normal mucosal folds seen on double-balloon enteroscopy.

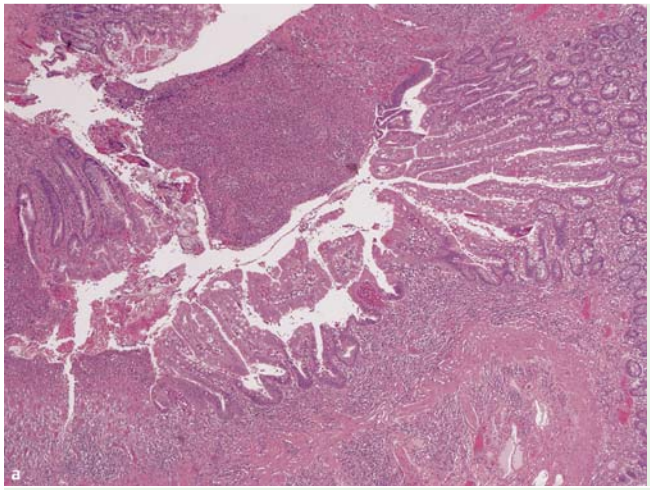

Fig. 3 Histopathology of small bowel ulcerated stenoses.
a Ulceration with overlying exudates.
b Partial villous atrophy with eosinophilic infiltration of lamina propria (> 50/HPF).

A 32-year-old man presented for evaluation of anemia, abdominal bloating, and weight loss. He had been diagnosed with eosinophilic gastroenteritis (EGE) in childhood. He had no history of current or past nonsteroidal anti-inflammatory drug (NSAID) use. Computed tomography enterography (CTE) did not reveal any small-bowel abnormalities. Video capsule endoscopy was significant for ulcerated stenoses similar to diaphragm disease (**Fig. 1**), and the test was complicated by capsule retention.

At antegrade double-balloon enteroscopy (DBE), multiple ulcerated stenoses were present (**Fig. 2**).

Small-bowel biopsies revealed ulceration (**Fig. 3a**), partial villous atrophy and eosinophilic infiltration (> 50/HPF) (**Fig. 3b**), consistent with EGE.

Following initiation of prednisone, the patient had resolution of symptoms and eosinophilia. Segmental resection of 6 inches of ileum was performed for capsule retrieval. Multiple diaphragms were present on surgical pathology (**Fig. 4**), without mucosal or serosal eosinophilia.

Diaphragm disease is a disorder characterized by ulcerated small-bowel stenoses in patients with a history of NSAID use [1]. In the past, most cases were diagnosed at laparotomy, but an increasing number of cases are now diagnosed on capsule endoscopy and DBE [2,3]. As radiologic imaging studies (CTE) have a low sensitivity for detection of diaphragms, patients undergoing capsule endoscopy are at risk of retention.

Interestingly, not all cases of diaphragm disease are related to NSAID use. In a prior case report of diaphragm disease, NSAID use was ruled out by history and objective testing for salicylates [4]. The term cryptogenic multifocal ulcerous stenosing enteritis (CMUSE) has been coined to refer to ulcerated small-bowel strictures, in the absence of an obvious etiology [5]. In a series of 10 patients with diaphragm disease, three had mucosal eosinophilia (> 20/HPF), and satisfied the clinical criteria for EGE [6]. Circumferential ulcerated lesions, similar to diaphragm disease, have also been reported in equines with EGE [7]. Although small-bowel eosino-

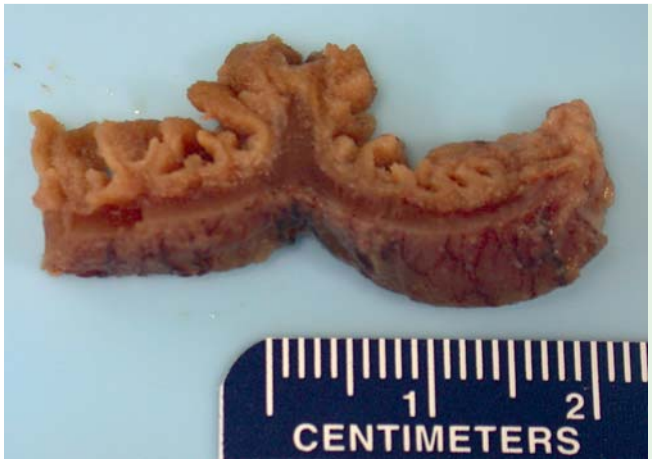

Fig. 4 Intestinal diaphragm with serosal retraction seen on gross surgical pathology.

philic infiltration has also been described with NSAID-related enteropathy [1], a diagnosis of EGE in the current patient is supported by the history, absence of NSAID use, peripheral eosinophilia, and clinical and histopathologic response to steroids.

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Bibliography

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