Retrieval of retained video endoscopy capsule reveals small bowel adenocarcinoma

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Introduction

Capsule endoscopy (CE) has been helpful for evaluating small bowel diseases, such as bleeding. However, the most common and serious complication is capsule retention in the gastrointestinal (GI) tract. Rarely, the investigation of a GI bleed with CE reveals small bowel adenocarcinoma (SBA). Notably, limitations of small bowel exploration make it challenging to diagnose this devastating disease. Here we present a case of endoscopic retrieval of a retained capsule leading to a diagnosis of small bowel adenocarcinoma.

Case Report

A 78-year-old female with a medical history including atrial fibrillation on apixaban was seen in the GI clinic for recurrent acute on chronic anemia and heme-positive stools. Occasionally, she had minimal rectal bleeding and intermittent dark stool attributed to hemorrhoids and supplemental iron tablets. Esophagogastroduodenoscopy and colonoscopy were negative for a GI source of bleeding.

CE was performed and showed fresh blood in the proximal small bowel at around the 3.5-hour mark. At the 6-hour mark, fresh blood was noted again, along with the failure of the capsule to reach the cecum. The patient was contacted urgently and admitted to the hospital. She was asymptomatic upon admission. Later, she developed vomiting and abdominal pain. Subsequent imaging showed retained capsule on the left side of the abdomen. A push enteroscopy was performed, which revealed the retained capsule at 150 cm in the proximal jejunum. An ulcerated mass was found to be obstructing the capsule's path (Figure 1). The surgery team performed an exploratory laparotomy with segmental resection of the jejunum and partial gastrectomy. Pathology of the lesion returned, revealing moderately differentiated adenocarcinoma. The patient was sent home with a follow-up in the oncology clinic.

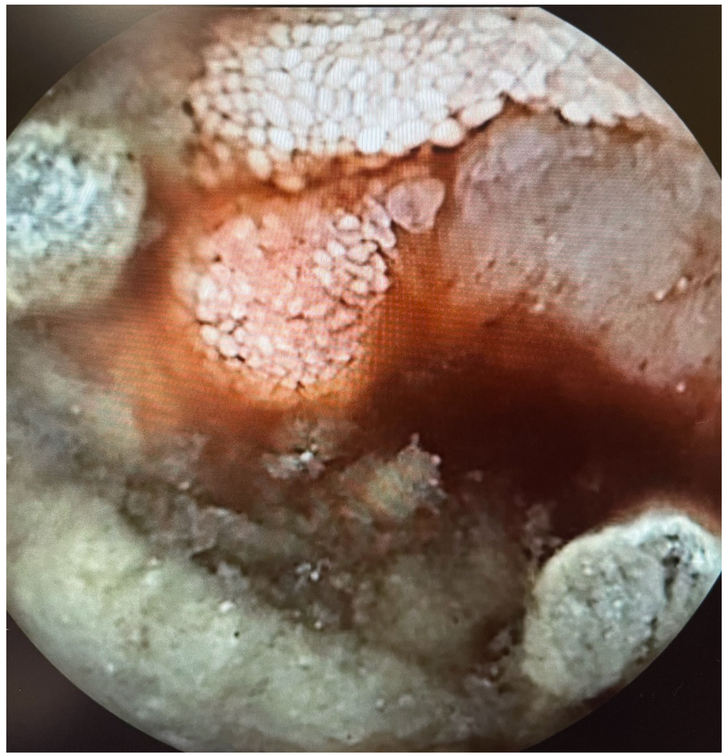

Figure 1. Ulcerated lesion in proximal jejunum found to be small bowel adenocarcinoma on biopsy.

Discussion

- Capsule retention is the most common adverse event associated with video capsule endoscopy and occurs in approximately 1–3% of video capsule endoscopies.
- Retention may reveal the underlying cause of the gastrointestinal disease but often requires endoscopic or surgical removal.
- Historically, when medical management of capsule retention has failed, patients have been sent directly to surgery. However, recent advances in small bowel enteroscopy have demonstrated a high success rate and safety profile in retrieving retained capsules.

- In this case, the exploration to retrieve a retained capsule revealed the uncommon diagnosis of small bowel cancer.
- Although the small intestine makes up 75% of the length of the digestive tract and 90% of its mucosal surface area, small bowel cancer is rare, accounting for less than 5% of gastrointestinal cancers.
- Although certain predisposing factors are now established, most SBAs arise without risk factors. Studies of molecular aberrations suggest that the pathogenesis of SBA is similar to that of colorectal cancer despite fewer APC mutations.

- The diagnosis is generally made incidentally while investigating an intestinal obstruction or GI bleed.
- Treatment of SBA is surgical resection of the primary tumor and loco-regional lymph nodes.
- The main prognostic factors are the margin of resection and nodal invasion, which are highly in favor of the patient in this case.

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