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CASE REPORT

A long adult intussusception secondary to transverse colon cancer

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Abstract

The occurrence of adult intussusception arising from colorectal cancer is quite rare. We present the case of a 76-year-old man with sudden abdominal pain and vomiting. Clinical symptoms included severe abdominal distension and tenderness. Computed tomography scan of the abdomen revealed left-sided colocolic intussusception with a lead point. The patient underwent a left hemicolectomy with right transverse colostomy. Pathologic evaluation revealed moderately differentiated adenocarcinoma invading the muscularis propria; the regional lymph nodes were negative for cancer cells. The postoperative course was uneventful.

Key words: Adult intussusception; Colon cancer; Surgery; Hemicolectomy

Core tip: Intussusception is a common cause of bowel obstruction in pediatric patients, but it is rare in adults and it is often difficult to diagnose. We present the case of a 76-year-old man with sudden abdominal pain and vomiting. The patient underwent a left hemicolectomy with right transverse colostomy. This article reports the complete diagnosis and management of the patient.

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INTRODUCTION

Intussusception is most often encountered in infants and children, and only 5% of cases occur in adults. It accounts for about 1% of all cases of adult bowel obstruction. Adult intussusception of the colon is rare and related to malignant lesions[1]. We describe a case of adult intussusception of the transverse colon caused by a malignant tumor in an elderly man preoperatively diagnosed by X-ray, barium enema and computed tomography (CT) scan.

CASE REPORT

A 76-year-old male with no significant medical history was admitted as a surgical emergency with sudden abdominal pain and vomiting and 2 episodes of bright red bloody stool. Physical examination revealed severe abdominal distension and tenderness.

The abdominal X-ray showed distension of the ascending and right half transverse colon (Figure 1). A barium enema showed the meniscus sign in the contrast material-filled distal sigmoid (Figure 2). CT showed a giant mass at the transverse colon. CT also showed "bowel within bowel" consistent with colocolic component of the intussusception with distension of the ascending

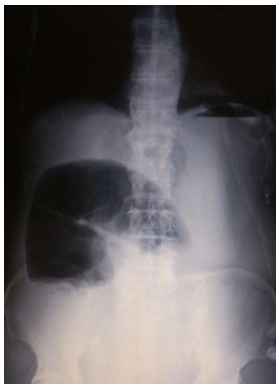

Figure 1 Abdominal X-ray showing distension of the ascending and right half transverse colon.

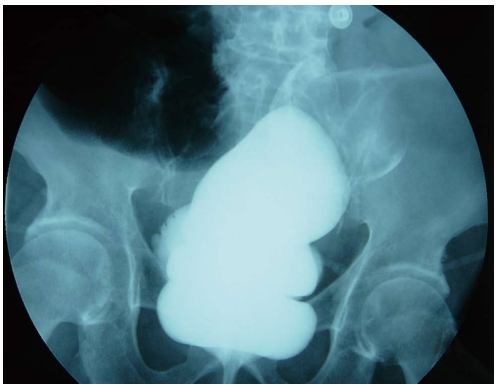

Figure 2 Barium enema examination showing the meniscus sign in the contrast material-filled distal sigmoid.

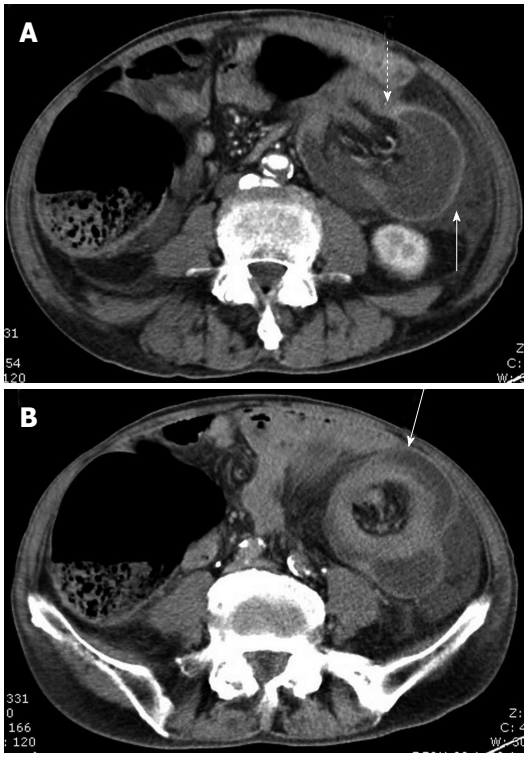

Figure 3 Abdominal computed tomography showing colocolic component of the intussusception (A, dashed arrow), thick-walled descending colon invaginated by transverse colon with mesenteric fat and vessels (A, solid arrow), and the typical "target sign" of colon within colon (B, solid arrow).

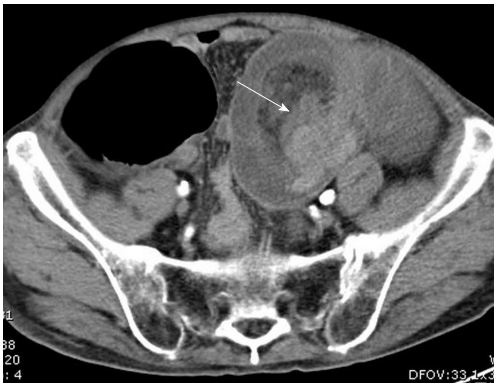

Figure 4 Abdominal computed tomography showing enlargement of the descending colon wall with the intussusception (arrow), suggesting the existence of a tumor in the head.

colon and invaginated left transverse colon into the descending colon with mesenteric fat and vessels (Figure 3).

The diagnosis of colocolic intussusception at the transverse colon was made. The patient was admitted and underwent emergency laparotomy, and radiologic findings were confirmed during the operation. A giant mass was palpable through the splenic flexure of colon which extended till the sigmoid colon. The mass comprised an intussusception of both the left part of the transverse colon and the great omentum (Figure 4). An extended left hemicolectomy with right transverse colostomy was performed. The patient had an uneventful recovery and was discharged 10 d after the surgery.

Gross examination of the resected specimen revealed a 25-cm colocolic intussusception which contained a 3.0 cm × 3.0 cm × 2.5 cm protuberant tumor originating from the splenic flexure of colon and the whole great omentum in the descending colon (Figure 5). The final pathological report showed moderately differentiated adenocarcinoma invading the muscularis propria; the regional lymph nodes were negative for cancer cells.

DISCUSSION

Colo-colonic intussusception is rare in adults (< 5%), but it is the most common cause of intestinal obstruction in infants aged 6-18 mo[1]. The characteristic pediatric presentation triad of abdominal pain, palpable abdominal mass and bloody stool is rarely seen in adult cases. Most patients present with subacute (24.4%) or chronic (51.2%) symptoms of abdominal pain, nausea, vomiting and constipation; this is the main reason why preoperative diagnosis is difficult[2]. The best preoperative diagnosis method of intussusception is CT scan. Mostly, adult intussusception is related to bowel pathology and 38%-45% cases occur in the colon, while 52%-55% occur in the small intestine[3]. It has been reported that 33%-77% of adult colonic intussusception cases are associated with malignant lesions. Adult intus-

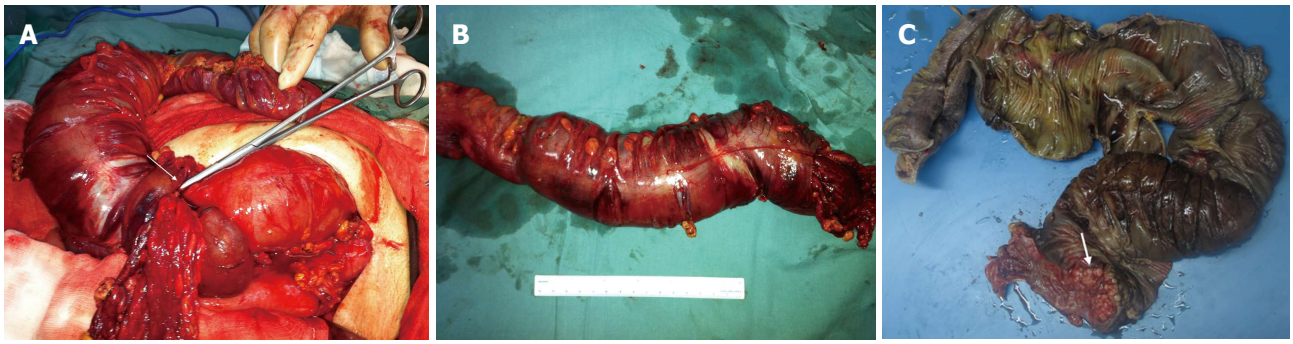

Figure 5 Gross examination of the resected specimen reveals a 25-cm colocolic intussusception. A: Perioperative view after mobilization of the left colon with forceps inside the intussusception invaginated transverse colon with great omentum; B: Operative specimen showing about 25 cm overlapped colon in the intussusceptions; C: The specimen contained a 3.0 cm × 3.0 cm × 2.5 cm protuberant tumor, thought to be the lead point of the intussusception (arrow).

susception of the colon mostly occurs in the flexible regions such as the sigmoid and transverse colon and the cecum[4]. For the management of adult intussusception, most authors think that laparotomy is mandatory due to the high incidence of underlying malignancy in colonic intussusceptions and the inability to differentiate non-operatively benign from malignant causes in enteric intussusceptions[5].

In this case, we report a relatively complete process for the diagnosis of adult intussusceptions with detailed medical pictures. Adult intussusception must be considered in the differential diagnosis of patients with abdominal pain and vomiting. The work-up must include X-ray, ultrasound and CT scan of the abdomen, and even a barium enema. Emergent surgical interventions are required once the diagnosis of intussusception is made, due to the high risk of malignancy.

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