

Intussusception after Routine Colonoscopy: A Rare Complication

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ABSTRACT

We present a 31-year-old woman who developed ascending colon intussusception several hours after a routine colonoscopy where random mucosal biopsies were obtained. She underwent an ileocolic resection, and pathology did not show an etiology for the intussusception. Colonic intussusception occurring without pathology and after minimal intervention is rare.

INTRODUCTION

Colonoscopy is an important diagnostic and therapeutic procedure. The risks associated with colonoscopy include hemorrhage, perforation, and cardiopulmonary compromise. The incidence of these complications range from 0.01% to 0.9%.¹ Intussusception, where part of the intestine telescopes into an adjacent portion, is less common in adults than in children and typically develops when there is an identified etiology.² Intussusception is a rare complication after colonoscopy, especially in cases where minimal endoscopic intervention is performed.

CASE REPORT

A 31-year-old woman presented to an outpatient gastroenterology clinic for chronic abdominal pain and constipation. Past medical history included endometriosis and obesity. Past surgical history included appendectomy at age 20 years, and a low anterior resection for rectosigmoid endometriosis at age 26 years. Her medications included tramadol and cyclobenzaprine, and a levonorgestrel-based intrauterine device was in place. She reported occasional tobacco and alcohol use.

Computed tomography (CT) and colonoscopy were performed to rule out structural pathology such as anastomotic stricture and evaluate for recurrent endometriosis. CT of the abdomen and pelvis was normal. A pediatric colonoscope was advanced into the terminal ileum. There were no significant abnormalities noted, although there was mild congestion throughout the colon. A patent colorectal anastomosis was seen in the mid-rectum 10 cm from the anus, with granulation tissue and mild aphthous ulcers seen on both sides of the anastomosis. Targeted biopsies from the ulcers and random superficial biopsies were obtained from the left and right colons without difficulty. The random colon biopsies were normal, and biopsies from the anastomosis showed mild edema with surface hyperplastic changes. The procedure was performed under conscious sedation. Carbon dioxide was used for insufflation throughout the exam. The patient tolerated the procedure well without any obvious initial complications.

Several hours after discharge from the endoscopy suite, the patient presented to the local emergency room for acute worsening of her abdominal pain. On exam she was hemodynamically stable, and her abdomen was tender, without guarding or rebound. CT of the abdomen and pelvis showed an 8-cm long colo-colic or ileocolic

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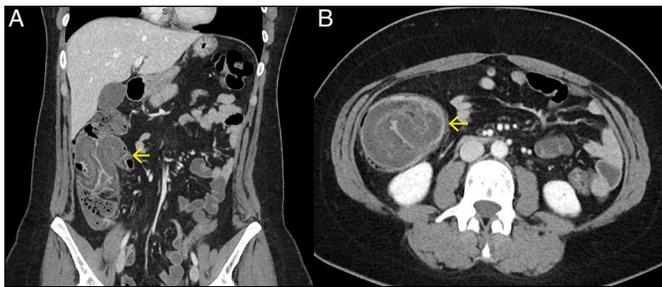


Figure 1. Abdominal/pelvic CT scan with contrast. (A) Coronal view showing right ileocolonic or colocolonic intussusception. (B) Transverse view showing target-like appearance of the ascending colon.

intussusception in the right hemi-abdomen. No pneumatosis or free air was seen (Figure 1). Her laboratory findings showed leukocytosis $16.9 \times 10^9/L$, but complete blood count, basic metabolic panel, and serum lactate were all normal.

She underwent surgery on hospital day 2 for persistent abdominal pain and leukocytosis. During laparoscopic exploration, a small amount of fibrinous exudate was found to be overlying the cecum, and it appeared the intussusception had reduced itself. A significant amount of edema, erythema, and hyperemia was found in the right colon extending from the cecum to the distal ascending colon. There were no signs of ischemia. An ileocolic resection was performed with a primary anastomosis. The patient recovered well from the surgery and was discharged on postoperative day 5. Pathology from the ileocolic resection showed active colitis with mucosal ulceration with transmural acute inflammation, consistent with intussusception. There were no signs of chronic colitis, malignancy, or endometriosis.

DISCUSSION

Intussusception is uncommon in adults compared to children. Overall, approximately 5% of all intussusceptions occur in adults, and it represents 1% of patients with bowel obstruction.³ The majority of these cases are entero-enteric in location and to a lesser extent ileocolic and colo-colonic.⁴ Contrary to intussusception in the pediatric population, an identifiable etiology is found in 70–90% of cases.^{2,5} Causes include benign lesions, including adhesion, lipoma, polyp, hamatoma, as well as malignant lesions, including primary adenocarcinoma, gastrointestinal stroma tumor (GIST), and lymphoma.^{3,4,6} Because of this, most experts agree that after an intussusception is identified, the patient will likely require surgical resection. This is especially true if the site of intussusception is in the colon, which in 50–60% of cases is secondary to a malignant etiology.^{7–8}

There have been very few reported cases of intussusception after routine colonoscopy, the majority of which involved

endoscopic resection of a lesion in the area where the intussusception later developed.^{9–12} In one such report, a large ileal polyp was identified but was not resected.⁶ In that patient, the endoscopic exam was largely normal, with just mildly congested mucosa noted throughout the entire colon. Pathology from the both the colonoscopy and the surgical resection did not show any chronic inflammation, dysplasia, or malignancy. Our patient had a history of endometriosis that required a previous surgical resection, which was not evident from her workup. The prior sigmoid resection may have predisposed her to intestinal dysmotility that ultimately put her at risk for developing intussusception. Intussusception is a rare complication after colonoscopy, especially when no pathology is found and minimal intervention is performed.

DISCLOSURES

Author contributions: MX Min wrote the manuscript and reviewed the literature. B. Skow and BP Vaughn edited the manuscript. BP Vaughn is the article guarantor.

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Informed consent was obtained for this case report.

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