

Post-colonoscopy appendicitis: a rare entity

Vipul D. Yagnik,¹ Bhargav D. Yagnik²

¹Ronak Endo-Laparoscopy and General Surgical Hospital, Patan;

²GP, Ahmedabad, Gujarat, India

Abstract

A 35-year-old woman was admitted to the surgical ward complaining of right-sided lower abdominal pain. She had undergone colonoscopy a week previously. She was diagnosed with acute appendicitis following colonoscopy and laparoscopic appendectomy was performed via the 2-port technique. Post colonoscopy appendicitis is very rare with 14 cases reported since 1988.

Introduction

Colonoscopy is commonly performed by gastroenterologists and surgeons. Colonoscopy is the gold standard test for the diagnosis of colonic diseases. The most common indication for colonoscopy in the United States in patients under the age of 50 years is rectal bleeding followed by irritable bowel syndrome. In patients over the age of 50 years, the most common indications are surveillance endoscopy for colorectal cancer and a positive fecal occult blood test. Colonoscopy is a relatively safe procedure. Post colonoscopy appendicitis is so rare that the British Society of Gastroenterology, which lists rare complications of colonoscopy, does not include it. The aim of reporting this case is to highlight this rare complication. Appendicitis should be included in the differential diagnosis of right-sided lower abdominal pain following a colonoscopy.

Case Report

A 35-year-old female patient was admitted complaining of right-sided lower abdominal pain over the previous three days. She had a history of nausea and vomiting for two days. She underwent colonoscopy for a positive stool occult blood test a week previously. She had no history of similar complaints and her past surgical history was not significant. Colonoscopy was performed according to the standard protocol using an Olympus video colonoscope. Colonoscopy examination was normal. Physical examination revealed tenderness at

McBurney's point. Blood pressure was 110/80 mmHg, pulse rate 90/min, and body temperature 37°C. Laboratory data showed a white cell count of $11 \times 9/L$ with left shift. Alvarado score was 8. An ultrasound scan of the abdomen revealed a non-compressible, blind ended tubular structure measuring 10 mm in diameter in the right iliac fossa (Figure 1). A laparoscopic appendectomy was performed. During laparoscopy, the appendix was found to be inflamed in a retrocecal position. Appendectomy was performed via the 2-port technique. Histopathological examination confirmed the diagnosis of acute appendicitis. Her post-operative course was unremarkable.

Discussion

Colonoscopy is a relatively safe procedure. However, complications and adverse effects still occur, although with low frequency. Complications may be related to either bowel preparation or intubation. Complications related to bowel preparation are aspiration, vomiting and acute renal failure. Common complications associated with intubation or extubation are perforation and bleeding. Waye *et al.*¹ and Kavic and Basson² listed the rare complications of colonoscopy. They include mesenteric ischemia, cholecystitis, pancreatitis, appendicitis,^{3,8} small bowel perforation, volvulus, obstruction and strangulation.

Post-colonoscopy appendicitis is a very rare complication of this common procedure. Vender *et al.*³ reported 3 cases of post-colonoscopy appendicitis out of approximately 8000 colonoscopies over two years in 2 institutions. There have been approximately 14 cases reported in the English literature since 1988. Among reported cases, average age was 54.4 years, the male:female ratio was 10:1 and the onset of symptoms ranges between 12 h to five days.⁸ In our case, although the patient presented on Day 7 post procedure the onset of symptoms was Day 4 following the colonoscopy. Possible explanations for post-colonoscopy appendicitis are: direct intubation of appendicular lumen, local edema and obstruction of the appendicular lumen secondary to mucosal injury around the appendiceal orifice, barotrauma, penetration of fecolith inside the lumen, pumped through the colonoscope, and pre-existing sub-clinical disease of the appendix. Endoscopists should always be aware of the potential complications of colonoscopy and of medical imaging, and take appropriate steps to investigate any post-colonoscopy abdominal pain so as to avoid a delayed diagnosis of appendicitis.

Correspondence: Vipul Yagnik, 77 Siddhraj Nagar, Rajmahal Road, Patan-384265, Gujarat, India. E-mail: vipul.yagnik@gmail.com

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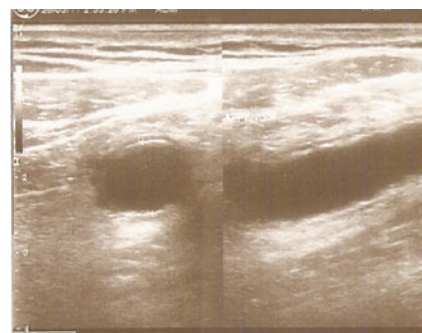


Figure 1. Ultrasound abdomen scan revealing a non-compressible, blind-ended tubular structure measuring 10 mm in diameter in the right iliac fossa.

Conclusions

Although post-colonoscopy appendicitis is a rare entity, endoscopists should always be aware of the rare complication of this procedure. A high index of suspicion helps to avoid the serious consequences of a delayed diagnosis of appendicitis.

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