

Spontaneous Expulsion per Rectum of a Colorectal Polyp: A Rare and Unusual Case

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Abstract

Colorectal polyps are growths that form on the epithelium of the colon and rectum. While their prevalence varies considerably from region to region, they are common in adults. In fact, among asymptomatic, average-risk individuals at 50 years of age, the prevalence of colorectal polyps averages roughly 10% in sigmoidoscopy studies and more than 25% in colonoscopy studies. Approximately two-thirds of all colorectal polyps are adenomatous precancerous lesions that have the potential to become malignant. Usually, they are discovered and resected during colonoscopy. The spontaneous expulsion per rectum of a colorectal polyp is exceedingly rare. Here, we report a rare and unusual case that we believe is the first of spontaneous expulsion of an adenomatous polyp during defecation. These patients should undergo colonoscopy to search for additional polyps as well as other gastrointestinal pathology.

Keywords: Colorectal polyp; Expulsion per rectum; Polypectomy

Introduction

The development of colorectal polyps, particularly adenomatous polyps, is associated with several risk factors, including age (i.e., increasing age is a risk factor), gender (i.e., more common in men), ethnicity (i.e., more common in African Americans), body mass index (BMI; i.e., increased BMI is associated with an increased risk), and lack of physical activity [1-15]. Many colorectal polyps are benign and include inflammatory polyps, hamartomatous polyps, and hyperplastic polyps. The other major type of polyp found, and of much greater significance due to its malignant potential, is the neoplastic adenoma. Adenomatous polyps have some degree of cytologic

dysplasia and are recognized as precursors of colorectal cancer (CRC). They are estimated to be present in a quarter to a third of all adults [7]. Recently, several types of serrated polyps have been implicated in the development of CRC, as well [16, 17]. Polypectomy during colonoscopy has been demonstrated to be significantly effective in reducing the incidence of CRC [18]. However, the spontaneous expulsion per rectum of a polyp is rare.

Case Report

A 60-year-old man, with past medical history of hypertension, diabetes mellitus, schizophrenia, and chronic constipation, visited his gastroenterologist with complaints of worsening lower abdominal pain and constipation for several weeks, not relieved with stool softeners and laxatives. He also reported, that during a bowel movement that morning, he had defecated “a piece of flesh” and bright red blood. The pain had been increasing in intensity, especially over the last 3 days. He was taking stool softeners, an over-the-counter colon cleanser, and magnesium citrate for his chronic constipation. Attributing the worsening abdominal pain to constipation, he consumed a higher dose of magnesium citrate. After a few hours, he had a large bowel movement with “a piece of flesh” and bright red blood per rectum. Subsequently, his abdominal pain improved, but he became concerned, collected the specimen in a container, and decided to visit his gastroenterologist. He had never experienced blood in the stool or black stools before. He denied any recent symptoms of fevers, chills, nausea, vomiting, diarrhea, change in appetite, or weight loss. He reported no family history of gastrointestinal malignancy. Previously, he had refused to undergo screening colonoscopy and to be screened with any of the other CRC screening modalities.

The patient was afebrile (temperature 36.8 °C) and hemodynamically stable (pulse rate 74 beats per minute, blood pressure 136/82 mm Hg). On physical exam, the abdomen was soft and not distended. There was mild tenderness at the left lower quadrant and normoactive bowel sounds. There was no rebound tenderness, guarding, rigidity, nor organomegaly. The specimen he collected appeared to be a polyp, and it was submitted to a laboratory for histopathologic evaluation. Macroscopic examination of the specimen brought by the patient in a container after spontaneous expulsion per rectum showed a tan polypoid lesion, roughly 1.4 cm in diameter (Fig. 1). Histologic examination of the spontaneously expelled lesion revealed neoplastic glands lined by epithelium containing elongated

Manuscript submitted June 2, 2018, accepted June 12, 2018

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doi: <https://doi.org/10.14740/gr1054w>

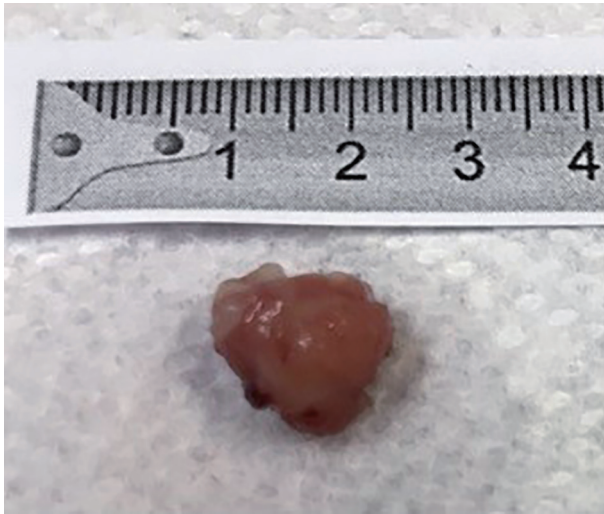


Figure 1. The specimen brought by the patient in a container after spontaneous expulsion per rectum. It appeared to be a colorectal polyp, roughly 1.4 cm in diameter.

and hyperchromatic nuclei and demonstrated high nucleus to cytoplasm (N/C) ratio, features diagnostic of tubular adenoma.

The following day, the results of laboratory testing were reviewed, and the complete blood count (CBC) showed white blood cell count of $19.0 \times 10^9/L$ ($4.0 - 11.0 \times 10^9/L$), hemoglobin of 12.8 g/dL (13.5 - 17.5 g/dL) with an unknown baseline, hematocrit of 39% (38-54%), and platelet count of $417 \times 10^9/L$ ($150 - 450 \times 10^9/L$). The comprehensive metabolic panel (CMP) showed blood urea nitrogen of 16 mg/dL (7 - 22 mg/dL) and creatinine of 0.8 mg/dL (0.6 - 1.3 mg/dL), as well as normal liver function tests. The specimen was later reported as tubular adenoma (Fig. 2).

Colonoscopy was performed and revealed multiple polyps: a 1.8 cm pedunculated polyp in the descending colon (Fig. 3a), an 8 - 9 mm pedunculated polyp in the distal transverse colon (Fig. 3b), a 2 cm pedunculated polyp in the proximal transverse colon (Fig. 3c), and a 2 cm sessile polyp in the ascending colon (Fig. 3d). All of the polyps were removed with snare cautery polypectomy and submitted to a laboratory for histopathologic evaluation. They were later reported as tubular adenoma, except for the ascending colon polyp which was reported as tubulovillous adenoma.

At the patient's follow-up visit 2 weeks later, he reported feeling better. His chronic constipation has improved since then with a polyethylene glycol laxative.

Discussion

Colorectal polyps, growths protruding into the colorectal lumen above the surrounding mucosa, can be neoplastic or benign. Neoplastic adenomas are precancerous lesions that have the potential to become malignant. Such progression to adenocarcinoma is believed to occur over a period of roughly 10 years. Therefore, with appropriate screening and surveillance, these polyps can be removed to prevent the development of

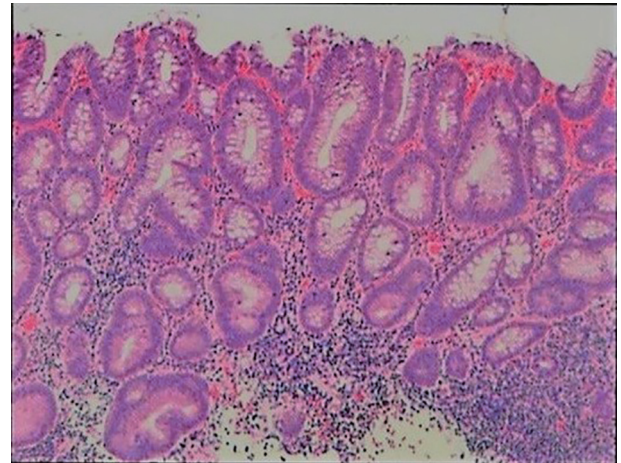


Figure 2. Histopathologic image of the colorectal polyp. The neoplastic glands are lined by hyperchromatic glandular epithelium. The elongated nuclei and reduced cytoplasmic mucin production are consistent with a large tubular adenoma. H&E stain. Low-power magnification.

cancer [19, 20]. Although there are various CRC screening modalities - fecal occult blood test (FOBT), fecal immunochemical test (FIT), double-contrast barium enema, computed tomography (CT) colonography, flexible sigmoidoscopy, and others - colonoscopy remains the gold standard test for detection of CRC [21]. Moreover, colonoscopy is performed for both diagnostic and therapeutic reasons, via polypectomy for visualized colorectal polyps.

The spontaneous expulsion per rectum of a polyp is rare, and the literature regarding such cases is limited. There have been several reported cases of rectal expulsion of lipomas [22-29]. With an incidence of 0.035-4.4%, lipomas are the second-most common benign tumors of the colon [22]. In rare circumstances, the lipoma can self-detach and be expelled from the rectum. Such spontaneous expulsion primarily takes place among large, pedunculated lipomas that separate from their pedicles. In most cases, the cause of the event remains unknown [24]. The lipoma may necrose as it twists upon its pedicle or as that particular colonic segment intussuscepts [28].

To our knowledge, this is the first published case of spontaneous expulsion of an adenomatous polyp during defecation. The exact mechanism of self-detachment of the colorectal polyp is not well understood. Similar to lipomas, in large, pedunculated polyps, the pedicle can become twisted and strangled, leading to necrosis and self-amputation of the polyp. The base of this polyp indeed appeared necrotic on histology. Also, chronic constipation, as in our patient, can result in damage to the mucosal lining. Conceivably, a hard, dry stool could shear a large, pedunculated polyp from its base, causing it to be expelled from the rectum. In our patient, given the adenomatous histopathology of the expelled polyp, a complete examination with colonoscopy was warranted.

Conclusions

In conclusion, colorectal polyps are fairly common, and the

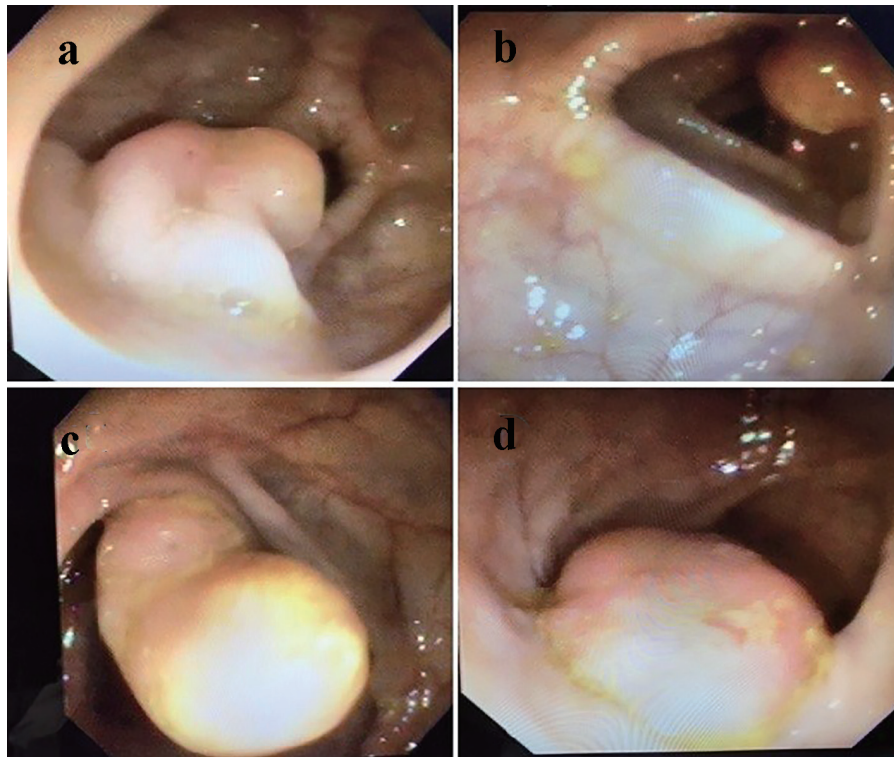


Figure 3. Endoscopic images of (a) a 1.8 cm pedunculated polyp in the descending colon, (b) an 8 - 9 mm pedunculated polyp in the distal transverse colon, (c) a 2 cm pedunculated polyp in the proximal transverse colon, and (d) a 2 cm sessile polyp in the ascending colon.

complete removal of adenomatous polyps during colonoscopy prevents the development of cancer. Meanwhile, the spontaneous expulsion per rectum of such polyps is exceedingly rare. Such a patient should undergo colonoscopy to search for additional polyps as well as other gastrointestinal pathology.

Financial Disclosures

The authors of this case report declare that no financial support nor grant support has been received for the preparation of this manuscript.

Conflict of Interest

The authors of this case report declare that they have no competing interests.

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