

## CASE REPORT

# Unusual presentation of colon cancer as rectal prolapse in middle-aged male

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**Abstract**

Rectal prolapse is typically a benign idiopathic condition. Rarely, rectal prolapse can be due to or associated with colorectal carcinoma. Here we present a middle-aged gentleman with no previous medical or surgical history, who presented with rectal prolapse secondary to sigmoid adenocarcinoma.

**KEYWORDS**

colorectal cancer, general surgery, intussusception, oncology, rectal prolapse, sigmoid adenocarcinoma

## 1 | INTRODUCTION

Rectal prolapse is typically an idiopathic benign condition characterized by an intussusception of the rectal wall resulting in a protrusion through the anus. Epidemiologic studies have shown that the usual demographics are elderly females. These patients are at higher risk of various anatomic abnormalities associated with rectal prolapse, such as: diastasis of the levator ani, deep cul-de-sac, redundant sigmoid, patulous anal sphincter and loss of rectal sacral attachments.<sup>1</sup> Rarely, rectal prolapse secondary to colorectal carcinoma has been reported.<sup>2-11</sup>

## 2 | CASE PRESENTATION

A middle-aged man with no past medical or surgical history presented with a painful, irreducible anal bulge (Figure 1). He denied a prior history of constipation or frequent straining and he had never had a colonoscopy. On arrival, his white blood cell count was 20.4 K/ $\mu$ L, hemoglobin was 15.9 g/dL, liver function tests were within normal limits, and carcinoembryonic antigen

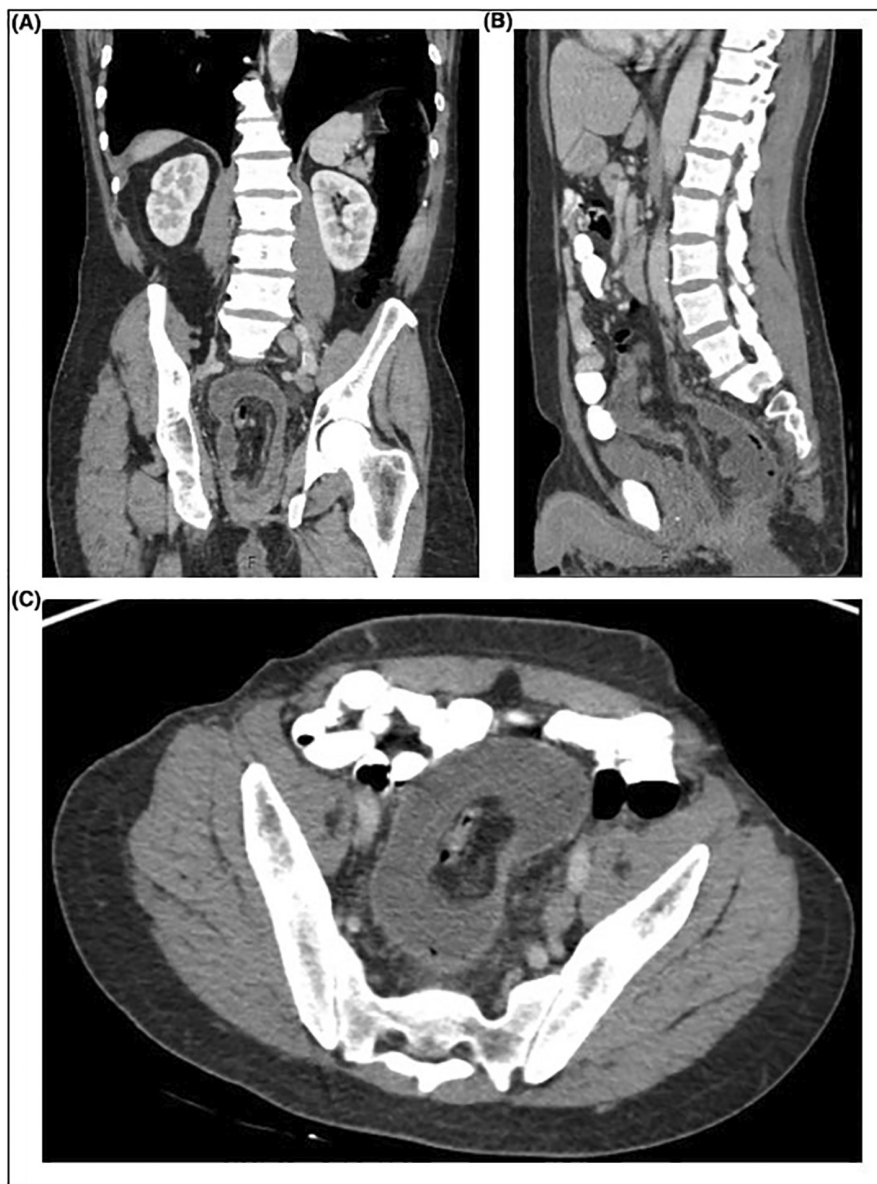


FIGURE 1 Photo of rectal prolapse.

(CEA) was 2.8 ng/mL. On physical examination, he appeared to have a characteristic rectal prolapse; however, one area of exposed mucosa was irregularly appearing

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**FIGURE 2** CT scan demonstrating intussusception (A) Coronal View, (B) Sagittal view, (C) Axial View.

and firm on palpation. Attempts at bedside reduction were unsuccessful.

Given the mucosal abnormality and the fact that he fell outside of the typical demographic that presents with rectal prolapse, a bedside mucosal biopsy was performed and was normal on frozen section. Formal colonoscopy could not be obtained due to patient discomfort and refusal to drink the bowel prep. CT of the chest, abdomen, and pelvis demonstrated intussusception of colon into rectum with prolapse out of the anus (Figure 2). There was no evidence of locally advanced or metastatic disease. The patient was operated on urgently due to increasing pain requiring narcotics and the concern for ischemia of the incarcerated prolapse. A perineal approach was avoided due to concern for malignancy despite the negative biopsy. After laparotomy, intussusception due to a sigmoid mass as the lead point was found and an oncologic resection was done. Final

pathology revealed moderately differentiated sigmoid adenocarcinoma 5.6 cm pT2N0 (0/17 lymph nodes) with no lymphovascular invasion.

### 3 | DISCUSSION

Rectal prolapse is a rare disorder that occurs in approximately 0.5% of the population. The usual presentation is in elderly females.<sup>1,12–15</sup> When rectal prolapse does present in male patients, they are usually young and often report a history of longstanding constipation due to pelvic floor disorders or medications, such as anticholinergic medications.<sup>14</sup>

There are a variety of operations for the management of rectal prolapse which are categorized as either intra-abdominal or perineal approaches.<sup>12,13,15</sup> None of the operations necessitate an oncologic resection, though abdominal

approaches can achieve an oncologic resection while perineal approaches cannot. Thus, if malignancy is suspected, it should impact the operative approach chosen.

Approximately nine cases describing rectal prolapse secondary to a colorectal carcinoma have been reported in the literature (Table 1).<sup>2–11</sup> In these reports, similar to

our case, an unusual mass was either visualized on the surface of the prolapsed rectum or found on subsequent imaging. Also, it is interesting to note that in all of the previous reports, including this case, the cancers associated with rectal prolapse on presentation were node negative.

TABLE 1 Case reports to date.

Author (year)	N	Demographic	Characteristic/Staging	Course
Rashid (1996) <sup>2</sup> <i>Retrospective study</i>	4/70 (5.7%)	74% F	History of rectal bleeding, and/or mass 3/4 rectal carcinoma, 1/4 sigmoid carcinoma 3/4 Duke stage A, 1/4 Duke stage B	Screening included rigid proctoscopy, flexible sigmoidoscopy, colonoscopy and/or barium enema Surgical approach for malignancy was not discussed
Yamazaki (1999) <sup>10</sup>	1	76 F	Sigmoid adenocarcinoma T3N0M0	Barium enema showing sigmoid carcinoma. Sigmoidectomy and proctopexy
Bounovas (2007) <sup>8</sup>	1	85 F	Mass noted on prolapsed colon, 3 × 4 cm Rectal adenocarcinoma. T3N0M0	Biopsy of mass on prolapsed colon Sigmoidectomy with proctopexy
Chen (2008) <sup>6</sup>	1	75 F	History of rectal prolapse Sigmoid adenocarcinoma <i>Unable to identify staging</i>	Double contrast barium enema showing intussusception at rectosigmoid junction Flexible sigmoidoscopy, with biopsy. Rectosigmoidectomy with rectopexy
Nabi (2015) <sup>7</sup>	1	77 F	History of rectal prolapse for 5 years Full thickness rectal stump prolapse, 15 cm of prolapse. Large mass of 3.5 cm emanating from stump Rectal adenocarcinoma T2N0M0	Biopsy of suspicious large mass. Staging CT performed (CT chest, abdomen/pelvis) Intersphincteric perineal proctectomy, with high ligation of mesorectum
Yamamoto (2018) <sup>4</sup>	1	63 F	7 cm soft mass, 5 cm from anal verge Rectal adenocarcinoma cT1N0M0	Colonoscopy with biopsy Low anterior resection performed
Akyuz (2019) <sup>9</sup>	1	77 M	Complete rectal prolapse 15 cm w/ mass palpated on DRE Sigmoid mucinous adenocarcinoma T3N0M0	Rectal digital examination Low anterior resection
Nocera (2020) <sup>5</sup>	1	92 F	4 cm malignant polyp, 3–4 cm above anal verge cT3-T4, cN1, cM0 adenocarcinoma -> ypT1 pN0, M0	Pain with suppository for hemorrhoids. MRI, colonoscopy with biopsy. Electing palliative approach with radiotherapy 2 months later presented with rectal prolapse. MRI confirmed Altemeier's technique
Mazumdar (2021) <sup>11</sup>	1	52 M	Sigmoid moderately differentiated adenocarcinoma, infiltrating the submucosa and muscularis propria	Non - contrast CT showing sigmoid-rectal intussusception telescoping through anal canal Hartmann's procedure and sigmoidectomy

This case illustrates the fact that when patients present with rectal prolapse and they fall outside of the usual demographic, malignancy should be considered. The prolapse may not be due to the expected anatomic abnormalities, such as levator diastasis or loss of rectal sacral attachments; it may, in fact, be due to a tumor causing an intussusception that looks identical to ordinary idiopathic rectal prolapse. In these abnormal presentations, a preoperative workup should include colonoscopy, if possible. If malignancy cannot be excluded within reason prior to operation, then operations that are not oncologic should be avoided.

#### AUTHOR CONTRIBUTIONS

**Ashley A. Penton:** Writing – original draft; writing – review and editing. **Sarah B. Jochum:** Writing – original draft; writing – review and editing. **Joshua M. Eberhardt:** Supervision; writing – review and editing.

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None.

#### CONFLICT OF INTEREST STATEMENT

The authors declare there is no conflict of interest regarding the publication of this article.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are not openly available due to patient privacy and are available from the corresponding author upon reasonable request. Consent was obtained from the patient.

#### CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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