Title

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CLINICAL VIGNETTE

74-Year-Old Male with Large Rectal Prolapse

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History

A 74-year-old man presented to the ED with rectal bleeding and prolapse. His history includes subtotal colectomy for rectal bleeding 15 years ago, subtotal small bowel resection, hemorrhoids and recurrent rectal prolapse. The patient felt a large mass at his rectum after stooling in the morning. He had no pain but noted some associated bright red blood per rectum. He denies trauma, anal receptive intercourse, heavy lifting or straining while stooling. He reports near daily rectal prolapses but is usually able to self-reduce. However, he was unable to self-reduce and sought care in the emergency department (ED).

Physical Exam

He was in no distress with presenting vitals: T 98.3F, BP 112/79, HR 100, RR 18, oxygen saturation 96% on room air. Examination revealed a large full thickness rectal prolapse measuring approximately 10cm x 10cm. The prolapse appeared edematous and 'beefy' red but without evidence of ischemia or necrosis.

Discussion

Rectal prolapse is an uncommon condition that involves disruption of normal pelvic floor (pelvic diaphragm) function usually occurring in older women. It can often cause pain, bleeding, constipation, incontinence, and a diminished overall quality of life. The prevalence in an adult population is about 0.25% and reaches about 1% in adults older than 65.[1,2] Risk factors for developing rectal prolapse include: age greater than 40, female sex, multiparity, vaginal delivery, pelvic surgery, chronic straining/constipation/diarrhea, cystic fibrosis, dementia, CVA, pelvic floor dysfunction, and congenital defects in pelvic floor anatomy.[3] These risk factors share excessive or inappropriate strain placed on the muscles of the pelvic diaphragm.

Currently, there is no widely accepted definition for rectal prolapse, or Rectal Procidentia, Clinically this condition has been categorized into partial (rectal mucosal prolapse), complete (full-thickness), and occult (rectal intussusception).[2] Partial prolapse, as its alternative name suggests, involves only mucosal prolapse outside of the anal sphincter. In comparison, a complete rectal prolapse involves all layers of the rectum (mucosa, submucosa, muscularis externa, and serosa) and concentric rings are often visualized. Although not a true prolapse, an occult rectal prolapse is secondary to "telescoping" of the rectum on itself without any external manifestations. Occult prolapses will not always lead to a partial or complete rectal prolapse, but patients may experience similar complications, such as obstruction or incontinence.[4]

Rectal prolapses may initially be triggered by an episode of straining to initiate or complete defecation. Pelvic floor anatomy may eventually become disrupted enough to cause prolapses with normal defecation. In addition to having a palpable rectal mass that may reduce spontaneously or with manual manipulation, patients with rectal prolapse may present with abdominal discomfort, difficulty evacuating bowels, or with mucus, stool or bloody discharge per rectum**.** Rectal pain is usually not present.[5]

Clinical examination is usually adequate to diagnose rectal prolapse, however, defecography may also be helpful when the prolapse cannot be reproduced on physical examination or when symptoms suggest additional pelvic floor dysfunction. Depending on the severity of the prolapse, physical exam maneuvers can help visualize the defect. Patients can be asked to take a squatting position or use a bedside commode to better visualize the perineum while gravity and body positioning facilitate pulling the rectum downward. Digital rectal examination can assess sphincter tone, and additional masses, rectocele, cystocele, or uterine prolapse. Detailed history, including diet, fluid intake, fiber, medication use, and bowel habits help support physical exam findings to make an accurate diagnosis.[5]

Evaluating patients for rectal prolapse should include a broad differential. Other possible diagnoses are prolapsed internal hemorrhoids, occult rectal prolapse, rectal mucosal prolapse, and solitary rectal ulcer. Although rare, rectal prolapse can be the initial manifestation of colon cancer which should be excluded with appropriate evaluation.[6]

Once the diagnosis of rectal prolapse has been established, concomitant pathology such as cystocele should be ruled out prior to treatment. The following are additional tests that can be obtained:

- Defecography (fluoroscopy or dynamic MRI)
- Anal manometry
- Electromyography (EMG)
- Pudendal nerve terminal motor latency (PNTML)
- Colonoscopy
- Colonic transit study

Although these studies may be useful excluding concomitant pathologies and providing additional baseline data, they rarely change the operative approach nor correlate well with actual functional changes.[7]

Rectal prolapse management can be both medical and surgical. The ED management of prolapsed rectum focuses on ruling out bowel strangulation by evaluating the color of the mucosa. If the prolapsed segment is strangulated, emergent surgical consultation is warranted. For all other cases an attempt at reduction is appropriate. The main approach for reduction involves applying slow steady pressure to the prolapsed segment in order to reduce it. One method involves placing thumbs over luminal surfaces medially and fingers grasp outer walls laterally.[8] Constant pressure is applied, first with thumbs followed by internal rolling of fingers. Granulated sugar coating may be used to reduce edematous changes in the prolapse segment.

Emergent surgical consultation should be obtained if the prolapsed segment cannot be reduced at bedside.

Once the segment is reduced, medical management helps reduce symptoms, while patients are optimized for surgical intervention. Medical management includes ensuring adequate fiber (25-30 grams/day) and fluid (1-2 liters/day) intake to help relieve any underlying constipation and decrease stool or mucus seepage. Although pelvic floor exercises are commonly advised for female patients, there is no data to support use to treat rectal prolapse. Children with rectal prolapse should be referred for evaluation of underlying condition such as cystic fibrosis, pelvic floor weakness, diarrhea, etc.

Although the optimal surgical approach is yet to be defined, surgical repair, either intra-abdominal or perineal, is the treatment of choice.[9] Though an invasive procedure, early surgery is recommended since even a small, reducible rectal prolapse will eventually worsen. Progression may weaken the sphincter with severe complications such as prolapse incarceration.[9]

Conclusion

The ED team attempted bedside reduction, and even applied granulated sugar to the segment, but were unsuccessful. Emergent surgical consult was able to reduce the segment after 1 hour of applying steady pressure at bedside. After reduction, the patient was observed for a few hours and then discharged home with outpatient surgical follow-up.

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