

Research Letter

Enema resulting in rectal prolapse and colostomy in a term pregnant woman

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Accepted 5 May 2010

Rectal prolapse during pregnancy is a rare event; however, incontinence and difficulties in defecating are common complaints of pregnant women [1]. The possible etiologic conditions associated with rectal prolapse have been discussed. A weak pelvic floor, which can manifest as incontinence, and straining during defecation, which increases intra-abdominal pressure, contribute greatly to the mechanisms of rectal prolapse [2–7]. In addition, chronic constipation and obstetric lacerations are reported to be risk factors for rectal prolapse [3]. We herein report a term pregnant patient who developed rectal prolapse immediately after an enema to illustrate this potential complication.

A 31-year-old woman, Gravida 2 Para 1, presented to the Emergency Department (ED) at 39 weeks' gestation 1 hour after receiving an enema during a routine bowel preparation before a scheduled Cesarean section in a local obstetric clinic. Enema was administered as a part of preoperative bowel preparation for Cesarean section. During evacuation, the rectum prolapsed through the anus. The patient stated that she felt pain during evacuation of the enema and panicked on realizing a bulging mass was extruding from her anus. The local clinician promptly transferred her to our ED after examining her without any other treatment. Her past history was significant for a Cesarean section 2 years earlier because of a prolonged labor. She denied any history of hemorrhoids, anal prolapse or anal lacerations, or regular use of stool softeners or laxatives, but stated she occasionally had constipation during the pregnancy, which varied with her dietary intake.

Primary reduction of the prolapsed rectum failed (Fig. 1) and colorectal surgeons were consulted. An emergent Cesarean section through a Pfannenstiel incision was performed; and after delivery of the infant, the colorectal surgeons attempted reduction of the rectosigmoid colon

without success. The colorectal surgeons discontinued their attempts to replace the bowel when they noted gangrenous changes secondary to constriction by the perianal sphincter. An Altemeier procedure was then performed with the removal of approximately 28 cm of gangrenous bowel through the anorectum and construction a defunctioning colostomy. The patient passed flatus on the 3rd postoperative day and recovered without complication. Pathologic examination of the resected colon showed acute ischemic changes. A colostomy takedown was performed 3 months later.

Complete rectal prolapse (procidentia) presents as the intussusception of the rectum into the anal canal, with the descent of all layers of the rectum through the anus [2,5,6,8]. This condition is uncommon [2–4], with a disproportionate occurrence among women (80–85%) [5,6]. In females, the incidence is greatest in the sixth to seventh decades of life [5,6]. The etiology of rectal prolapse is multifactorial. Anatomic abnormalities that account for some, but not all of the causes of rectal prolapse include an abnormally deep cul-de-sac of Douglas, laxity and diastasis of the levator muscles, patulous anal sphincter, increased retrorectal space, elongated mesorectum, loss of horizontal fixation of the rectum and its sacral attachments with straightening of rectum, and redundant sigmoid [7]. Others factors include those associated with a weak pelvic floor, such as prolong straining, parasite infection, neurological conditions, vaginal delivery, and constipation [2]. In addition, there is evidence that pregnancy changes the smooth muscle of the gastrointestinal tract, the musculature, and supportive tissues of the pelvic floor through hormonal effects that result in constipation in the first and second trimesters [1]. These changes further complicate the etiology and process of rectal prolapsed in gravidas.

In the case presented herein, several factors may have contributed to the failure of primary reduction in the ED. The size and pressure of the term uterus in the pelvis as well as the severe edema and constriction of the anal sphincter hampered our attempt to exert sufficient pressure to reduce the rectum.

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Fig. 1. Prolapsed colon with edematous, ischemic, and necrotic change.

Although the patient had no prior history of an obstetric injury involving the anal sphincter, she did report constipation and dyschezia during pregnancy. The additional cumulative effects of increased intra-abdominal pressure from pregnancy and the enema may have contributed to the prolapse.

A prolapsed rectum will incarcerate and strangulate if left untreated for a prolonged period [2,3]. One hour has elapsed in the case described herein. In addition, a tight sphincter will

aggravate the edema and strangulation process [2]. The initial management of rectal prolapse is prompt manual reduction to prevent ischemia and necrosis. However, this is a difficult procedure in a pregnant woman because of the increased intra-abdominal pressure.

In summary, although rare in a gravida, procidentia of the rectum can lead to severe complications. Extra caution should be exercised when providing treatment and counseling to gravidas regarding dyschezia and constipation.

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