A Rare Case of an Enterocele causing a Partial Small Bowel Obstruction

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Introduction

Small bowel obstructions account for over 80% of the laparotomies done in the United States each year for which there are estimated to be about 300,000, with an increasing incidence with age and number of intra-abdominal procedures. There are many different etiologies of small bowel obstructions including adhesions, hernias, malignancy, inflammatory bowel disease, foreign bodies, and stool impaction.

Clinically, patients will present with abdominal pain (progressive or intermittent), distention, nausea, and vomiting. Computed Tomography (CT) has become an important imaging modality to assess for lead points, but more importantly assess for complications such as closed loop obstructions and strangulated obstructions.

Pelvic Organ Prolapse (POP) traditionally occurs in post-menopausal women regardless of hysterectomy status, and some studies show the incidence to be similar among women with and without hysterectomies. POP is a collective term referring to herniation of pelvic organs into or through the perineum, usually as a result of weakness from ligaments, fascia, and muscles. Enteroceles are herniations of the peritoneal sac containing small bowel into the vaginal vault or rectovaginal space.

We report a case of a middle aged female that was found to have a pelvic organ prolapse causing a partial small bowel obstruction.

Case Presentation

A mid forty year-old female with a past medical history of moderately differentiated squamous cell carcinoma of the cervix with metastatic disease to pelvic lymph nodes status post robotic radical hysterectomy, bilateral salpingo-oophorectomy, chemotherapy, and radiation with vaginal cuff brachytherapy completed in 2015. She reported having
diffuse abdominal pain, vaginal bleeding, and vaginal pain over the past 2 days. She has had 20 lb of unintentional weight loss in the last 3 months. Her pain is constant, described as being crampy without radiation, and described as being moderate.

Her initial vital signs were temperature 97.5 F, pulse 91, RR 14, BP 109/77, saturating 98% on room air. On physical exam she was awake, alert and oriented to person and place, soft, nontender abdomen without rebound or guarding. Notable labs included WBC 11.18, glucose 112, 3+ blood, 3+ Leukocyte esterase, 1 + ketones, negative nitrite.

A Computed Tomography (CT) of the abdomen and pelvis was ordered, and a result was paged from the attending radiologist to the ordering provider; an enterocele causing mesenteric fat and a loop of distal bowel prolapsing into the vaginal cuff causing a partial small bowel obstruction with mild upstream dilatation that measured up to 2.8 cm in caliber. The terminal ileum was collapsed.

Initial Imaging Findings

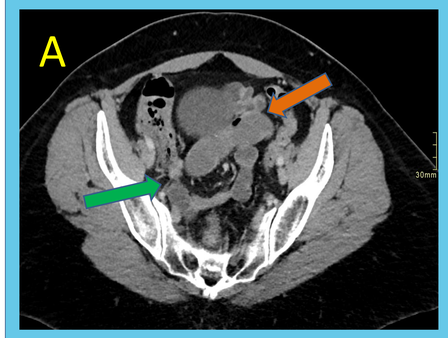


Figure A: CT Abdomen and pelvis with IV Contrast with a green arrow in A pointing to the collapsed ileum, and an orange arrow pointing to partially dilated upstream small bowel

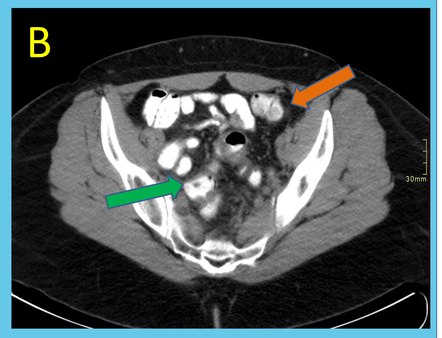


Figure B: CT Abdomen and pelvis with oral contrast that was taken prior to oncologic interventions in 2015 with a green arrow pointing to normal distal ileum for comparison.

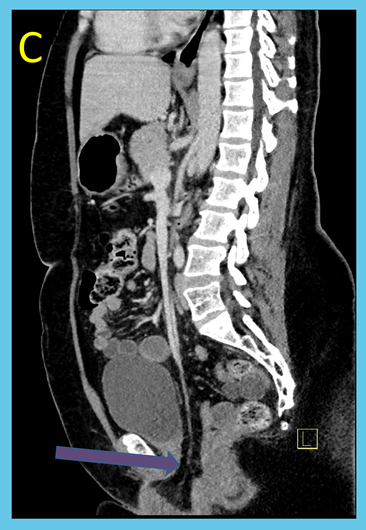
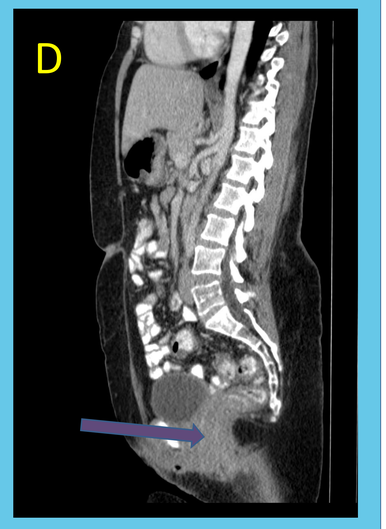


Figure C

Figure C: CT Abdomen and pelvis of the sagittal sequence that was taken on initial presentation with a purple arrow pointing to the enterocele containing mesenteric fat and small bowel prolapsing into the vaginal cuff.
Figure D: is an image of the patient in 2015 for comparison



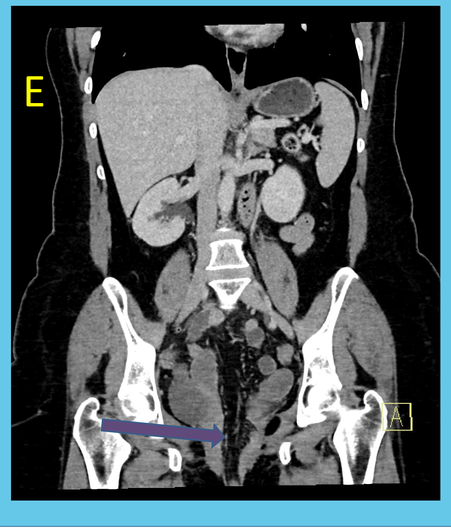


Figure E: Coronal image CT Abdomen and Pelvis with a purple arrow pointing to the mesenteric fat prolapsing into the pelvis, that could be further localized to the vaginal cuff on the axial images as above

Case Resolution

Gynecology oncology was then consulted for vaginal cuff dehiscence with bowel evisceration. The patient underwent a vaginal repair of cuff dehiscence along with reduction of the small bowel the following day. Intraoperatively, the bowel showed no evidence of compromise, the bowel was probed with a moist sponge demonstrating no fixation to the edges of the vaginal cuff, and vaginal vault copiously irrigated and noted to be completely hemostatic. The operation was completed without any operative complications.

Discussion

Small bowel obstructions are most often caused from prior abdominal surgery with post-operative adhesions, and in females with a history of gynecological surgery. Enteroceles are a known but rare etiology for causing an obstruction, and it is fairly uncommon accounting for an incidence rate of up to .1-16% of gynecological surgeries.

Enteroceles can be divided into posterior, lateral, and anterior depending on which aspect of the vaginal wall is affected with a posterior being the most common. The female pelvis is supported through various muscles like the puborectalis, iliococcygeal, and levator ani muscles, along with ligaments such as the uterosacral and cardinal ligament, and the treatment for pelvic organ prolapse will vary depending on patient's preferences, the clinical presentation, while factoring in quality of life and associated comorbidities. Additionally, it should be mentioned that recurrence rate after surgical management is up to 29%.

The diagnosis of an enterocele in this case was found during an emergency CT scan of the pelvis, and up to 41% of women in the ED setting report pelvic exams to be moderately or severely painful. Traditional sectional modalities like CT and now exams like dynamic magnetic resonance imaging have assisted in properly diagnosing and guiding the management of enteroceles in affected patients while properly identifying the hernia sac and contents.

Additional Information

Please reach out if any there are any additional questions

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