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Case Report

Pelvic organ prolapse: An unusual cause of small bowel obstruction

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ABSTRACT

We present the rare case of a small bowel obstruction secondary to pelvic organ prolapse (POP). A 77-year-old female presented with four days of abdominal pain, nausea, and vomiting. She had a history of abdominal hysterectomy with bilateral salpingo-opherectomy and a mildly symptomatic cystocele. She was found to have an enterocele causing small bowel obstruction. The enterocele was manually reduced and subsequently managed non-operatively with a pessary. Prior case reports of small bowel obstructions secondary to POP required emergent surgical intervention. Post-menopausal women should be asked about symptoms or presence of pelvic organ prolapse and in the correct patient population, pelvic examination can be important for diagnosis and treatment of small bowel obstruction. If the enterocele is manually reduced non-operative management can be safe and effective.

Small bowel obstructions (SBOs) are responsible for almost 350,000 hospitalizations in the US each year [1]. About 75% of small bowel obstructions are caused by intra-abdominal adhesions with less common causes including hernias, malignancy, Crohn's disease, strictures, foreign bodies, and congenital abnormalities [2]. Pelvic organ prolapse (POP) occurs frequently in post-menopausal women regardless of prior hysterectomy status [3]. Rates of pelvic organ prolapse (POP) are similar in women with and without history of hysterectomy and treatment depends on patient preference, quality of life, associated comorbidities and symptoms. Enteroceles are herniation of the peritoneal sac containing small bowel into the vaginal vault or rectovaginal space. There have been three prior case reports of POP complicated by incarceration of small bowel within the vaginal vault requiring emergent surgery and bowel resection [4-6]. This is the first case reporting non-operative reduction and management.

A 77-year-old female with a history of hypertension presented with four days of abdominal pain, nausea and vomiting. At time of presentation, she had not had a bowel movement or passed flatus for 24 h.

Her history was significant for three pregnancies and an abdominal hysterectomy with bilateral salphingo-oopherectomy performed 30 years earlier. The patient reported a history of a spontaneously reducible cystocele. She did not feel as though her sensation of prolapse was any greater than usual.

On exam, her abdomen was diffusely tender and was distended without peritoneal signs. Her labs were notable for a hematocrit of 51 (hemoglobin 16.1). All other laboratory values were within normal ranges. CT imaging of her abdomen and pelvis demonstrated diffusely dilated loops of small bowel with a decompressed ileum and a transition point in her pelvis associated with her cystocele (Fig. 1).

A pelvic exam revealed a cystocele protruding from the vaginal opening. The cystocele and associated herniated small bowel were manually reduced. Gynecology saw the patient and fitted her with a Gelhorn short stem pessary. Nasogastric decompression and bowel rest were maintained for 12 h without return of her cystocele. Water soluble contrast was administered via NG tube and observed in the colon 6 h later. The NG tube was removed, and her diet was advanced. She was discharged after tolerating full liquids with instructions to follow up with gynecology.

The most common cause of small bowel obstruction in patients with prior abdominal surgery are post-operative adhesions, which in women are most commonly caused by gynecological surgery [7]. Indications for surgical intervention in SBO include peritonitis on exam and imaging findings concerning for bowel ischemia [8].

Female pelvic organs are supported by muscles (the levator ani muscle complex) and fascial attachments (the uterosacral and cardinal ligaments) [9]. The prevalence of POP is difficult to ascertain as the 200,000 women per year who undergo surgical treatment likely only represents a portion of the affected women [3]. The Women's Health Initiative enrolled post-menopausal women seeing a gynecologist between the ages of 50–79 and found a prevalence of 41% of women with a uterus and 38% of women without a uterus having some form of prolapse [10].

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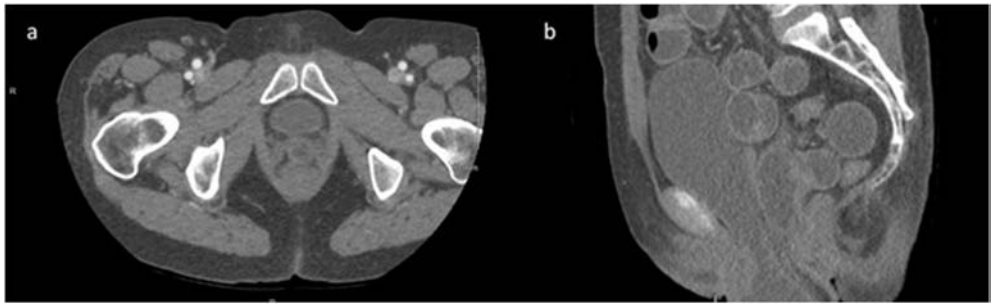

Fig. 1. Axial and coronal CT imaging of patient with (a) loops of bowel in vaginal vault and (b) dilated loops of bowel leaving the pelvis.

The treatment of POP depends on patient preference, quality of life, associated comorbidities and symptoms. Surgical management is reserved for patients who have failed lifestyle modifications, physical therapy, or pessary devices. However, the recurrence rate after surgical management is up to 29% [11]. In our patient, it was reasonable to treat with a pessary device given her age and lack of life-altering symptoms such as urinary incontinence, fecal incontinence, or vaginal ulceration. [11]

Three prior case reports discuss small bowel obstruction as a result of pelvic prolapse with associated enterocele. In all three cases, the patients had a history of hysterectomy. In two of the cases, the hysterectomy was greater than 15 years prior to presentation. All three of these patients required surgical management which included repair of the peritoneal defect allowing for herniation of the small bowel into the vaginal vault [4-6].

A pelvic exam in this patient would have found the cause of her SBO prior to CT scan. A prospective study evaluated the clinical usefulness of vaginal examination in women presenting to the emergency department with abdominal or pelvic pain, they found that in only 6% of cases did the results of the pelvic exam change clinical management [12]. Given that in the ED setting 41% of women report pelvic exams to be moderately or severely painful, they are not an intervention to undertake without clinical suspicion of usefulness [13].

In conclusion, patients with a history of known pelvic organ prolapse who present with clinical signs and symptoms of small bowel obstruction, a vaginal exam should be considered for evaluation of potential enterocele. If the enterocele is not able to be reduced, patients will likely require operative management. In cases where the enterocele is reducible, management with a pessary and discussion of elective operative repair may be appropriate.

Author contributions

All authors (K.W., A.T., and J.T.) were involved in management of the case, drafting of the article, and critical revision of the article. J.T. approved the final version to be published and takes responsibility for the article as a whole.

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