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Rectal prolapse and urinary retention: A case report of an "anal cystocele"

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ABSTRACT

Background: Concomitant rectal and vaginal prolapse is diagnosed in 14–55% of patients who present for pelvic floor evaluation.
Case: A patient was referred for pelvic floor evaluation in the setting of rectal prolapse and urinary retention. Preoperative magnetic resonance (MR) imaging revealed the presence of a posterior cystocele prolapsing through the full-thickness rectal prolapse.
Conclusion: Rectal prolapse with concomitant urinary retention should raise suspicion for posterior bladder prolapse. Here we propose the new term "anal cystocele". MR imaging aids in the diagnosis and treatment planning for this condition.

1. Introduction

Concomitant rectal prolapse can be found in 14–55% of patients presenting with pelvic organ prolapse (POP) [1,2]. Women previously operated on for fecal incontinence or rectal prolapse have a POP prevalence of 18–34% [3]. Patients who have had multiple surgical operations for pelvic floor disorders and recurrent POP or rectal prolapse may occasionally present with atypical symptomatology such as urinary retention, prompting further evaluation. Here we present a case in which the patient had been diagnosed with recurrent rectal prolapse and treated conservatively for urinary retention for over a year. A referral for multi-disciplinary pelvic floor evaluation revealed a rare and atypical condition causing the patient's urinary retention.

2. Case

The patient was a 74-year-old post-menopausal Caucasian woman gravida 2 para 2 referred for pelvic floor evaluation to an academic urogynecology practice. She had an extensive pelvic surgery history, including a total abdominal hysterectomy and "bladder lift" for fibroids and abnormal uterine bleeding when she was in her early 40s, followed by an anal sphincteroplasty when she was in her 50s, after the development of fecal incontinence. In her late 50s she had undergone a laparoscopic sigmoidectomy for a large-bowel obstruction secondary to adhesive disease. When in her early 70s, the patient had developed rectal prolapse and a hand-assisted laparoscopic low anterior resection with rectopexy had been performed. Rectal prolapse recurred 6 months later, and around the same time she developed urinary retention with bilateral hydronephrosis, which was treated with intermittent catheterization for approximately one year. The patient could only urinate in the morning, with a post-void residual of 500 cc or more, and required catheterization twice a day. She was referred by her colorectal surgeon for further evaluation of her pelvic floor symptoms as surgery for rectal prolapse was being planned.

On physical exam, the patient was noted to have stage 3 anterior vaginal wall prolapse (Ba = +3), stage 2 apical prolapse (C = 0), posterior wall prolapse (Bp = −1), and full-thickness rectal prolapse, more prominent anteriorly (Fig. 1). She was fitted with a pessary and was then able to void spontaneously several times with volumes greater than 300 cc. The patient discontinued the pessary due to rectal discomfort. Urodynamic testing revealed a bladder capacity of 815 cc, maximal flow rate of 10.1 mL/s, maximal detrusor pressure of 37 cm/H2O, and a post-void residual of 500 cc. In order to further evaluate chronic urinary retention, cystourethroscopy was performed and it appeared that the patient had a large posterior bladder diverticulum. Given the presenting symptoms and findings on cystourethroscopy, the decision was made to proceed with imaging to further evaluate the suspected bladder diverticulum.

MR imaging of the pelvis was performed (Fig. 2), which showed an anterior cystocele component protruding through the vaginal introitus extending 4.5 cm below the pubococcygeal line (PCL) as well as a posterior cystocele component extending 9 cm below the PCL protruding through a complete extra-anal rectal prolapse, beyond the level of the

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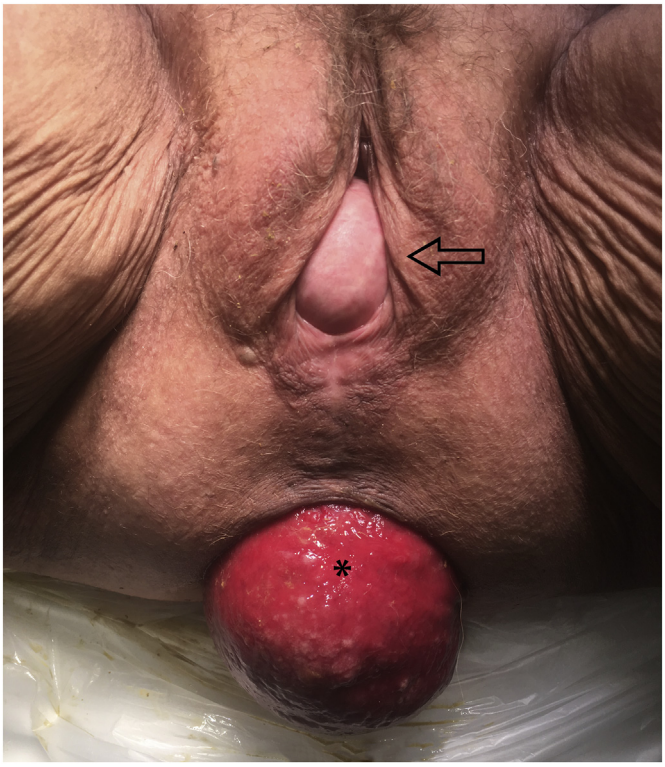

Fig. 1. Physical exam in lithotomy position showing vaginal prolapse (arrow) and full-thickness rectal prolapse (asterisk).

anal verge. In other words, the bladder was noted to be descending through the vaginal and apex and through the rectovaginal septum, into the rectal prolapse.

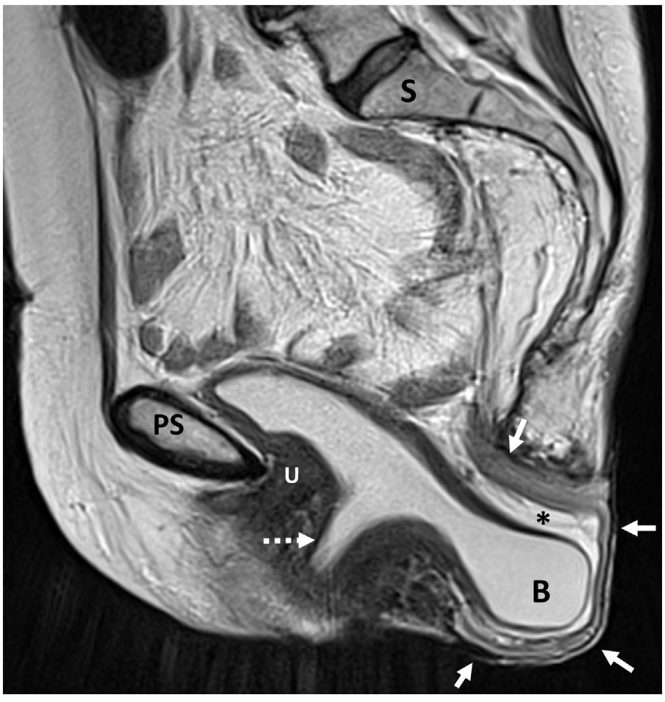

Fig. 2. Single sagittal midline T2-weighted Fast Spin Echo (FSE) image with the patient at rest demonstrates complete anorectal prolapse (solid arrows) containing the bladder (B) and peritoneal fat (*). The bladder is also seen prolapsing though the vagina in the middle compartment (dashed arrow). PS - pubic symphysis; U - urethra; S - sacrum.

After the patient had given informed consent, she underwent an uncomplicated abdominal sacrocolpopexy and ventral mesh rectopexy. At her post-operative visit she had no complaints, and reported discontinuation of intermittent catheterization. Exam revealed a well-supported vagina in all compartments (Ba-3, Bp-3, C-8, TVL 8) and no evidence of rectal prolapse. The patient also reported her ability to empty her bladder completely and no bulge symptoms.

3. Discussion

The lifetime risk of undergoing a surgical procedure for POP or incontinence in the United States by the age of 80 is 11% and the rate of reoperation for recurrent prolapse is as high as 29% [4]. Multiple surgical operations on the pelvic floor may contribute to anatomical distortion resulting in unusual prolapse and symptom presentations, as in this case. When symptoms are not clearly the result of observed anatomy, physical examination alone may be inadequate, and has been shown to have poor sensitivity and specificity in diagnosing various forms of pelvic floor dysfunction [5]. Imaging can help identify and grade pelvic floor dysfunction and demonstrate the multiple compartments of the pelvic floor that may be involved [6]. MR imaging is useful to evaluate the entire pelvic floor in unison and allows for both anatomic and functional evaluation. High-resolution T2-weighted images of the pelvis in the sagittal, axial, and coronal planes obtained at rest provide detailed evaluation of the anatomic structures in the pelvis, including levator muscles, the anorectal complex, as well as pelvic organs. Dynamic imaging with MR defecography is obtained during active defecation and provides functional information such as assessment of the degree of prolapse and involvement of multiple pelvic floor compartments and may affect surgical management in up to 67% of patients [6].

This patient's extensive pelvic surgery history and unique presentation of a recurrent rectal prolapse with urinary retention suggested a more complex pelvic floor disorder, thus warranting a more comprehensive approach to assessment and management. In this case, the anatomic MR images demonstrated complete anorectal eversion and prolapse of the bladder posteriorly within the prolapsing sac, even at rest. In addition, the MR images demonstrated prolapse of the bladder through the everted vagina (Fig. 2). Although the vaginal and rectal prolapse were seen on physical examination, the bladder prolapsing within the full rectal prolapse was occult and detected only through imaging. This case demonstrates the valuable role of MR imaging for diagnosis and preoperative planning of complex cases.

The most common management of concomitant genital and rectal prolapse is a combined sacrocolpopexy and ventral rectopexy. Several studies report that combined sacrocolpopexy and rectopexy is a safe procedure that results in improved bowel function and quality of life in most patients, with a low risk of recurrence [7]. Combined surgery is reported to result in high patient satisfaction along with the additional benefits of cost savings and a single recuperation period [8].

To our knowledge, this is the first reported case of posterior bladder prolapse within a full-thickness rectal prolapse, and hence we introduce the novel term “anal cystocele”. Given the rate of concomitant rectal prolapse and POP, we suspect that this condition is underdiagnosed. Physicians should maintain a high index of suspicion when evaluating patients who have had multiple operations on the pelvic floor who present with recurrent prolapse and atypical symptoms. Evaluation by a multidisciplinary team and the use of imaging can aid in the diagnosis and management of these patients. MR defecography has the benefit of providing both anatomic and functional information in this setting.

Contributors

Maria E. Florian-Rodriguez participated in direct care and treatment of the patient, and contributed to the drafting and revising of the manuscript.

Kinjal Mehta contributed to the drafting and revising of the manuscript.

Gaurav Khatri participated in direct care and treatment of the patient, and contributed to the drafting and revising of the manuscript.

Joseph I. Schaffer participated in direct care and treatment of the patient, and contributed to the drafting and revising of the manuscript.

Conflict of Interest

The authors declare that they have no conflict of interest regarding the publication of this case report.

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Patient consent

Obtained.

Provenance and peer review

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