Rectal Duplication Cyst Presenting As Urinary Retention In Adult

Lindsay Petersen M.D.* Jose M. Velasco M.D.†

*Rush University Medical Center, lindsay.petersen@rush.edu
†NorthShore University HealthSystem, jose.velasco@rush.edu

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Abstract

BACKGROUND: A 61-year old male presented with urinary retention and lower abdominal pain. Ultrasound revealed right hydronephrosis and hydroureter, as well as a large pelvic mass. Computed tomography and magnetic resonance imaging showed a heterogeneous solid and cystic pelvic mass.

METHODS: Colonoscopy showed no masses but narrowing of the rectum from a likely external mass. At exploratory laparotomy, the patient was found to have a large cystic mass arising from the anterior wall of the rectum. The mass was excised, and the anterior wall of the rectum was repaired in two layers.

RESULTS: Pathology revealed a mass with smooth muscle tissue in the cyst wall and lined with mucinous epithelium and extravasated mucin consistent with a diagnosis of enteric duplication cyst. The tumor was low grade. The patient’s postoperative course was uncomplicated.

CONCLUSIONS: A rectal duplication cyst is a very rare finding in an adult, and this is the only case in the literature to present as urinary retention in an adult. Resection is indicated in symptomatic cases or suspicion of malignancy, although long-term risk of malignancy is low.

KEYWORDS: enteric duplication cyst, rectum, adult
INTRODUCTION

Enteric duplications are congenital malformations that can be encountered from the mouth to the anus and are found in immediate contact with the wall of the alimentary tract. They generally present in pediatric patients but can be asymptomatic throughout childhood and present later in life. They are cysts or tubular structures that contain an exterior layer of smooth muscle cells with internal lining of gastrointestinal mucosa (1). Gastric duplications account for 2-7% of cases, small intestinal duplications account for over 60% of cases, colonic duplications account for 4-18% of cases, and rectal duplications account for 4% of cases (2-3). Colonic duplications can present with pain, obstruction, or bleeding (3-8). Generally enteric duplications are benign, but there are reports of malignancy found within duplication cysts (9). Treatment is reserved for symptomatic cases, but resection is recommended if there is any concern for malignancy in asymptomatic cases. We report a case of an unusually late presentation of a rectal duplication cyst in an adult and review the current literature.

CASE REPORT

A 61-year old male presented with urinary retention and lower abdominal pain. Ultrasound revealed moderate to severe right hydroureteros, and hydroureter.
as well as a heterogeneous cystic and solid pelvic mass measuring 10 cm. Computed tomography scan showed moderate right hydronephrosis and a large pelvic mass that was predominantly cystic with dense peripheral calcification, as well as some partially calcified internal septations in the more caudal portion of the mass, reported to be possibly arising from the left seminal vesicle (Figures 1-2). Magnetic resonance imaging showed a large cystic, peripherally calcified mass with subtle nodule internal enhancement with unknown origin, but extends to and displaces and distorts the left side of the rectum.

Cystoscopy and right retrograde pyelogram confirmed a pelvic mass causing right ureteral obstruction, and the right ureter was stented. Colonoscopy was negative for any masses. At exploratory laparotomy, the patient was found to have a cystic mass arising from the pelvis and adherent to the anterior wall of the rectum. Resection of mass with repair of anterior rectum was performed. The patient did well postoperatively.

Pathology of the 10 cm mass reported a large butterfly-shaped cystic lesion. The wall was thick and fibrous with areas of calcification. The cyst wall contained smooth muscle tissue. The inner lining was mucinous epithelium and extravasated mucin. There was no invasion, and the tumor was low grade. Immunostains were positive for cytokeratin 20 and CDX-2. These findings are most consistent with the diagnosis of rectal duplication cyst.
DISCUSSION

Enteric duplication cysts are rare congenital malformations of the gastrointestinal tract, and rectal duplication cysts make up 4% of all intestinal duplications (2-3). The smooth muscle present in the wall of the duplication can communicate with the rectum (1). The etiology of enteric duplication is suspected to be a diverticulum that forms during development of the embryo (11).

Diagnosis of rectal duplication cysts is difficult given the rarity of this anomaly. Symptoms can include rectal pain, rectal bleeding, obstruction, or mass (3-8), although some cases can remain asymptomatic. Computerized tomography and magnetic resonance imaging can aid in the diagnosis. Magnetic resonance imaging can be especially useful to evaluate the pelvic anatomy.

Excision is indicated for symptomatic cases of rectal duplication, but also when malignancy is suspected. Malignancy is reported at an incidence of 12% (9-10). Duplication cysts have been successfully resected using transanal endoscopic microsurgery and laparoscopic surgery techniques (12-14). The recommended surveillance of these tumors for recurrence is not well defined.
CONCLUSION

In conclusion, we report the presentation of a rectal duplication cyst in a 61-year-old male who underwent resection because of urinary retention and risk of malignancy. These congenital anomalies rarely present in adults, and this is the only case in the literature of a rectal duplication cyst presenting with urinary retention in an adult male.

REFERENCES


FIGURE LEGENDS

Figure 1

Computerized tomography image revealing a large pelvic mass.
Figure 2

Computerized tomography image revealing a large pelvic mass displacing the rectum posteriorly.