INGUINO-SCROTAL HERNIA OF THE URINARY BLADDER

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INTRODUCTION

- Inguinal bladder hernia (IBH), first described by Levine in 1951 as a “scrotal cystocele”, is a rare clinical condition [1].
- The incidence of bladder involvement in inguinal hernias is 1% to 4% [2]. In men over age 50 years, the incidence may be as high as 10% [3].
- Most cases are asymptomatic and found incidentally at the time of herniorrhaphy [2].
- IBH continues to pose a challenge to surgeons before, during, and even after herniorrhaphy.
- We present a case of incarcerated right inguinal hernia containing small bowel with urinary bladder herniation.

CASE PRESENTATION

- An 81-year-old male presented with abdominal pain, distension, and swelling in the right groin with no nausea, vomiting, fever, or change in bowel habits.
- Past medical history of hypertension, DVT, and atrial fibrillation on Eliquis and past surgical history of appendectomy.
- Physical examination was remarkable for incarcerated right inguinal hernia with tenderness to palpation.
- CT scan demonstrated a right inguinal hernia containing a small bowel loop with proximally dilated small bowel loops suggestive of obstruction (Figure 1a), and urinary bladder adhered to the medial wall of hernia sac (Figure 1b).
- Received IV fluid resuscitation, IV antibiotics, foley catheter placed and emergently taken to the operating room.
- Intraoperative findings: Right inguinal incision. A large direct inguinal hernia containing small bowel was identified. The hernia sac adhered to the urinary bladder medially. The bladder was dissected off the sac without any injury. The hernia was repaired with a mesh using the Lichtenstein technique.
- Postoperative course was uneventful. No hematuria was noted. The foley catheter was removed on postoperative day one and he voiding spontaneously. Tolerated diet.
- Patient was discharged in stable condition and was doing well during clinic visit.

Figure 1: CT scan images show a right inguinal hernia containing bowel loops (Figure 1a), and urinary bladder adhered to the hernia sac (Figure 1b).

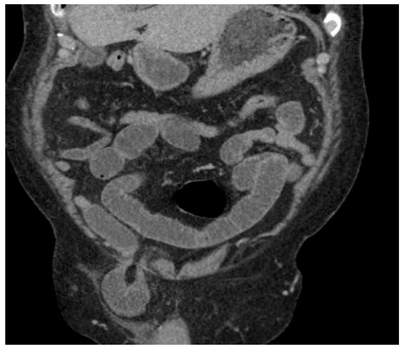
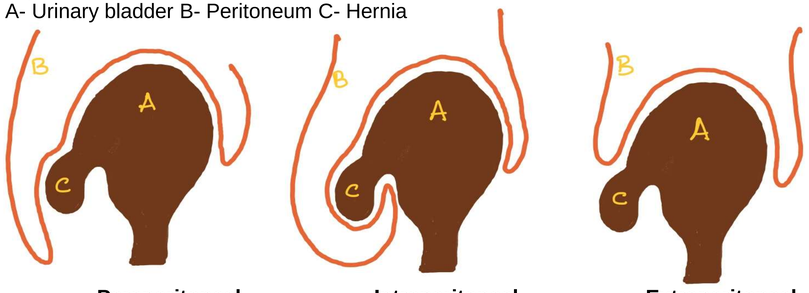


Figure 1a



Figure 1b

Figure 2: Types of Inguinal bladder hernias
A- Urinary bladder B- Peritoneum C- Hernia



Paraperitoneal **Intraperitoneal** **Extraperitoneal**

REFERENCES

1. LEVINE B. (1951). Scrotal cystocele. *Journal of the American Medical Association*, *147*(15), 1439–1441.
2. Gomella, L. G., Spires, S. M., Burton, J. M., Ram, M. D., & Flanigan, R. C. (1985). The surgical implications of herniation of the urinary bladder. *Archives of surgery (Chicago, Ill. : 1960)*, *120*(8), 964–967.
3. Wagner, A. A., Arcand, P., & Bamberger, M. H. (2004). Acute renal failure resulting from huge inguinal bladder hernia. *Urology*, *64*(1), 156–157.
4. Soloway HM, Portney F, Kaplan A: Hernia of the bladder. J Urol 1960;84:539-543.
5. Kraft KH, Sweeney S, Fink AS, Ritenour CW, Issa MM. Inguinoscrotal bladder hernias: report of a series and review of the literature. Can Urol Assoc J. 2008 Dec;2(6):619-23. doi: 10.5489/cuaj.980

DISCUSSION

- IBH are classified as paraperitoneal, intraperitoneal, and extraperitoneal based on the relationship of the hernias to the peritoneum (Figure 2) [4].
- The paraperitoneal hernia is the most frequent bladder herniation, in which a portion of the bladder lies medial to the hernia sac as in this case. In an intraperitoneal hernia, the bladder is covered with the peritoneum in the hernia sac. In an extraperitoneal hernia, only the bladder herniates with no relationship to the peritoneum.
- IBH most commonly present as direct inguinal hernias, usually on the right side [3].
- Risk factors include males, age >50, obesity, bladder outlet obstruction, chronically distended bladder, decreased bladder tone, or history of herniorrhaphy [2].
- Small hernias are usually asymptomatic. Large hernias present with lower urinary tract symptoms (LUTS) such as hematuria, dysuria, nocturia, polyuria, and reduction of hernia size after micturition [2].
- Radiographic imaging studies useful for diagnosis include CT scan, ultrasound, or cystography (gold standard) [5].
- Standard treatment for inguinal hernias involving the bladder is reduction or resection of the bladder followed by herniorrhaphy.
- Surgical resection of the herniated bladder should only be performed in cases of bladder wall necrosis, bladder diverticulum, tight hernial neck, or tumor in the herniated bladder [3].

CONCLUSION

- Inguinal bladder hernias are uncommon. Unrecognized bladder hernias can cause bladder injury during surgery.
- High-risk patients including obese, older men, who have urinary symptoms need further evaluation with a CT scan, ultrasound, or cystography to prevent iatrogenic injury and complications.
- Management consists of reduction or resection of the herniated bladder followed by herniorrhaphy.