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A Rare Case of Inguinoscrotal Bladder Hernia: Scrotal Cystocele

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ABSTRACT
Inguinal bladder hernia (IBH) is rare condition. Hernial sac can contain any portion of bladder (diverticulum, part of bladder or entire bladder). Condition where bladder found in inguinoscrotal hernial sac is referred as scrotal cystocele which is a rare entity. Patient usually presents with urinary retention or complain of double voiding. Physical examination is necessary in this scenario to avoid any further complications or inadvertent injury to urinary bladder during surgery. Diagnosis is confirmed with radiological investigations like ultrasonography (US), computed tomography(CT) scan and cystography. Most cases are diagnosed intraoperatively. Open surgical repair is preferred.

Keywords: Hernia; Inguinal bladder hernia, Scrotal cystocele

INTRODUCTION

Described first by Levine in 1951 as scrotal cystocele, inguinal bladder hernia (IBH) is a rare clinical condition. Since that time, despite several reports and advances in abdominal imaging, IBH remains a constant challenge for the surgeon before the diagnosis, during herniorrhaphy, and even in the postoperative period. [1]

Scrotal cystocele is considered as the rarest type of herniation. Most of the times small scrotal cystocele are asymptomatic.

Herniation of urinary bladder into inguinal canal can be partial or total; however, when whole bladder is herniated to the inguino-scrotal region, patients may present with obstruction, calculi, vesicoureteric reflux, hydronephrosis, infection, and acute renal failure. [2]

Damage to the herniated bladder during herniorrhaphy has been reported, and in the preantibiotic era, an unrecognized injury to the bladder could lead to infection, sepsis, and even death. To avoid intraoperative complications, it has been suggested that all men older than 50 years who have prostatism associated with an inguinal or femoral hernia should undergo radiographic studies to rule out involvement of the bladder within the hernia before surgical repair. In patients who do not undergo surgery, complications of herniation include possible upper tract obstruction and strangulation, infarction, and perforation of the bladder. Tumors and calculi have been found within the herniated bladder. [3]

CASE REPORT

A 56-year-old male referred to us from surgery department for sonography with chief complaints of swelling in right inguinal region, difficulty in passing urine with pain in right scrotal region since 7 days.

On abdominal ultrasonography urinary bladder was not visualized in the pelvis. Ultrasonography was repeated with full bladder and only small part of urinary bladder was visualized in pelvis. On scrotal

ultrasonography an ill-defined anechoic structure noted in right scrotal cavity[Figure-1]. Therefore, CECT was performed for further evaluation.

On CECT scan near total herniation of urinary bladder noted into the right scrotal sac through right inguinal canal with surrounding fat stranding and inflammation. [Figure-2]

On laparoscopy right sided indirect inguinal hernia was noted with urinary bladder as a content. As the content was difficult to reduce, decision was made to convert to open surgery. Urinary bladder was reduced and peritoneum closed. [Figure-3]

DISCUSSION

Data reported shows incidence of inguinal bladder hernia 1–3% and is slightly higher in obese males, aged ≥50 year and with lower urinary tract symptoms. Anatomically, inguinal bladder hernias may be classified as indirect, entering through the internal inguinal ring and running laterally to the inferior epigastric artery, or direct, protruding through Hesselbach's triangle of the posterior wall of the inguinal canal and running medially to the vessel. In our case herniation of urinary bladder seen in right scrotum through deep inguinal ring i.e. Indirect hernia, which was also confirmed per-operatively.

Most bladder hernias are asymptomatic and diagnosed incidentally during surgery or during imaging studies performed for other purposes. Symptoms like dysuria, frequency, urgency, nocturia, and hematuria have been reported; however, it is difficult to dissociate similar symptoms arising from coexisting conditions such as bladder outlet obstruction or urinary infection. Patients with large hernias may have specific symptoms, like reduction in size of the hernia mass after micturition and two-stage micturition, a situation during which initially the patient empties the normally located bladder, then voids again after manual compression of the hernial sac. [3] In our case patient presented with pain and swelling in right inguino-scrotal region with difficult voiding.

The diagnosis is usually made during hernia surgery. Early diagnosis required a detailed history, clinical examination and radiologic evidences to prevent complications during surgical repair. Imaging modalities for herniation of urinary bladder include intravenous urography, retrograde cystography and ultrasound. CECT scan preferred to evaluate the content, location, and its relationship with abdominopelvic structures. [4] In our case ultrasonography and CECT was performed. During scrotal ultrasonography a fluid filled anechoic structure seen in right scrotal cavity with beaked appearance of cranial part reaching towards inguinal which was traced up to urinary bladder in pelvis via inguinal canal that helped to differentiate the bladder from other intrascrotal conditions such as hydrocele, spermatocele, epididymal cyst. CECT was performed to delineate the hernial sac with urinary bladder as content, wall of bladder to rule out any strangulation, evidence of hydronephrosis and any other complications.

CONCLUSION

Scrotal cystocele is a rare condition. It should be considered in obese males, aged ≥ 50 years with lower urinary tract symptoms (LUTS). Preoperative identification of IBH is mandatory to prevent iatrogenic trauma or severe complications. Precise diagnosis can be readily achieved by radiologic evidences. It is necessary for general surgeons and urologists to be aware of this rare condition during the surgical repair of inguinal hernia.

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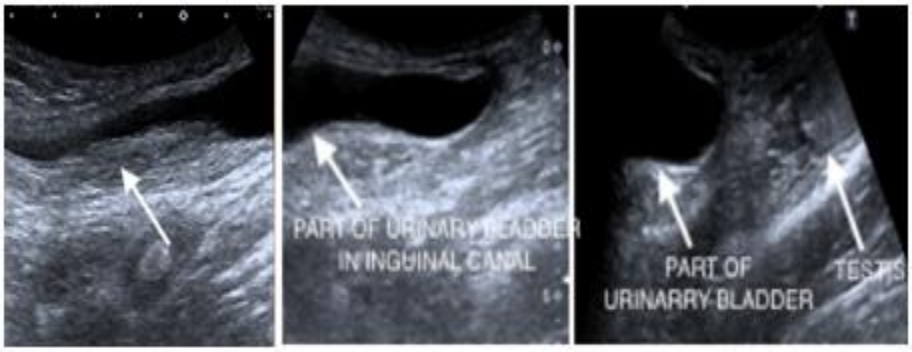

Figure 1: Ultrasound image showing herniation of urinary bladder to scrotal cavity through inguinal canal (with beaked appearance).

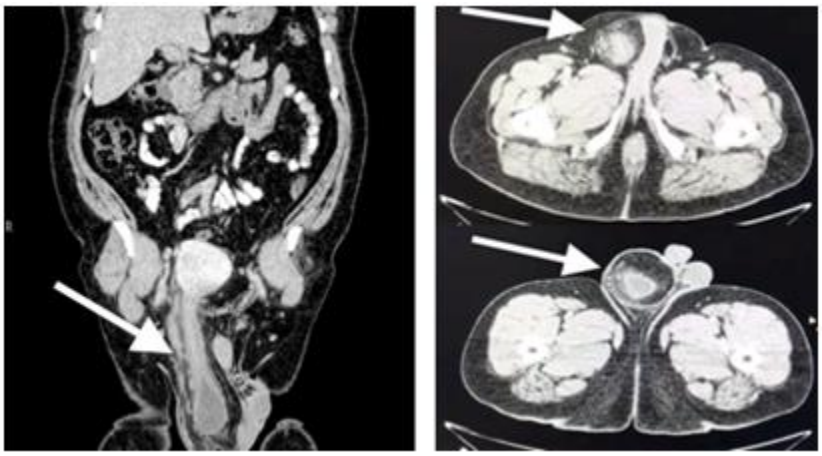

Figure 2: Coronal and axial CT images showing showing indirect herniation of urinary bladder into the right scrotal cavity via inguinal canal.

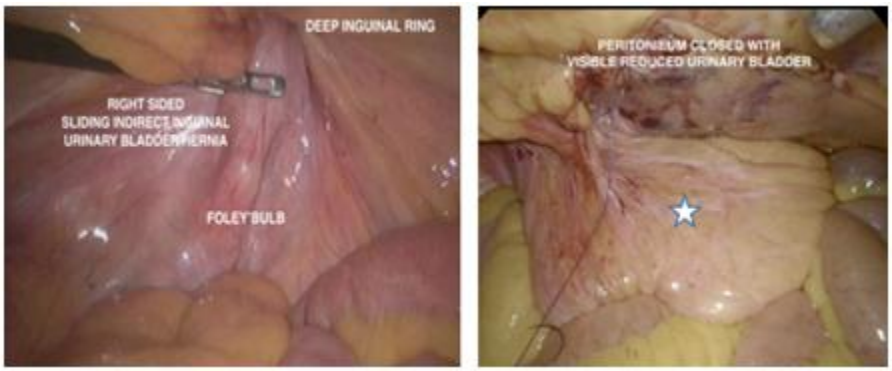

Figure 3: Intra-operative images showing urinary bladder herniation through deep inguinal ring and reduced urinary bladder after repair.

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