Scrotal herniation of urinary bladder: A rare case report

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Abstract
Scrotal cystocele is uncommon clinical condition. We report a 67 years old male patient who presented with right inguinoscrotal swelling. He was investigated and diagnosed as a case of scrotal herniation of urinary bladder. He underwent repair and had smooth postoperative course.

Keywords: Cystocele, Inguinoscrotal swelling.

Introduction
Scrotal urinary bladder herniation is a rare clinical condition. It is reported that inguinal hernia involve urinary bladder in 1% - 3% of all patients. In men older than 50 years, the incidence is high and reported to be 10%.[2-4] In this condition, part of urinary bladder, ureter or entire bladder, diverticulum may form all or part of scrotal hernia. Scrotal cystocele is condition where urinary bladder is found in inguinoscrotal hernia sac.[5] In all these patients, clinical examination plays important role. They present with symptoms of inguinal or scrotal bulging associated with LUTS and occasionally double voiding. Ultrasonography and cystography help in confirming the diagnosis. Surgical repair of hernia is the mode of treatment.

In our case we, have encountered with male patient presenting with right inguinoscrotal swelling, diagnosed to be scrotal cystocele which was managed by open surgical repair.

Case Report
A 67 year-old male patient, presented with swelling in the right inguino- scrotal region since 2 months (Fig. 1). Patient presented with LUTS since 2 months – increased frequency of micturition (daytime x 6, night time x 4), intermittency and weak stream of urine and increase in size of the scrotal swelling at the time of Micturition, with no past significant history. On examination, right inguino- scrotal swelling was soft, irreducible and size variation related with voiding. The examination of rest of the abdomen and flank was normal. Digital rectal examination showed grade 2 enlargement of prostate. Urinalysis and renal function tests were normal. Scrotal ultrasonography was done which showed hypoechoic lesion in the scrotum which extended proximally to the urinary bladder in the abdominal cavity. Diagnostic clue was during micturition, there was change in volume of lesion. Cystography showed herniation of the urinary bladder to the right scrotum (Fig. 2).

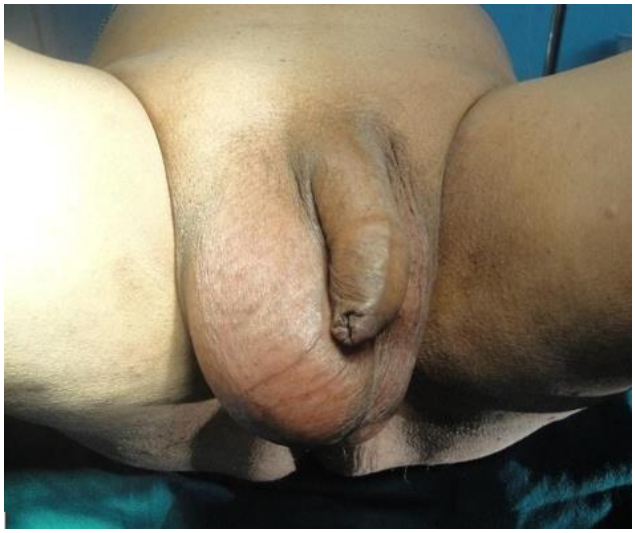

Fig. 1: Right inguino-scrotal swelling

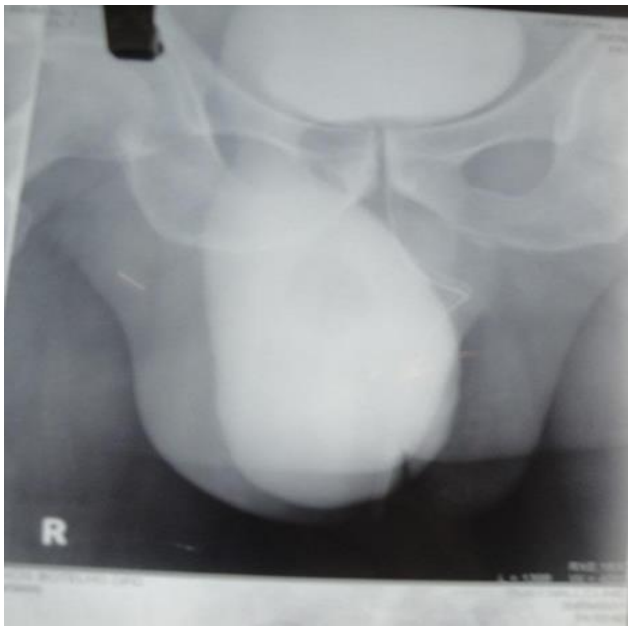

Fig. 2: Cystogram showing herniation of the bladder to the right scrotum

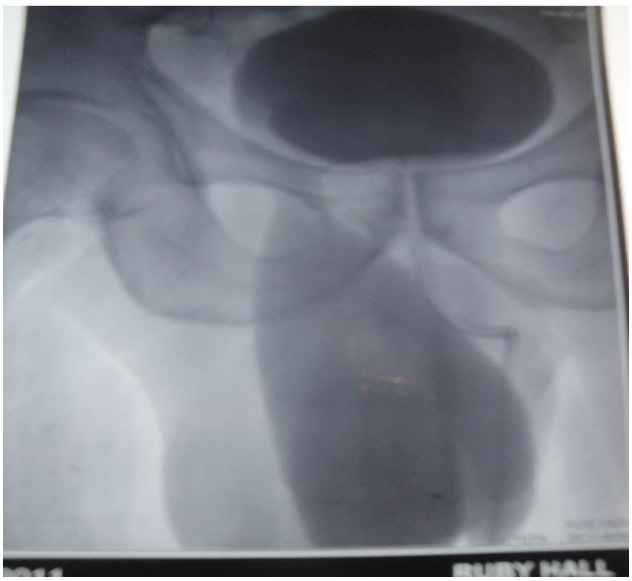

Fig. 3: Post void cystogram

A diagnosis of scrotal herniation of urinary bladder was made and patient was prepared for open surgical repair of hernia under regional anaesthesia in supine position. Urethral catheterization was done. Right inguinal incision was given and after dissection herniated bladder was dissected and reduced to the pelvic cavity. Prolene mesh was used to repair the floor of right inguinal canal. The immediate postoperative was uneventful. Urethral catheter was removed on postoperative day 4. Patient voided successfully and was discharged on the same day. During the follow-up visit after 7 day he was absolutely asymptomatic. Cystography was performed which showed no herniation / diverticulum of urinary bladder.

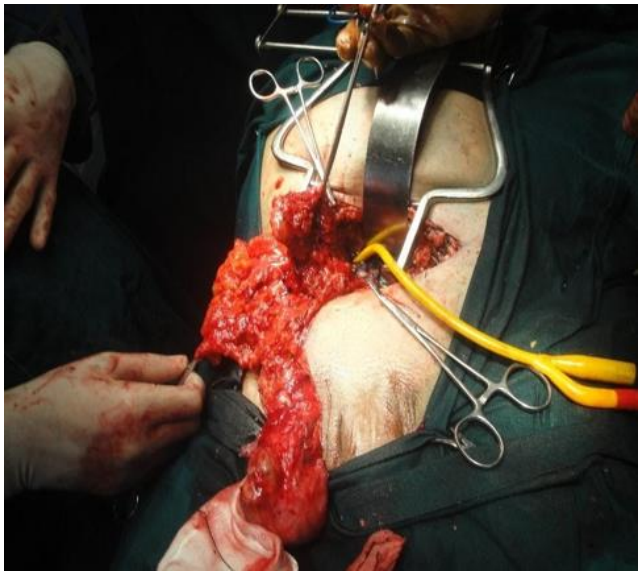

Fig. 4: Intraoperative image

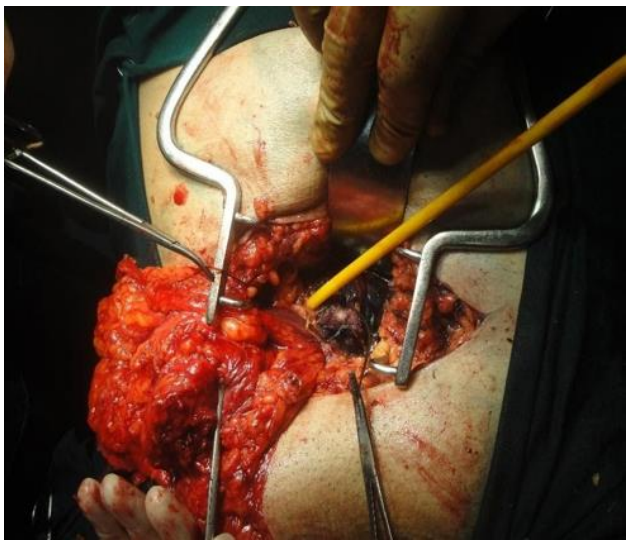

Fig. 5: Intraoperative image

Discussion

The first case of inguinal bladder hernia was described by Levine in 1951.Inguinal hernia on right side is more common, males being ten times more affected.[7] Direct inguinal bladder hernia is more common usually on right side and is asymptomatic.[6] In our case, patient was 67 years old ,male and the inguinal bladder hernia occurred on the right side.

Pathophysiology for scrotal cystocele can be due to bladder outlet obstruction, decreased bladder tone, chronically distended bladder, obesity and weakness of pelvic floor muscles.[1,6] Due to weakening of abdominal and urinary bladder wall, bladder slides through the inguinal ring.[8] Large bladder hernia presents with intermittent swelling in the inguinal region or scrotum associated with lower urinary tract symptoms such as increased frequency of micturition, intermittency, weak stream of urine and double voiding.[3] Lower urinary tract symptoms are due to obstruction or infection.[1] Ureter can also herniate independently or along with bladder which can result in ureterovesical junction obstruction leading to hydronephrosis.[9-11]

77% of cases of scrotal herniation of urinary bladder are diagnosed intraoperatively, 7% preoperatively and 16% postoperatively.[1,12] Ultrasonography and voiding cystourethrography aid in diagnosing the condition. Ultrasonography may show hypoechoic mass lesion protruding from the urinary bladder through the inguinal canal into scrotum. Voiding cystourethrographymay reveal dog-ear shapped bladder into scrotum.[6] Urologic diagnostic modalities such as cystoscopy is indicated to confirm the diagnosis, evaluate the prostate and urinary bladder.[12] In our case, it was clinically direct inguinal hernia and ultrasonography showed hypoechoic lesion in the scrotum which extended proximally to the urinary bladder in the abdominal cavity. Cystography showed herniation of the urinary bladder to the right scrotum.

Preferred treatment is open surgical repair.[1,6] Urethral catheterization is advisable before surgery. Surgical

approach depends on surgeons preference. Clear identification of each anatomic element inside hernia sac is important during surgery.[1] Bladder reduction is preferred and inguinal floor is repaired with or without mesh. Bladder resection is carried out in cases with necrosis of bladder neck, bladder tumors, bladder diverticulum, bladder damage during surgery and hernia neck of less than 5 mm in diameter.[1,6,12] If associated bladder outlet obstruction is present, correction of the condition is recommended.[9]

Conclusion

Unusual contents of inguinal hernia sac are rare, but may be encountered in one's surgical career during hernia repair, as it is most commonly performed surgeries.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Conflicts of Interest

All contributing authors declare no conflicts of interest.

Source of Funding

None.

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How to cite: Shimpi RK, Bhondave ST, Patel P**.** Scrotal herniation of urinary bladder: A rare case report. *IP J Urol Nephrol Hepatol Sci* 2021;4(1):18-20.