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A RARE CASE REPORT OF BLADDER INGUINOSCROTAL HERNIA PRESENTING AS SCROTAL SWELLING: SCROTAL CYSTOCELE

Radiodiagnosis

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ABSTRACT

Inguinal hernias with bladder herniation is rare with incidence of about 1-4%. Commonly part of bladder or diverticulum is herniated which is usually asymptomatic. Rarely bladder may herniate into the scrotum defined as scrotal cystocele by Levine for the first time in 1951.High clinical suspicion and early diagnosis is necessary to avoid intraoperative bladder injuries and complications. In this case report an elderly obese male patient presented with right inguinoscrotal swelling and recurrent urinary tract infections since 3 months, CT revealed large right inguinoscrotal hernia with herniation of major portion of bladder and right ureter.

KEYWORDS

Bladder Hernias,Scrotal Cystocele

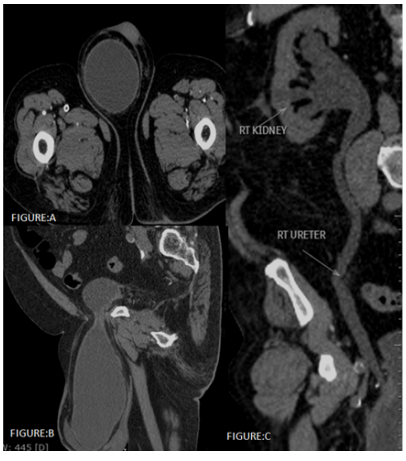
INTRODUCTION:

Inguinoscrotal hernias with bladder herniation are rare with incidence of about 1-4%.Advanced age, obesity, male gender and prostatism are recognized risk factors for bladder herniation. Commonly part of bladder is herniated which is usually aysmptomatic[1]. Rarely bladder may herniate into the scrotum defined as scrotal cystocele by Levine for the first time in 1951[2]. The condition should be suspected in all patients presenting with inguinal hernias and concomitant renal failure or LUTS, especially if a painless unilateral scrotal swelling is detected to avoid intraoperative bladder injuries and complications like urinary tract infections, obstruction and incarceration of bladder wall. However literature cited that only 7 % of cases have seen diagnosed before surgery[3].

CASE PRESENTATION:

A 78 year old obese male patient presented with right side painless reducible inguinoscrotal swelling and recurrent urinary tract infections since 3 months, typically swelling reducing in size after micturition. Patient had no history of previous surgery. Patient is on dialysis since 2 years for chronic renal failure. No other comorbid conditions noted.

CT revealed large right inguinoscrotal hernia with herniation of bladder and right ureter associated with right moderate hydroureteronephrosis. Right testis appears normal. No evidence of bladder incarceration. Both kidneys showed features of chronic renal failure. Prostate appears normal.



Figure(A):NCCT axial section shows well defined fluid density lesion in scrotum on right side,(B) sagittal section showing herniation of bladder upto base of scrotum, (C) reconstructed image showing herniation of right ureter with hydroureteronephrosis

DISCUSSION:

Although the urinary bladder is involved in up to 1-4% of inguinal hernias, massive scrotal cystocele is quite uncommon. They are frequently unilateral on right side with 70% male dominance as in our case. The herniation is often through the inguinal and femoral canal but can originate from the ischiorectal, obturator canal or abdominal wall[1,3]. Risk factors includes Bladder outlet obstruction, loss of bladder tone(elderly), pericystitis, large pelvic mass lesions and previous history of hernia surgery[4].Symptoms includes voiding-related scrotal swelling, two-stage micturition (a first spontaneous voiding followed by a second requiring manual compression of the inguinoscrotal region), urinary tract infections, or irritative lower urinary tract symptoms (LUTS) such as urgency, frequency, and nocturia secondary to bladder outlet obstruction or infection[5].

Bladder hernias have been classified into three types according to their relationships with the peritoneum: paraperitoneal hernias,the most frequent type, in which the extraperitoneal portion of the hernia lies along the medial wall of the sac; intraperitoneal hernias, in which the herniated bladder is completely covered by peritoneum; and extraperitoneal hernias, in which the bladder herniates without any relation with the peritoneum [6,7] .The relative position of the bladder to the peritoneum is of crucial value, since the peritoneal tissue can obscure an adjacent bladder wall causing an unintentional injury curing operative procedures[8].

Possible complications of untreated scrotal cystocele include hydronephrosis, renal failure, cystolithiasis, vesicoureteral reflux, bladder necrosis, and bladder perforation[9].

The imaging diagnosis can be established by CT,ultrasound, cystography, or intravenous pyelography

Excretory urography: The diagnosis of bladder hernia is made on urographic studies when a wide-mouthed, rounded protrusion of the bladder wall directed downward is noted. Identification of signs such as a small asymmetric bladder, incomplete visualization of the bladder base, or lateral displacement of the lower third of one or both ureters may suggest the diagnosis[10].

Sonography is usually requested to characterize the nature of a scrotal mass. Diagnostic criteria include the presence of a fluid-filled lesion at the scrotum that can often be followed cranially to join the intraabdominal portion of the bladder Continuity can be difficult to show; a beaked appearance of the cranial portion of the scrotal mass, which can be seen entering the inguinal canal, can suggest the correct diagnosis. Changes in volume of the lesion and thickening of its wall after micturition are the diagnostic clues[10].

Pointing of the bladder toward the side of the hernia—that is, angulation of the base of the bladder anteriorly and inferiorly—is the CT sign of a bladder herniation and, especially in patients with large lesions, it is possible to follow the bladder down into the inguinal or femoral canal .Even in the absence of contrast medium in the herniated bladder, identification of its thick wall surrounding unopacified urine can suggest the diagnosis. CT also can reveal herniations through other abdominal wall defects. Hernias along the midline after suprapubic prostatectomy, or laterally after traumatic defects in the bone and musculature of the pelvis, have been reported.[10]

Hernia repair has shown to be effective in improving LUTS and reducing complications in patients with significant bladder herniation; therefore, standard treatment of scrotal cystocele consists of reduction or resection followed by herniorrhaphy**.** Timely preoperative diagnosis of scrotal cystocele remains the single most important determinant of a successful surgical outcome, making proper clinical and imaging assessments valuable.[11.]

CONCLUSION:

Though bladder hernias are rare.This condition should be suspected in all patients presenting with inguinal hernias and concomitant renal failure or LUTS, especially if a painless unilateral scrotal swelling is detected.The imaging diagnosis can be established by CT, ultrasound, cystography, or intravenous pyelography.Because CT provides a clear anatomical outline of the herniated contents and allows prompt identification of complications, thereby enabling appropriate surgical planning, it is an especially valuable tool in the work-up of scrotal cystocele.

CONFLICT OF INTEREST:

Authors have no conflicts of interest to disclose.

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