

Massive inguinoscrotal bladder hernia

Authors: J Westera, J Meyer, J Reynolds, AL Lambrianides

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ABSTRACT

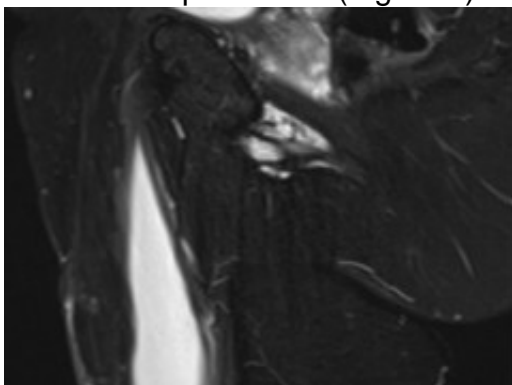
Inguinoscrotal bladder hernias are rare, occurring in 1-4% of all inguinal hernias. Massive inguinoscrotal bladder hernias, where >50% of the bladder is found in the hernia sac are extremely rare. Patients can suffer significant morbidity from such a hernia. These include sepsis, unilateral or bilateral ureteric obstruction, renal failure and strangulation with secondary ischaemia of the bladder wall and bladder rupture. Inguinoscrotal bladder hernias are most commonly diagnosed at the time of surgery. This may lead to significant complications for the patient, particularly if undetected during surgery.

INTRODUCTION

The urinary bladder is involved in 1-4% of all inguinal hernias (1,2), with the incidence rising to 10% in obese males between 50 (3). There is a 70% male predominance, with most occurring on the right side and are more commonly direct herniations (5). The inguinal and femoral areas account for 75% and 23% respectively, with 2% occurring outside the groin. Massive (where >50% of the bladder is out of its pelvic position) are extremely rare, with less than 120 reported in the literature.

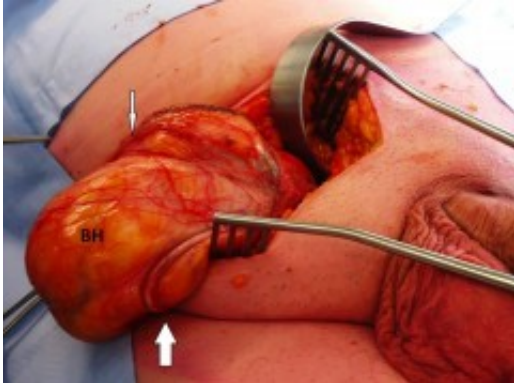
CASE REPORT

A 56 year old male presented with a 12 month history of an intermittent swelling in his right hemi-scrotum, moderate storage lower urinary tract symptoms, and of late, manual compression of his scrotum to complete bladder emptying. On physical examination, the abdomen was soft, with no flank mass or tenderness. There was a non-tender irreducible inguinoscrotal swelling. The prostate was mildly enlarged with a normal PSA and negative urine microscopy and culture. An ultrasound examination was unhelpful in aiding diagnosis and an MRI was performed (Figure 1)



Intra-operative findings (Figure 2) showed a paraperitoneal

subtotal prolapse of the bladder through the internal inguinal ring, into the scrotum. Following reduction of the bladder to its normal anatomical position, a tension free mesh repair was performed. He had an uneventful recovery, with significant improvement in his symptomology.



DISCUSSION

Small bladder hernias are usually asymptomatic while patients with large inguinoscrotal bladder hernias, as in our case, commonly report 2 stage micturition with the second stage precipitated by external compression of the inguinoscrotal region (5,8). The pathophysiology of inguinoscrotal bladder hernias is conditioned by weakness of the abdominal and bladder walls. The presence of bladder outlet obstruction, such as prostatic enlargement or urethral stricture disease, increases intra-abdominal pressure during micturition which in turn favours herniation(9). Weakness of the pelvic floor or space occupying pelvic masses can also lead to herniation. Finally obesity maybe responsible and herniation could also follow trauma or surgical complications. Complications of an inguinoscrotal bladder herniation include cystolithiasis, vesico-ureteric reflux, sepsis, unilateral or bilateral ureteric obstruction, renal failure and strangulation with secondary ischaemia of the bladder wall and bladder rupture(7,9). Oruç et al (6) reported an 11% incidence of urothelial malignancies in a case series of 116 patients with bladder herniations, the majority being bladder urothelium carcinoma followed by hyperplastic polyps and prostate cancer. The pre-operative diagnosis of a bladder herniation is preferable to avoid potential iatrogenic surgical complications. Injury to the bladder occurs in approximately 12% of patients(4,7). A voiding cystogram should be performed in patients whom a bladder hernia is suspected from the history. Characteristically, a dumbbell shaped bladder is seen on cystography. Investigative modalities for scrotal cystocoeles can include ultrasonography, computerised tomography and magnetic resonance imaging. Imaging aids diagnosis and surgical planning, as anatomical deformities and possible complications can be identified (9). Tissue with similar consistency to the bladder within the hernial sac, change in the dimensions in the inguinal canal pre- and post-micturition and continuity between bladder and the hernia contents may indicate a bladder herniation (10). The majority of bladder hernias are discovered intra-operatively, with only 7% diagnosed pre-operatively and 16% post-operatively owing to complications(6). Inguinal bladder hernias are classified as intraperitoneal, paraperitoneal or extraperitoneal. Most cases are paraperitoneal (60%), with an extraperitoneal portion of herniated bladder only partly accompanied by peritoneum (7,9). Purely intraperitoneal cases are rare, whilst extraperitoneal cases account for 30% (7). An inguinoscrotal bladder hernia encountered during hernia repair should be reduced and a standard hernia repair performed. Bladder

resection should be reserved for a necrotic portion of bladder, or the presence of a bladder malignancy (4,7,9,10). The rarity of the condition endows this with interest and should be a timely reminder to the surgeon lest he accidentally damages the bladder during surgery. The injury itself may not be noticed until the post-operative period and in cases of intraperitoneal trauma, a fatal result is a real possibility.

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