

Pre Surgical Evaluation of Scrotal Cystocele by Conventional Radiography (Cystogram)

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ABSTRACT

Urinary bladder is a known content of sliding inguinal hernias but rarely presents as irreducible direct inguinal hernia. As inguinal hernia repair is commonly undertaken even at peripheral surgical centers. Cystogram a simple radiological investigation (picturesque view) is useful for pre-surgical evaluation as it can prevent iatrogenic bladder injury during inguinal hernia repair. This investigation can be performed where other radiological expertises like computerized tomography scan/magnetic resonance imaging or even ultrasound facilities are not readily available.

KEYWORDS: Cystogram, irreducible direct inguinal hernia, scrotal cystocele

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INTRODUCTION

Bladder hernia is a rare pathology but should be suspected in every male patient with obstructive symptoms and associated hernia. Ultrasound, retrograde and voiding cystourethrogram are the radiological diagnostic tests of choice in such cases but may not be possible where trained radiological expertises is not available. We are reporting this case where definite preoperative diagnosis was possible by simple cystogram which can be performed using water soluble contrast and is useful in preventing iatrogenic bladder injury during inguinal dissection. The patients symptoms of double voiding disappeared completely after hernioplasty.

CASE REPORT

This report is of a 73-year-old male patient who presented to the surgical out patient department (OPD) with voiding difficulty for 8 months duration. He also gave history of a right groin swelling which gradually increased in size. He emphasized that he could empty his bladder completely, only if he pressed this swelling and swelling reduced in size on voiding but the swelling never disappeared completely. There was history suggestive of chronic obstructive pulmonary disease (COPD). There was no history of constipation. Patient underwent left herniorrhaphy about 15 years back. On examination, his general condition was unremarkable. His hernia was right sided, complete, direct inguinal, irreducible and was with no signs of inflammation [Figure 1]. With the age and voiding difficulty in consideration, benign prostatic hypertrophy (BPH) was made as the differential diagnosis. Also,

BPH along with COPD was thought to have caused the hernia. As the patient could void without difficulty after manipulation of the hernial sac, BPH was ruled out. Rectal examination and prostate specific antigen (PSA) were normal.

A retrograde cystogram was performed using water soluble contrast. It showed part of the urinary bladder in the pelvis and part in the hernial sac extending up to the base of scrotum with feeding tube seen *in situ* and conforming its wide mouth and continuity with bladder seen in suprapubic area. The cystogram was diagnostic of bladder herniation [Figure 2]. Patient was also subjected to ultrasonography to rule out BPH which was reported to be normal but ultrasonography showed continuity of groin swelling with bladder.

Operative procedure included a right inguinal incision extended across the groin swelling medially. Urinary bladder formed the contents of the hernia [Figure 3]. The hernial sac not opened but urinary bladder was confirmed intra operatively by filling the bladder with normal saline with Foleys catheter *in situ*. The hernial sac containing urinary bladder was reduced. There were no intraoperative complications. No resection of the bladder was performed but only hernioplasty was carried out. The patient remained clinically asymptomatic, without voiding difficulty after surgery and recovered well.

DISCUSSION

The urinary bladder is involved in 1 to 3% of inguinal hernias.^[1] Herniation of the urinary bladder into the scrotum is a highly



Figure 1: Clinical image of a 73-year-old male with dumbbell-shaped urinary bladder in a sliding inguinal hernia. Preoperative picture shows enlargement of the right scrotum



Figure 2: Conventional radiograph of a 73-year-old male with dumbbell shaped urinary bladder in a right inguinal hernia. Retrograde cystogram shows the bladder being filled with contrast. Part of it is in the pelvis and the rest in the right inguinal hernia which appears like a 'dumbbell' and feeding tube in hernia sac



Figure 3: Macroscopic pathology of a 73-year-old male with urinary bladder in right direct inguinal hernia. Intraoperative picture shows the hernia sac containing urinary bladder

uncommon observation.^[2] Such hernias may present with no symptoms or may present with voiding problems, such as painful voiding or two stroke voiding, or manipulated voiding.^[2] Emptying of a scrotal cystocele with voiding is an important diagnostic feature in a patient with incarcerated bladder diverticula. Urinary bladder hernia occurs with a similar incidence as tubo ovarian hernia; however, it requires special attention because of a high risk of iatrogenic bladder injury during inguinal dissection.^[3] Hence, patients with such complaints should undergo diagnostic workup such as ultrasonogram, cystoscopy, endovenous urography, retrograde and voiding cystourethrography, urodynamic studies and computed tomography.^[4] One or more studies can be performed depending on a particular case. Ultrasonography picks up the contents of the sac, findings like an asymptomatic stone disease and post void residual urine if present. Ultrasonogram may be of limited use if the sac contains gas filled bowel. Endovenous urography may detect associated upper urinary tract obstruction and anomalies.

Urography requires exposure to contrast material and is limited in patients allergic to these agents. Urodynamic studies help to diagnose a coexisting neurological bladder dysfunction, and to assess problems with voiding and to distinguish between obstructive and neurological etiology. Cystoscopy is advised when co-existing bladder pathology is suspected. Computed tomography gives an insight to the contents of the hernial sac, associated pathology and the anatomical variations. However, patients are exposed to radiation and it is only performed when strongly indicated.^[5] Retrograde cystourethrogram in such cases is a simple test without potential harm to the patient and with good diagnostic outcome. Most urinary bladder herniations are diagnosed at the time of herniorrhaphy.^[6] This case report is important to appreciate the bladder herniating into the sac during simple preoperative evaluation with a picturesque value and the same can be performed even in places where trained radiology expertise are not available to avoid inadvertent iatrogenic bladder injuries. Bladder hernia is a rare pathology often presenting in middle age males.^[4] It should be suspected in every male patient with obstructive urinary symptoms and associated hernia. Retrograde and voiding cystourethrogram are the radiological diagnostic tests of choice in such cases.^[4] Such patients with voiding difficulty need a work up for benign prostatic hypertrophy. Also, BPH is a common cause of direct inguinal hernia in adult males. This patient upon manipulation of the hernial sac could void without effort, and therefore BPH was ruled out clinically. Simple reduction of the bladder into the abdomen followed by inguinal herniorrhaphy/hernioplasty is the treatment of choice.^[7]

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