

## Giant inguino-scrotal bladder hernia Report of a case

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### Abstract

Bladder hernia is very uncommon. It tends to affect patients over the age of 50 and is predisposed by cervico-urethral obstruction. The condition is often diagnosed during inguinal hernia surgery. The authors report a case of massive inguino-scrotal bladder herniation. The different types of bladder hernia are described, and the clinical-radiological findings and surgical management are discussed. © 2001 Elsevier Science B.V. All rights reserved.

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### 1. Introduction

Bladder hernias often go unnoticed. It is relatively common to detect minor bladder herniation in the course of herniorrhaphy in coexistence with hernia pathology. The incidence ranges from 1 to 10% [1] and the condition must be distinguished from less frequent massive bladder hernia or scrotal cystocele.

The present study describes a case of massive bladder hernia and reviews the epidemiological, diagnostic and therapeutic characteristics of this pathology.

### 2. Patient and methods

A 39-year-old male presented with a past history of left inguinal herniorrhaphy in childhood and appendectomy. For 2 months he had suffered pollakiuria, dysuria and urgency coinciding with the finding of a right inguinal mass. Examination revealed a painless, non-reducible right inguino-scrotal hernia, clinically suggestive of a bladder hernia. Cystography (Fig. 1) revealed the presence of a right inguino-scrotal cystocele.

Surgery under spinal anaesthesia confirmed the presence of over half of the bladder within the hernia sac.

The bladder hernia was reduced and a hernioplasty was performed using a modification of the Lichtenstein technique [2], comprising plasty without transverse fascial tension, running from the arch of the transverse muscle to the iliopubic tract, and followed by the placement of a polypropylene mesh adapted to the passage of the inguinal cord and fixed to the common tendon, transverse muscle and inguinal ligament with monofilament sutures.

The postoperative course was uneventful, with spontaneous micturition. The patient remains asymptomatic following discharge.

### 3. Discussion

Bladder hernias of the abdominal wall were first described by Guy de Chauliac in 1363, and by Verdier in 1753 [3]. These conditions account for 1–10% of all hernias and generally affect males over the age of 50 [4]. In 75% of cases they are associated with an inguinal hernia [5], in 23% with a femoral hernia, and in the remaining 2% to other types of hernia (obturator, perineal and umbilical) [6].

Bladder hernias have also been reported following surgery, particularly herniorrhaphy, secondary to possible traction of the sutures upon the bladder wall and peritoneum [7]. Herniation as a result of traumatic pubic diastasis is much less common [8].

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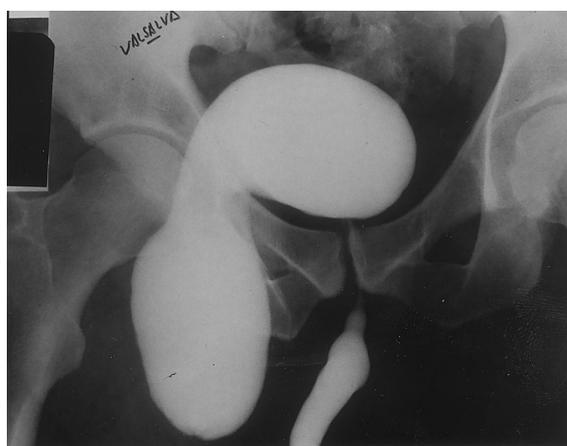


Fig. 1. Cystography (Valsalva view) with the presence of inguino-scrotal cystocele.

These hernias mainly affect patients with micturition difficulties. Increased bladder pressure, resulting in progressive bladder wall hypertrophy and the development of multiple vesical diverticuli or more frequently, an area of diminished resistance in intimate contact with the bladder coexists in the early stages of obstruction [7–9] facilitating possible herniation of the entire bladder wall [7]. The possibility of associated pathology must therefore be considered in such patients.

Three types of bladder hernia can be identified according to the anatomical relations with the herniated peritoneal sac [9], (a) *paraperitoneal*, where the bladder accompanies the descent of the peritoneal hernial sac (this being the most frequent presentation); (b) *extraperitoneal*, generally involving smaller and less frequent herniations through an area at marked muscle weakness, and occasionally accompanied by the distal portion of the ureter and (c) *intraperitoneal*, where the bladder is entirely covered by the peritoneum. The latter presentation is usually easily reduced and may be of considerable size.

Most bladder hernias are asymptomatic and generally constitute incidental findings in the course of surgery. Occasionally, they may be associated with nonspecific urinary manifestations such as dysuria, polakiuria and repeated urinary infections. Hernias of large size can in turn yield two characteristic signs, the presence of an inguino-scrotal tumour mass that disappears with micturition, and two-step micturition (Mery's sign) urine stream intensity being intensified by elevating or compressing the scrotum and groin [10,11].

Bladder hernias are diagnosed preoperatively [5] in only 7% of cases, while 16% are identified following surgery due to the development of complications resulting from bladder injury during the operation (bladder-cutaneous fistulisation or sepsis).

Cystography is the most useful imaging technique in such patients [4] and proved conclusive in our case.

Urography is necessary to assess the upper urinary system, though bladder hernias may occasionally go undetected [10]. Orthostatism and dorsal decubitus are the best radiographic positions for visualising the hernia [11]. Echography and computed tomography (CT) are complementary explorations that may be particularly useful in the presence of associated urinary tract pathology [11].

Bladder participation in inguinal hernias does not modify either surgical indications or strategy. Management consists of fully reducing the bladder and repairing the abdominal wall. Resection of the herniated bladder zone is to be avoided, to reduce the risk of urethral damage and preserve bladder capacity [11]. In the event of bladder damage, suturing is required, with bladder reconstruction and drainage for 8–10 days. This results in increased morbidity and a longer hospital stay.

Preoperative investigation of a bladder hernia is very useful to avoid damaging the bladder and/or ureter during herniorrhaphy. The presence of a tumour mass that disappears with micturition, two-step micturition, or any urinary symptom associated with the hernia is suggestive of a bladder hernia. In such cases, cystography prior to herniorrhaphy or hernioplasty is indicated to confirm the diagnosis.

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