

# Inguinoscrotal bladder hernia. A case report

## Hernia vesical inguinoescrotal. A propósito de un caso

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## Summary

Inguinal hernias with bladder content are a rare entity, usually diagnosed intraoperatively. We present the case of an 86-year-old male patient who consulted for obstructive urinary symptoms and oncologic history of squamous cell carcinoma of the penis; a diagnosis of left inguino-scrotal bladder hernia was made, identified by pelvic MRI, which was surgically operated with satisfactory postoperative evolution.



**Key words (MeSH)**

Inguinal hernia
Urinary Bladder
Cystography

**Palabras clave (DeCS)**

Hernia inguinal
Vejiga urinaria
Cistografía



## Resumen

Las hernias inguinales con contenido vesical son una entidad rara, usualmente diagnosticada intraoperatoriamente. Se presenta el caso de un paciente masculino de 86 años de edad, quien consultó por síntomas urinarios obstructivos y antecedente oncológico de carcinoma escamocelular de pene; se realizó diagnóstico de hernia vesical inguinoescrotal izquierda, identificada mediante resonancia magnética (RM) de pelvis, la cual fue intervenida quirúrgicamente con evolución posoperatoria satisfactoria.


## Introduction

Inguinal hernias with bladder contents are a rare entity, first described in 1951 by Levine, known as "scrotal cystocele". It is found in 1 % to 4 % of the general population and up to 10 % in patients over 50 years of age with a diagnosis of inguinal hernia. In most cases the diagnosis is incidental and less than 7% are identified preoperatively, with the consequent therapeutic challenge and possible complications derived from intraoperative diagnosis (1).

We present the case of a patient with a diagnosis of inguinoscrotal bladder hernia, with the aim of addressing the relevant clinical and imaging findings for its diagnosis and therapeutic approach.

## Case report

86-year-old patient with a pathological history of squamous cell carcinoma of the penis, who consulted the emergency department for left inguinoscrotal pain and difficulty in urination, of approximately one week of evolution. Physical examination showed swelling in the left inguinoscrotal region, without changes during Valsalva maneuvers and painful on palpation; taking into account the oncologic history, inguinal lymph node involvement was suspected and a pelvic MRI with contrast medium was performed.

The pelvic MRI (Figure 1) diagnosed left inguinal hernia with fat and bladder content (approximately 50% of the urinary bladder), with extension towards the scrotal sac, associated with focal thickening of the bladder walls in the hernial ring. In addition, adenopathy was identified in the external iliac and inguinal lymph node chain on the left side, with a suspicious appearance (Figure 1c); an excisional biopsy was taken which confirmed secondary neoplastic involvement.

The patient's surgical treatment was directed both to his oncologic diagnosis and to the irreducible inguinal hernia with bladder content, so partial penectomy, radical inguinal lymphadenectomy and repair of the hernial defect were performed concomitantly; the urinary bladder was reduced (without requiring partial and/or total cystectomy) and a bladder catheter was left for postoperative control. There were no intraoperative complications and the clinical and imaging evolution was satisfactory (Figure 2).

## Discussion

Inguinal hernia with bladder contents is a rare entity, previously known as "scrotal cystocele" (described by Levine in 1951), with a prevalence between 1% and 4% of the general population, and up to 10% in adults over 50 years of age. Among the known risk factors are male sex, obesity, chronic obstructive uropathy, age and weakness of the abdominal wall (2).

Pre-surgical diagnosis is a medical challenge, since most patients are asymptomatic and, when symptoms occur, they are usually nonspecific, such as dysuria,

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urinary retention, pelvic pain, mass in the inguinal region and/or hematuria. The clinical sign that most orients the diagnosis is two-stage urination or Mery's sign (3), and consists of compression of the hernial sac or scrotal sac after urination, to complete bladder emptying; less frequently, patients may debut with complications such as urinary tract obstruction, urinary tract infection or bladder infarction. Some associated pathologies are benign prostatic hyperplasia, bilateral hydronephrosis with/without acute renal failure, scrotal abscesses and vesicoureteral reflux (3).

Considering the above, less than 7% of inguinal bladder hernias are diagnosed before herniorrhaphy, 16% are diagnosed postoperatively due to complications (bladder injury causing leakage) and the rest are diagnosed intraoperatively (4). Hence the importance of preoperative imaging studies to confirm the diagnosis and plan treatment, to modify the surgical approach and reduce complications.

The radiological approach includes computed axial tomography (CT), cystography and/or ultrasonography, the latter being especially useful to rule out intrascrotal differential diagnoses, such as hydrocele, spermatocele, epididymal cysts and abscesses. The confirmatory diagnosis is made by flexible cystoscopy, which also provides information on the prostate, bladder walls and excludes additional pathologies in case of macroscopic hematuria (5).

The standard treatment is surgical repair; however, in some patients expectant management is considered, with intermittent bladder catheterization to reduce the bladder volume and the size of the hernia sac (3, 5).




Figure 1. Pelvis MRI with contrast medium (pre-surgical study). a) Sagittal. b and c) Axial. Left inguinal hernial defect with sac of fat and bladder contents, extending into the scrotal sac on the same side, with hernial ring of 23 mm and focal thickening of the bladder walls. Lymph nodes (c) in the left external iliac and inguinal lymph node chain on the same side, with rounded morphology and loss of fatty hilum, with short axis of 14 mm, of suspicious appearance.

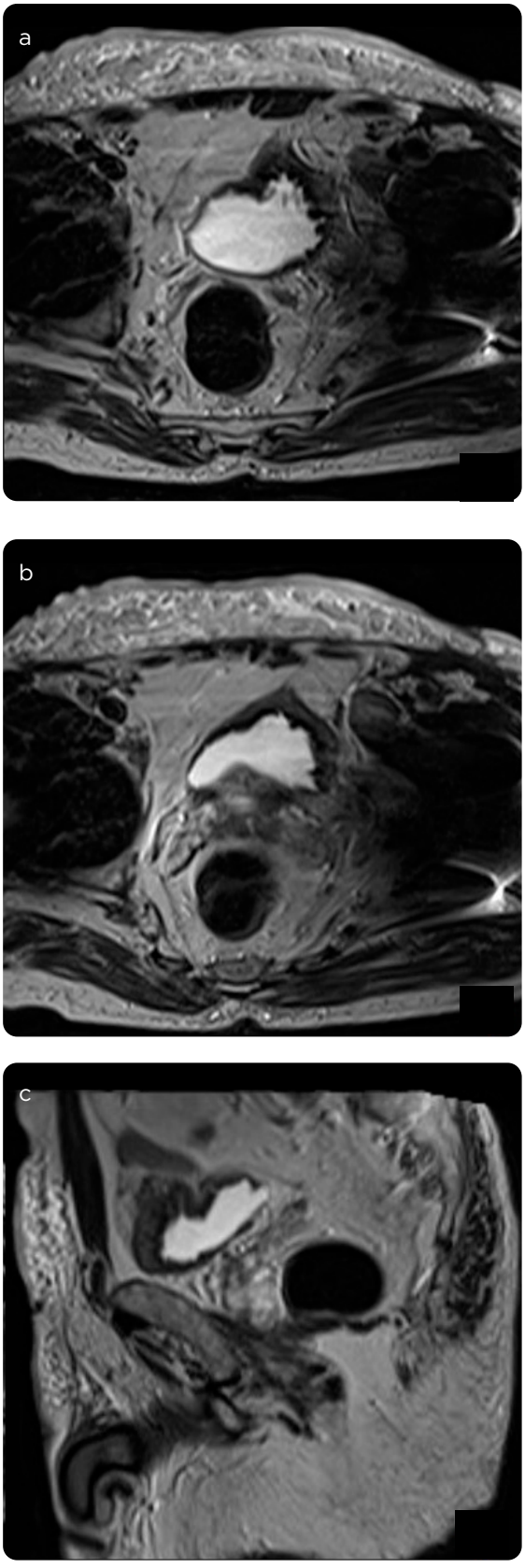



Figure 2. Pelvis MRI with contrast medium (postoperative study). a and b) Axial. c) Sagittal. Satisfactory postoperative control, with reduction of the bladder contents and repair of the abdominal wall hernial defect.

In the present case, this was a patient with multiple risk factors: male sex, advanced age, squamous cell carcinoma of the penis with involvement of the urethral meatus that produced long-standing obstructive urinary symptoms, in whom surgical management was considered due to clinical symptoms, irreducible hernia on physical examination and oncologic history. Surgical planning was possible thanks to a timely clinical and radiological diagnosis, with a satisfactory postoperative outcome.

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