

## Urinary Bladder Hernia: A Rare Cause of Voiding Disorders in Adults - A Case Report

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### Abstract

### Case Report

Urinary bladder hernia is a rare event corresponding to the externalization of a bladder segment through the inguinal orifice, resulting from the association of wall weakness with increased intra-abdominal pressure. We report the case of a 38-year-old patient with no particular pathological history who presented to the urological surgery department complaining of dysuria associated with pollakiuria, intermittent left inguinoscrotal bulge, with the need to compress the scrotum to finish urination. The physical examination revealed a large, painless left inguinoscrotal hernia, the pressure of which caused an urge to urinate. Retrograde cystography noted filling of a left inguinoscrotal bladder portion during voiding with upstream bladder emptying. The examination was completed by a CT scan which revealed an inguinal parietal defect with a passage of the anterosuperior part of the bladder which fills up with contrast product at the delayed acquisition. Urinary bladder hernia is most often asymptomatic and its discovery is intraoperative in most cases. The diagnosis is suspected due to the association of inguinoscrotal hernia and urinary signs, especially two-step urination with the need to compress the scrotum during urination. Retrograde cystography is the best technique to image, showing a dogear-shaped bladder in the scrotum.

**Keywords:** Urinary bladder, inguinal hernia, cystography, multidetector computed tomography.

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## INTRODUCTION

Urinary bladder hernia is a rare condition, found in 1-5% of inguinal hernias. It refers to the externalization of a bladder segment through the inguinal orifice.

It is called a scrotal cystocele when the scrotal hernia sac contains a portion of the bladder.

This work aims to show through an illustrative case the radiological aspects of the scrotal cystocele.

## CASE REPORT

A 38-year-old patient, with no particular medical history, presented to urological surgery consultation with bladder emptying disorders namely dysuria (fine and interrupted jet and delayed drops), filling disorders namely pollakiuria (three nocturnal

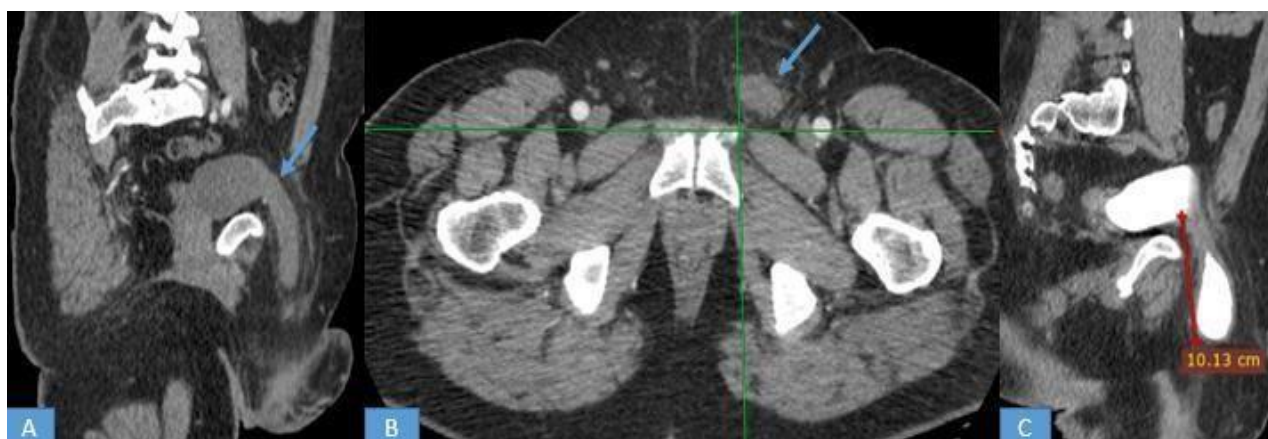
awakenings per night), and micturition impediment. He reported intermittent left inguinoscrotal bulge, with the need to compress the scrotum to finish urination.

The physical examination revealed a large painless left inguinoscrotal hernia, the pressure of which triggered an urge to urinate. The prostate was estimated at 30g by digital rectal examination. Renal function was normal.

A Retrograde Uretrocystography showed the filling of a left inguinoscrotal vesical portion during micturition with upstream vesical emptying (Fig. 1). Given these results, a presumption of scrotal cystocele was made and the diagnosis was confirmed on CT scan which demonstrated an inguinal parietal defect with a passage of the anterosuperior portion of the bladder filling with contrast agent at delayed acquisition and allowed to determine its direct type (Fig. 2).



**Figure 1: Retrograde Uretrocystography: Filling of the left scrotal cystocele portion at voiding time with upstream bladder emptying**



**Figure 2: CT scan: soft tissue window, sagittal sections after injection of contrast medium: arterial (A) and delayed phase (C), axial section after injection of contrast agent (B): inguinal parietal defect with a passage of the anteriosuperior part of the bladder and fat over a height of 10.13 cm which fills up with contrast agent at the delayed acquisition**

## DISCUSSION

Urinary bladder hernia is a rare event that is involved in less than 4% of inguinal hernias.

It results from the combination of parietal weakness with elevated intra-abdominal pressure. Predisposing factors for Urinary bladder hernia are obesity, weak abdominal wall musculature, and especially a sub-bladder obstruction [Branchu B *et al.*, 2018].

It occurs in men between the ages of 50 and 70, the age when prostate enlargement becomes symptomatic [Blah M *et al.*, 2015].

It is classified into three subtypes: intraperitoneal, para peritoneal, and extraperitoneal.

Most bladder hernias are of direct type [Kohga A *et al.*, 2021].

Inguinal bladder hernia is most often asymptomatic and its discovery is intraoperative in most cases.

The diagnosis is suspected when there is a combination of an inguinoscrotal hernia and urinary signs, especially when there is a two-stage micturition with the need to compress the scrotum during micturition, "Mery's Sign" [Badji N *et al.*, 2016].

Preoperative ultrasound, multidetector CT, MRI, and cystography are considered effective imaging techniques and may reduce the rate of intraoperative bladder injury. Retrograde cystography is considered the best imaging technique, showing a dog-eared

bladder in the scrotum. CT scan is indicated in cases of obesity, men over 50 years of age, and the presence of lower urinary tract symptoms. In the case of bilateral bladder hernia, the "pelvic Mickey mouse sign" is demonstrated by CT scan [Karanikas M *et al.*, 2020].

## CONCLUSION

Scrotal cystocele is a rare event whose radiological diagnosis is made by retrograde uretrocystography showing an inguinal filling of a bladder segment in the setting of urinary symptomatology and whose characterization is made by CT scan.

## CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

## Authors' Contributions

All authors contributed to the elaboration of this work. They have read and approved the final version of the manuscript.

## Abbreviations:

CT: computed tomography.

MRI: magnetic resonance imaging.

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