

Navigating Inguinal Bladder Hernia: Case Report and Diagnostic Insights

Ihssan Hadj Hsain*, Lahlou Chaimae, Ezzaky Sara, Marrakechi Salma, Chehrestane Rachida, Laila Jroundi and Omar EL Oufir

Department of Radiology, University Med V of Medicine and Pharmacy, Rabat, Morocco

*Corresponding Author: Ihssan Hadj Hsain, Department of Radiology, University Med V of Medicine and Pharmacy, Rabat, Morocco.

Received: September 23, 2024; Published: November 13, 2024

Abstract

Inguinal bladder hernia (IBH), first described as scrotal cystocele by Levine in 1951, remains a rare and challenging diagnosis despite advances in imaging. We report a case of a 55-year-old male with a painful right inguinal mass, urinary frequency, and suprapubic pain. Clinical examination and CT imaging confirmed a right inguinal bladder hernia with strangulation signs. Surgical exploration revealed a herniated bladder diverticulum, successfully reduced and repaired, leading to an uneventful recovery. Preoperative identification of IBH is crucial to prevent iatrogenic injuries. Surgeons, especially those in general surgery and urology, must consider this rare condition during inguinal hernia repairs. Complex cases benefit from interdisciplinary management. This case underscores the importance of thorough diagnostic imaging and collaborative surgical approaches in treating IBH.

Keywords: Inguinal Bladder Hernia; Scrotal Cystocele; Abdominal Imaging; Herniated Bladder Diverticulum; Urinary Frequency; Hematuria; Suprapubic Pain; Hernial Strangulation; Urology

Introduction

Inguinal hernia, a prevalent surgical pathology, is characterized by the protrusion of abdominal contents through the inguinal orifice [2]. When these contents involve the bladder, it is termed an inguinal bladder hernia (IBH) [1]. This condition arises from a combination of parietal weakness and increased intra-abdominal pressure, with predisposing factors including obesity and weakened abdominal wall musculature [5].

Although vesical obstruction is more frequently observed in men, largely due to the prevalence of prostatic pathology, it is notable that 30% of IBH cases occur in women [4]. In this article, we present a case of bladder hernia, contributing to the existing body of knowledge on this uncommon clinical entity.

Case Report

A 55-year-old male patient, with no significant medical history, presented with a painful right inguinal mass, accompanied by urinary frequency and suprapubic pain at the end of urination. Clinical examination revealed a tender, non-reducible right inguinal swelling that was impulsive on coughing. A CT scan identified a right inguinal bladder hernia. The hernial orifice was narrow, with a strangulated bladder exhibiting focal parietal thickening at the site of strangulation. Additionally, there was perivesical fat infiltration and a small intrahernial effusion.

Surgical exploration was undertaken, revealing a herniated bladder diverticulum within the inguinal canal, leading to the diagnosis of a vesical hernia. The procedure involved reduction of the hernia and subsequent hernia repair. The patient made a swift postoperative recovery without complications. Regrettably, postoperative imaging is not available.

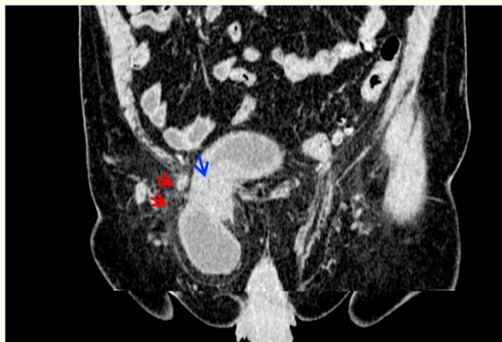


Figure 1: Coronal view of an abdomino-pelvic CT scan showing a right inguinal bladder hernia (red arrow), with associated infiltration of perivesical fat.

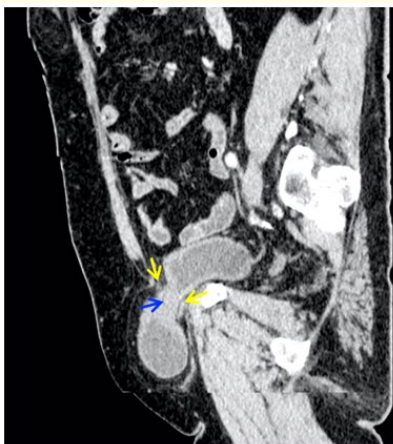


Figure 2: Sagittal view of an abdomino-pelvic CT scan showing a right inguinal bladder hernia (red arrow), with associated parietal thickening and partial sliding of the bladder through a narrow inguinal orifice, and intra-hernial effusion.



Figure 3: Axial view of an abdomino-pelvic CT scan showing a right inguinal bladder hernia (red arrow), with associated effusion.

Discussion

Inguinal bladder hernia (IBH), initially identified as scrotal cystocele by Levine in 1951, remains a rare clinical entity. Despite numerous publications and advancements in abdominal imaging, IBH continues to present diagnostic challenges for surgeons [3].

A bladder hernia is characterized by the protrusion of a bladder segment through a natural or acquired opening in the abdominal wall, excluding the vaginal opening. The inguinal orifice is most frequently implicated. The protrusion may involve a bladder horn, diverticulum, or even the entire bladder. Bladder hernias are classified into para-saccular hernias, where the bladder is part of the hernial sac; intra-saccular hernias, where the bladder is contained within the hernial sac (as in our patient); and extra-saccular hernias, where the bladder protrudes without a hernial sac [6].

Typically, asymptomatic and often discovered incidentally, bladder hernias can manifest through urinary symptoms such as increased frequency, hematuria, suprapubic pain at the end of urination, or a two-stage urination process.

Various radiological modalities are instrumental in diagnosing IBH, including ultrasound, retrograde cystography, and CT urography. Computed tomography (CT) is particularly effective in demonstrating the total or partial exteriorization of the bladder through the inguinal orifice. It is crucial to identify signs of hernial strangulation, such as parietal thickening (indicative of congestion), fat infiltration, and intrahernial effusion. Additionally, CT is invaluable in detecting complications like infection, tumors, or secondary lithiasis. The involvement of the bladder trigone should prompt the search for upstream obstructive uretero-hydronephrosis.

Treatment involves meticulous dissection to avoid bladder perforation, followed by parietal repair and restoration of the bladder's abdominopelvic position.

Conclusion

Identifying inguinal bladder hernia (IBH) preoperatively is paramount to prevent iatrogenic injury and potentially severe complications. Surgeons, particularly those specializing in general surgery and urology, must remain vigilant for this rare condition when performing inguinal hernia repairs. Optimal management of complex cases necessitates the collaborative efforts of both a urologist and a general surgeon.

Authors' Contributions

Ihssan Hadj Hsain: Data collection, conception and design of the study, drafting, and approval of the final version.

El Oufir O: Conception and design of the study, revisions, and approval of the final version.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding Support

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethics Approval

Our institution does not require ethics approval for case reports.

Informed Consent

Written informed consent was obtained from the patient.

Bibliography

1. B Debre and R Chiche. "Hernies de la vessie". *Encycl Méd Chir*, 18217: 10-1 (1982).
2. I Konaté, *et al.* "Prise en charge des hernies inguinales à la clinique chirurgicale de l'hôpital aristide le dantec de dakar: Étude rétrospective à propos de 432 cas". *J Afr Chir Digest* 10.2 (2010): 1086-1089.
3. B Levine. "Scrotal cystocele". *Journal of the American Medical Association* 147.15 (1951): 1439-1441.
4. S Manatt, *et al.* "Inguinal herniation of the bladder in an infant". *The Canadian Journal of Urology* 13.2 (2006): 3057-3058.
5. EM Schaeffer and SB Bhayani. "Inguinal bladder hernia". *Urology* 62.5 (2003): 940.
6. DW Storm and S Drinis. "Radiographic diagnosis of a large inguinal hernia involving the urinary bladder and causing obstructive renal failure". *Urology* 72.3 (2008): 523.

Volume 7 Issue 12 December 2024

©All rights reserved by Ihssan Hadj Hsain., *et al.*