

Inguinal bladder hernia, a rare cause of inguinal herniation: Report of two cases

Nadir bir inguinal herniasyon nedeni olan inguinal mesane fitiği: İki olgu sunumu

Aliou Zabeirou Oudou¹, Tenkorang Somuah², Belhaj Anas¹, Aissaoui Alae Eddine¹, Souiki Tarek¹, Farih Moulay Hassan², Ibn Majdoub Karim¹, Toughrai Imane¹, Mazaz Khalid¹

¹ Department of Visceral and Endocrinological Surgery II, Chu Hassan II, Fes, Morocco
² Department of Urology, Chu Hassan II, Fes, Morocco

ORCID ID of the author(s)

AZO: 0000-0001-6152-210x
TS: 0000-0001-5657-7253
BA: 0000-0002-1118-1594
AAE: 0000-0001-5776-2709
ST: 0000-0002-2416-4355
FMH: 0000-0001-8997-5717
IMK: 0000-0002-0421-7296
TI: 0000-0003-0401-3012
MK: 0000-0001-7779-7802

Abstract

Hernia surgery is the most frequent in visceral surgery. The bladder is rarely involved in groin hernia. This is when a diverticulum or a part of the bladder wall is incarcerated within the hernia. This affection is often asymptomatic. The diagnosis is made per-or post-operatively following complications. We report 2 cases of inguinal hernia involving the bladder in which the first case was diagnosed preoperatively whereas the second was diagnosed intraoperatively.

Keywords: Bladder, Hernia, Inguinal

Öz

Fıtık cerrahisi viseral cerrahide en sık görülenidir. Mesane nadiren kasık fitiği ile ilişkilidir. Bu, divertikülün veya mesane duvarının bir bölümünün fıtık içinde hapsedilmesidir. Bu durum genellikle asemptomatiktir. Tanı komplikasyonları takiben ameliyat sonrası veya sonrasında yapılır. Bu çalışmada iki kasık mesane fitiği olgusunu sunuyoruz, mesane ilişkisi birinci vakada preoperatif tanı ile, ikinci vakada intraoperatif olarak teşhis edildi.

Anahtar kelimeler: Mesane, Fıtık, Kasık

Introduction

Bernard Levine was the first to describe bladder hernia in 1951 as a scrotal cystocele [1]. Bladder inguinal hernia is a rare pathology found in about 1-4% of inguinal hernias [2]. The diagnosis is usually done intraoperatively or sometimes postoperatively following the onset of complications. Surgery is the required treatment option; it involves reintegrating the herniated part of the bladder and performing a herniorrhaphy. Patients often have associated urological symptoms. Inguinal bladder hernia constantly remains unknown to the surgeon before diagnosis is made during surgery. We report two cases of inguinal hernia with bladder involvement in which diagnosis was obtained preoperatively for the first and intraoperatively for the second.

Corresponding author / Sorumlu yazar:

Aliou Zabeirou Oudou

Address / Adres: Department of Visceral and Endocrinological Surgery II, Chu Hassan II, Fes, Morocco

e-Mail: ali.zabeirou@gmail.com

Informed Consent: The authors stated that the written consent was obtained from the patients presented in the study.

Hasta Onamı: Yazar çalışmada sunulan hastalardan yazılı onam alındığını ifade etmiştir.

Conflict of Interest: No conflict of interest was declared by the authors.

Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemişlerdir.

Financial Disclosure: The authors declared that this study has received no financial support. Finansal Destek: Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

Published: 5/18/2019

Yayın Tarihi: 18.05.2019

Copyright © 2019 The Author(s)
Published by JOSAM

This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial-NoDerivatives License 4.0 (CC BY-NC-ND 4.0) where it is permissible to download, share, remix, transform, and buildup the work provided it is properly cited. The work cannot be used commercially without permission from the journal.



How to cite / Atf için: Oudou AZ, Somuah T, Anas B, Eddine AA, Tarek S, Hassan FM, Karim IM, Imane T, Khalid M. Inguinal bladder hernia, a rare cause of inguinal herniation: Report of two cases. J Surg Med. 2019;3(5):414-416.



Figure 1: Axial computed tomography scan demonstrated the right upper part of the bladder herniated into the inguinal canal. Inguinal canal had not any bowel segment (arrows).

Case presentation

Case 1

A 50-year-old patient without any significant medical history who complained of dysuria, pollakiuria, urinary urgency associated with a burning sensation during micturition. The patient explained that the symptomatology had evolved during 6 months and had aggravated by the appearance of a right inguinal painless, reducible swelling which was impulsive to cough. It is important to note that the inguinal swelling increased in volume during pre-micturition and reduces after micturition "Mery's Sign". Digital rectal examination found a normal palpable prostate.

An abdominopelvic computed tomography (CT) scan was performed which revealed a right inguinal cystocele (Figure 1). The patient was scheduled for surgery. The Surgical exploration revealed a direct inguinal hernia associated with involved the bladder (Figure 2). The surgical treatment consisted of a repositioning of the bladder in an anatomical position and Lichtenstein tension free hernia repair. The postoperative course was uneventful.

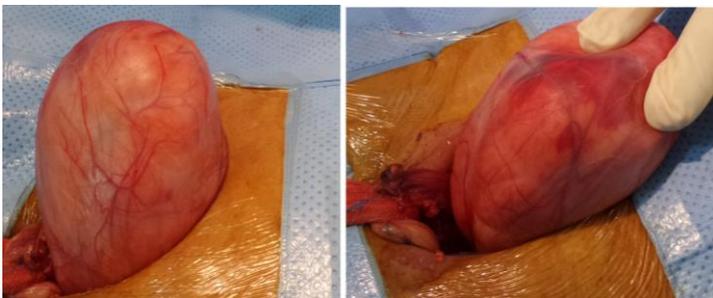


Figure 2: Image showing right inguinal bladder hernia intraoperatively.

Case 2

A 80-year-old patient, who was being treated in the department of urology for benign prostatic hypertrophy, was admitted to the emergency department for a painful swelling on the left groin. Clinical examination found an inguinal a painful, irreducible swelling with a negative cough impulse. The diagnosis of strangulated left inguinal hernia was retained. No radiological examination was performed. The patient was admitted to the operating room for an emergency surgery.

The surgical exploration revealed a thick hernia sac. Bladder involvement was ascertained as the after the hernia sac was incised making it possible to perceive the balloon of the urine catheter (Figure 3). The surgical treatment consisted of the suture of the injured bladder wall. The bladder was repositioned it's an anatomical position. Bassini technique was used to repair the hernia. The postoperative course was uneventful.



Figure 3: Image showing left inguinal bladder hernia intraoperatively

Discussion

Inguinal bladder hernia represents 1 to 4% of all inguinal hernias and mainly affects male patients aged between 50 and 80 years [1,3,4]. The existence of obstructive urinary tract disorders is a risk factor for the disease [5]. Although more this disorder may be frequently due to a prostatic pathology frequent in males. Bladder hernia can also occur in females [6].

Inguinal hernia of the Bladder can touch a bladder wall, a diverticulum or even the entire bladder. They are responsible for symptoms ranging from simple irritative symptoms to acute obstructive renal failure [7]. A two-step urination, facilitated by applying pressure on the hernia and the disappearance of the hernia after the voiding, constitutes a very revealing but inconstant clinical sign: Mery's Sign [8]. However, this pathology often remains asymptomatic. As a result, the diagnosis is usually made intraoperatively.

The diagnosis is often made preoperatively. Radiographic imaging can help obtain the diagnosis in order to reduce the risk of bladder injury during hernia repair when urinary symptoms are present. Indeed, less than 7% of bladder hernias are diagnosed before surgery, while in 16% of cases it is diagnosed postoperatively in the presence of parietal suppuration or vesico-cutaneous fistula [9].

Ultrasound or abdominal CT scan allows diagnosis of bladder hernia [10]. CT scan can identify the contents of the hernia (intestine / omentum / bladder) as well as the associated complications. Retrograde urethrocytography performed in search of stenosis of the urethra may objectify an inguinal bladder hernia. They appear as a rounded, unilateral, regular image of addition, communicating widely with the bladder [11].

The treatment consists of a hernia surgery with reintegration of the bladder in an anatomical position. In case of voluminous hernia, bladder diverticulum, or vesical necrosis, the herniated part can be resected. In case of preoperative diagnosis the treatment of a bladder hernia does not differ from that of other hernias and consists of a bladder repression associated with

a hernia repair. Resection of the bladder is required due to the risk of reduction of bladder capacity and ureteral injury [12].

BPH is a herniogenic factor. The prevalence of inguinal hernia is 15% to 25% in patients admitted for prostate adenoma [13]. In view of the relation between hernia and BPH, It is recommended to treat a BPH with alpha-blockers in the initial therapy. In case of satisfactory improvement of micturition, herniorrhaphy should be performed [14].

In Conclusion: Inguinal bladder hernia is a rare entity and occurs most often in a patient over 50 years of age with a history of urinary incontinence. The symptomatology is nonspecific; the diagnosis is suspected in a patient with an associated urinary disorder (Mery's Sign) and confirmed preoperatively or by computed tomography scan.

References

1. Kim KH, Kim MU, Jeong WJ, Lee YS, Park KK, Chung MS, Chung BH, et al. Incidentally detected inguinoscrotal bladder hernia. *Korean J Urol.* 2011; 52(1):71-3.
2. Oruc MT, Akbulut Z, Ozozan O, Coskun F. Urological findings in inguinal hernias: a case report and review of the literature. *Hernia.* 2004;8(1):76-9.
3. Ansari K, Keramati MR, Rezaei Kalantari K, Jafari M, Godazandeh G, Pakzad M. Gross hematuria as the presentation of an inguinoscrotal hernia: a case report. *J Med Case Rep.* 2011;5:561.
4. Bisharat M, O'Donnell ME, Thompson T, MacKenzie N, Kirkpatrick D, Spence RA, Lee J. Complications of inguinoscrotal bladder hernias: a case series. *Hernia.* 2009;13(1):81-4.
5. Gomella LG, Spires SM, Burton JM, Ram MD, Flanigan RC. The surgical implications of Herniation of the urinary bladder. *Arch Surg.* 1985;120(8):964-7.
6. Fisher PC, Hollenbeck BK, Montgomery JS, Underwood W, 3rd. Inguinal bladder hernia masking bowel ischemia. *Urology.* 2004;63(1):175-6.
7. Laniewski PJ, Watters GR, Tomlinson P. Herniation of the bladder trigone into an inguinal hernia causing acute urinary obstruction and acute renal failure. *J Urol.* 1996;156(4):1438-9.
8. Vindlacheruvu RR, Zayyan K, Burgess NA, Wharton SB, Dunn DC. Extensive bladder infarction in a strangulated inguinal hernia. *Br J Urol.* 1996;77(6):926-7.
9. Wagner AA, Arcand P, Bamberger MH. Acute renal failure resulting from huge inguinal bladder hernia. *Urology.* 2004;64(1):156-7.
10. Shelef I, Farber B, Hertzanu Y. Massive bladder hernia: ultrasonographic imaging in two cases. *Br J Urol.* 1998;81(3):492-3.
11. Catalano O. US evaluation of inguinoscrotal bladder hernias: report of three cases. *Clin Imaging.* 1997;21(2):126-8.
12. Casas JD, Mariscal A, Barluenga E. Scrotal cystocele: US and CT findings in two cases. *Comput Med Imaging Graph.* 1998;22(1):53-6.
13. Izes BA, Larsen CR, Izes JK, Malone MJ. Computerized tomographic appearance of hernias of the bladder. *J Urol.* 1993;149(5):1002-5.
14. Bacigalupo LE, Bertolotto M, Barbiera F, Pavlica P, Lagalla R, Mucelli RS, et al. Imaging of urinary bladder hernias. *AJR Am J Roentgenol.* 2005;184(2):546-51.
15. Karatzas A, Christodoulidis G, Spyridakis M. A giant inguinoscrotal bladder hernia as a cause of chronic renal failure: a rare case. *International Journal of Surgery Case Reports.* 2013; 4(3):345-7.

The National Library of Medicine (NLM) citation style guide is used in this paper.

Suggested citation: Patrias K. Citing medicine: the NLM style guide for authors, editors, and publishers [Internet]. 2nd ed. Wendling DL, technical editor. Bethesda (MD): National Library of Medicine (US); 2007-[updated 2015 Oct 2; cited Year Month Day]. Available from: <http://www.nlm.nih.gov/citingmedicine>