

CASE REPORT

Inguinal Bladder Hernia

Vishal Sardesai¹, Shirish Bhatkhande², Santosh Sahu³^{1,2,3}General surgery department, Holy spirit hospital, Andheri East, Mumbai 400093**ABSTRACT**

BACKGROUND: Bladder involvement occurs in 1%–4% of cases of inguinal hernias. Among obese men aged 50 to 70, the incidence may reach 10%. The diagnosis of bladder involvement is often difficult to delineate at the time of presentation and may only become apparent at the time of herniorrhaphy. Surgical management pertaining to the approach, repair and potential need for bladder resection may challenge the surgeon. Our goal is to highlight the clinical presentation and the decisive issues surrounding the diagnosis and management of this condition.

Key Words: Inguinal Bladder Hernia, Cystocele, Herniorrhaphy, Diagnosis

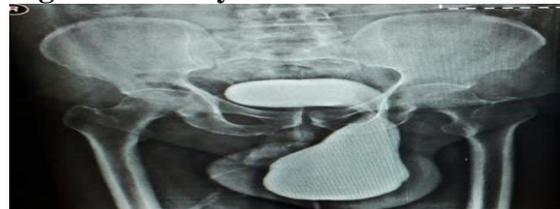
INTRODUCTION

Described first by Levine in 1951 as scrotal cystocele, inguinal bladder hernia (IBH) is a rare clinical condition¹. Since that time, despite several reports and advances in abdominal imaging, IBH remains a constant trap for the surgeon before the diagnosis, during herniorrhaphy, and even in the postoperative period. Actually, the bladder is involved in 1% to 4% of inguinal hernias in the general population and it may be as high as 10% in men older than age 50 years². IBHs are difficult to diagnose: 7% are diagnosed preoperatively and 16% are diagnosed postoperatively^{2,3}. Thus, it presents several specific problems in its management and could be associated with possible dangerous surgical problems³. Unforeseen complications have been described with either the bladder or the ureter being accidentally damaged³⁻⁵. In this article, we present our experience with a case of IBH.

CASE REPORT

A 60-year-old male patient presented to OPD with swelling over left inguinal region since 6 months. Swelling has gradually increased in size over 6 months. Swelling

would increase in size before patient voids urine and reduce after micturition. This swelling was painless and reducible. The patient reported that sometimes after voiding the swelling would reduce spontaneously. Occasionally, the patient had to squeeze his scrotum to complete urination. Patient was also experiencing symptoms of LUTS like increased frequency of urination and poor urinary stream. On imaging CT urography suggestive of left inguinoscrotal cystocele. Patient was advised to undergo surgery. Patient was catheterized preoperatively and herniorrhaphy done with Lichtenstein repair. No perioperative complications noted.

Figure 1: Left inguino-scrotal hernia**Figure 2: X-Ray KUB****Figure 3: Intravenous Urography*****Corresponding Author:**

Dr. Vishal R. Sardesai

Jeevan data hostel,

Holy spirit hospital,

Mahakali caves road,

Andheri east, Mumbai 400093

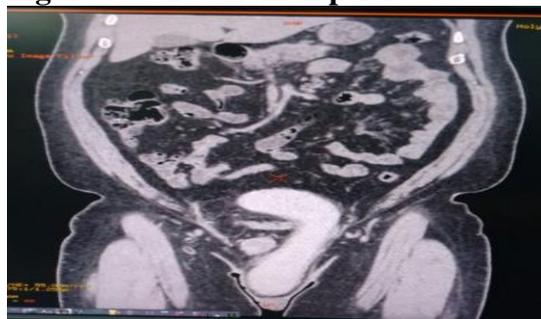
Contact No: 9657041523

Email: vishal.sardesai@gmail.com

Figure 4: CT abdomen pelvis



Figure 5: CT abdomen pelvis



DISCUSSION

Bladder herniation occurs in an acquired direct inguinal hernia with the bladder pulled into the

hernia, together with a sheath of peritoneum, which forms its sac. In most cases, IBH has been described in elderly patients. Some factors are associated with the patho-physiology of bladder herniation, such as chronic urinary obstruction, obesity, decreased bladder tone, and weakness of the pelvic musculature.²⁻⁴. Because hernias attain a large size mainly because of neglect, other neglected co-morbid conditions such as chronic obstructive pulmonary disease or benign prostrate hyper-trophy (BPH) might also be present. Most cases are asymptomatic and are usually found incidentally on radiographic imaging or at the time of surgery due to the small intermittent nature of the hernia^{2,4}.

Symptoms depend on the size and contents of the hernia. Advanced cases may be associated

with two-stage urination in which the first stage is spontaneous and the second is facilitated by manual compression of the herniated bladder or a decrease in scrotal size after voiding⁵.

Several authors reported improvement in urinary symptoms after hernia repair, which suggests that a large component of complaints are related to bladder hernia^{2,3,5}. That is why, in the era

of modern medical BPH therapy, many investigators recommend an evaluation of the urologic symptoms after surgery. Circumstances of discovery can vary from incidental findings to

surgical emergencies such as incarceration or strangulation of the hernial sac contents⁴. IBH is often diagnosed during herniorrhaphy or identified after intra operative injury. A preoperative identification of the hernial content can avoid surgical bladder injuries and modify operative management of the inguinal hernia. This radiographic evaluation can be performed in patients

aged 50 years, who are obese, have LUTS, or with a history of previous herniorrhaphies^{4,5}. The surgical repair can be performed ideally and safely with the use of mesh that decreases the risk of recurrence^{4,5}. Radiographic imaging is not routinely performed in the workup of inguinal hernias but cystography is the gold standard in diagnosis with the highest diagnostic value showing indentation of the bladder wall^{5,6}. Computed tomography (CT) scan could be an important aid and could provide detailed information for the surgical planning⁶. Current multi detector CT allows for a very accurate and rapid evaluation of bladder (and ureter) herniation, even on unenhanced scans. In our study, we used a CT scan and cystography to aid our diagnosis because we had suspected IBH. Complications of IBH include vesicoureteric reflux, bladder rupture, hydronephrosis, and strangulation, which may result in ischemia and bladder infarction²⁻⁵. The vesicoureteral reflux can be secondary to chronically distended bladder or, rarely, to involvement of the ureter in the content sac⁷. Typically, the trigone is in a fixed position; thus, obstructive renal failure is rare, but it can occur with large bladder hernias. Cancer within the bladder hernias have been reported. Usually, there are no associated complications; however, the possible development of strangulation should be kept in mind but this event is rare because the ring is large in this type of hernia.

Despite its retrospective uncontrolled design and small sample size, our study

suggests that some recommendations can be made to avoid complications. As a first step, if there is any doubt, preoperative identification of bladder herniation should be confirmed by CT, especially for very high-risk patients such as men aged 50 years, obese men with urologic symptoms or other causes of urinary output obstruction, or those with history of previous herniorrhaphies^{4,5}.

In these cases, abdominal imaging may be the first clue to the correct diagnosis. Second, a careful dissection of the visceral sac with clear identification of each anatomic element is advocated. Finally, it is preferable to abstain as much as possible from resection of hernia content, especially in obese patients where the subcutaneous fat and the intact external oblique aponeurosis can mask a small IBH.

The standard treatment of IBH is either reduction or resection of the herniated bladder followed by herniorrhaphy.^{2,3,5} Most small asymptomatic bladder hernias are diagnosed at the time of inguinal herniorrhaphy. Therefore, they are most commonly repaired through the same inguinal incision.³ Bladder resection should be reserved only for cases with a bladder wall necrosis, a true herniated bladder diverticulum, a tight hernial neck, or a tumor in the herniated bladder.

CONCLUSIONS

Preoperative identification of IBH is essential to prevent iatrogenic trauma or

even severe complications. It is mandatory for general surgeons and urologists to be aware of this rare condition during the surgical repair of inguinal hernia. It is recommended that both a general surgeon and a urologist should manage complex cases.

REFERENCES

1. Levine B. Scrotal cystocele. *JAMA*. 1951;147:1439–1441.
2. Gomella LG, Spires SM, Burton JM, et al. The surgical implications of herniation of the urinary bladder. *Arch Surg*. 1985;120:964–967.
3. Oru MT, Akbulut Z, Ozozan O, Coşkun F. Urological findings in inguinal hernias: a case report and review of the literature. *Hernia*. 2004;8:76–79.
4. Bisharat M, O'Donnell ME, Thompson T, et al. Complications of inguinoscrotal bladder hernias: a case series. *Hernia*. 2009;13:81–84.
5. Kraft KH, Sweeney S, Fink AS, et al. Inguinoscrotal bladder hernias: report of a series and review of the literature. *Can Urol Assoc J*. 2008;2:619–623.
6. Bjurlin MA, Delaurentis DA, Jordan MD, Richter HM., 3rd Clinical and radiographic findings of a sliding inguinoscrotal hernia containing the urinary bladder. *Hernia*. 2010;14:635–638.
7. Wagner AA, Arcand P, Bamberger MH. Acute renal failure resulting from huge inguinal bladder hernia. *Urology*. 2004;64:156–157.