

Strangulated Inguinal Bladder Hernia: A Rare Case

Strangüle Inguinal Mesane Hernisi: Nadir Bir Olgu

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Özet

Birçok organ inguinal herni ile ilişkili olabilir ancak mesane herniasyonu nadirdir ve vakaların sadece %1-4'ünde görülür. 48 yaşında erkek hasta gün içerisinde başlayan sol inguinal bölgede ağrılı şişlik şikayeti ile acil servise başvurdu. Vitalleri stabil olan hastada sol alt kadranda belirgin hassasiyet görülmesi ve Bilgisayarlı Tomografide intestinal strangülasyon şüphesi nedeniyle tanısal laparoskopi kararı alındı. İncelemede intestinal ansalar salim olup direkt herni görüldü devamında herni onarımı için açık operasyona geçildiğinde herniye olan yapının kanlanmasının bozulmuş mesane dokusu olduğu izlendi. İskemik doku wedge rezeke edildi ve primer onarıldı. Operasyon bölgesine mesh serildi. Postoperatif üroloji kliniği ile birlikte takip edilen hasta postoperatif 3. gün sorunsuz taburcu edildi. Tekrarlayan strangüle herniasyon ile başvuran hastalarda, fıtık kesesi içinde mesane gibi retroperitoneal organlarla karşılaşma olasılığının dikkate alınması önemlidir. Ayrıca laparoskopik incelemede intraperitoneal organ herniasyonu bulunmazsa mesane herniasyonu akılda tutulmalıdır.

Anahtar Kelimeler: Mesane Hernisi, Mesane Rezeksiyonu, Strangüle Herni, İnguinal, Femoral

Abstract

Many organs can be associated with inguinal herniation, but bladder herniation is rare and occurs in only 1-4% of cases. A 48-year-old male patient attended to the emergency department with a complaint of painful swelling in the left inguinal region that started during the day. In the patient whose vitals were stable, a decision was made for diagnostic laparoscopy due to significant tenderness in the left lower quadrant and suspicion of intestinal strangulation on Computed Tomography. On examination, the intestinal loops were intact and a direct hernia was observed, and then open surgery was performed for hernia repair. Upon examination, it was observed that the blood supply to the herniated structure was impaired bladder tissue. Ischemic tissue wedge was resected and primary repaired. Mesh was utilized on the operation area. The patient, who was followed up with the postoperative urology clinic, was discharged on the 3rd postoperative day uneventfully. In patients presenting with strangulated recurrent herniation, it is crucial to consider the possibility of encountering retroperitoneal organs such as the bladder within the hernia sac. Additionally, in laparoscopic examination, if no intraperitoneal organ herniation is found, bladder herniation should be kept in mind.

Keywords: Bladder Hernia, Bladder Resection, Strangulated Hernia, İnguinal, Femoral

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INTRODUCTION

Multiple organs may be involved with inguinal hernias, however bladder involvement is rare, occurring in 1-4% of instances (1). Femoral hernias, although more prevalent in females, are less common than inguinal hernias and are typically worsened by incarcerated or strangling of the organ that they contain.(2).

Male gender, advanced age, persistent urinary blockage, weak pelvic muscle, and obesity are risk factors for Inguinal Bladder Herniation (IBH). Significantly, only 7% of inguinal bladder hernias are identified before to surgery, with the great majority diagnosed intraoperatively and 16% diagnosed postoperatively as a result of complications such as bladder damage and leaking (3).

The literature classifies bladder hernia patients into intraperitoneal, paraperitoneal, and extraperitoneal subtypes. In the intra- and paraperitoneal but not the extraperitoneal subtypes, the peritoneum prolapsed (**Figure 1**) (4). Due to the retroperitoneal placement of the bladder, it was clinically significant that the prolapsed bladder could not be recognized intraperitoneally, and the hernial orifice could not be observed from inside the intraperitoneal cavity in instances of the extraperitoneal type (4).

In this case report, we will discuss a patient with recurrent inguinofoveal hernia on the left side.

CASE REPORT

A 48-year-old male patient attended the emergency room complaining of severe swelling in his left groin. The patient had undergone open surgery for bilateral inguinal hernias five years ago and was free of any known chronic diseases. The patient did not experience nausea or vomiting, burning while peeing, or urinating by pressing with his hands on the suprapubic region.

The patient's BMI was 26.2. During the patient's emergency room evaluation abdominal exam revealed no tenderness or rebound. The left inguinal area was quite sensitive.

The laboratory test revealed no leukocytosis, and renal function was normal. In the urine sample, there was no evidence of blood or infection.

Due to the patient's assessment being conducted during the night shift, an ultrasound examination was not feasible. By computed tomography (CT) with IV contrast, a left inguinal herniation was diagnosed radiologically. A hernia has been documented to contain intestinal loops or extraperitoneal tissue (**Figure 2**).

The decision to perform a diagnostic laparoscopy was based on the patient's examination findings and radiographic evaluation. Laparoscopy was initially preferred because there was a need to check the bowel loops due to radiological guidance. Before the procedure, a Foley catheter was inserted into the patient. A transabdominal investigation demonstrates that the hernia sac contained no ans. However, because the hernia was not classified as transabdominal, a left inguinal incision was attempted. During the evaluation, it was observed that the strangulated, blood-supply-impaired bladder diverticular tissue was herniated (**Figure 3**). Tissue with restricted blood supply was excised; the bladder mucosa was confirmed following resection; no extravasation of the urine was seen. The incision was closed with Vicryl 3.0 that was continuously locked, including the mucosa. The inguinal hernia was then repaired with a mesh.

It was explained by the presence of a narrow-necked bladder diverticulum herniation, as determined by the post-repair evaluation; the herniated area on the pre-operative CT image is the bladder, but it lacks contrast.

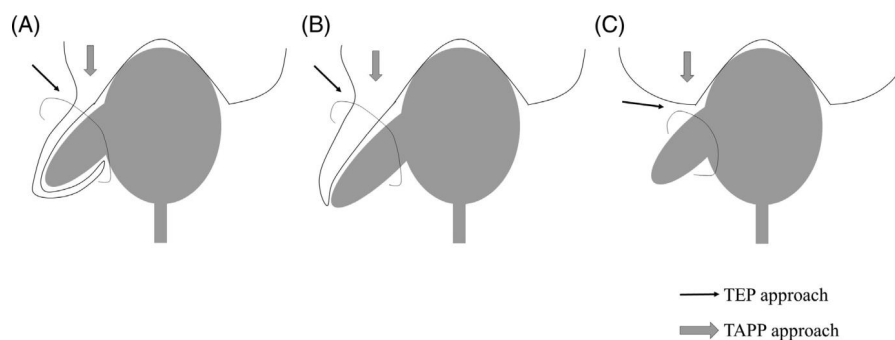


Figure 1. Subtypes of bladder herniation (the transabdominal preperitoneal [TAPP] surgery, the totally extraperitoneal [TEP] surgery) (4) (Written permission was obtained from the author and the journal that published the cited article to utilize their images).

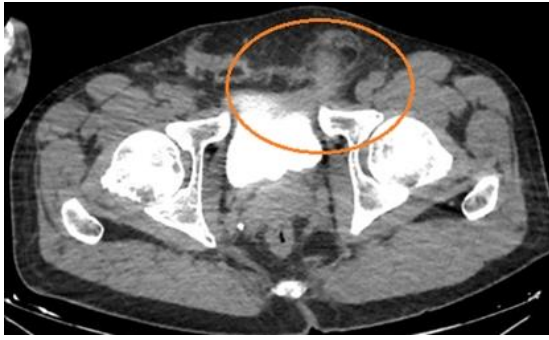


Figure 2. The marked area shows the herniated area on CT



Figure 3. The marked area describes a herniated bladder

During the postoperative phase, the patient was followed by the general surgery and urology clinics. Irrigation was applied to control the hematuria that developed on the first postoperative day. Postoperative cystography revealed that the bladder's integrity was intact. The PSA test result was normal.

The patient was discharged uneventfully on the 3rd postoperative day. Foley catheter was removed at postoperative 3rd week as a result of urology and general surgery outpatient follow-ups.

The bladder was confirmed to be intact during a diagnostic cystoscopy conducted by the urology clinic two months after surgery. There was no evidence of bladder outlet obstruction (benign prostate hyperplasia, urethral stricture, etc.) or urological cancer.

The patient provided written consent for the use of his clinical data to be utilized for academic objectives.

DISCUSSION

Although minor bladder hernias are asymptomatic, patients with large bladder hernias typically complain of scrotal edema, decreased force of stream on urination, dysuria, double micturition due to manual compression of the hernia, and reduction of scrotal edema after urination, known as Mery's sign (5). Both the Mery sign and urine symptoms were absent in our patient.

The pathogenesis of an inguinal bladder herniation involves the pushing of the bladder and a peritoneal sheath that forms its sac via a weak spot in the abdominal fascia

Multiple factors may lead to the formation of an inguinal bladder hernia, such as bladder outlet obstruction, pelvic muscle weakness, decreased bladder tone, and obesity. Among the risk variables are male gender, advanced age, and benign prostatic hypertrophy (3).

Our patient was not obese, and the previously suggested urological mechanical restriction to explain the bladder herniation was not observed during the postoperative urological follow-up.

Most bladder hernias are identified during surgery (77%), while only 7% are found before surgery and 16% are found after surgery due to complications (4). We confirmed a bladder hernia during the procedure after analyzing the differential diagnosis by radiology.

According to the data by Hasegawa *et al.*, the incidence of inguinal bladder hernia was 2.8%, and it was twice as common on the right side (4). According to the classification of inguinal bladder hernia presented in this paper, our patient had a paraperitoneal type C hernia. As highlighted in the same article, it was clinically significant that the prolapsed bladder could not be recognized intraperitoneally due to its retroperitoneal placement and that the hernial orifice could not be identified from within the intraperitoneal cavity in cases of the extraperitoneal variety (4). Therefore, we conclude that the transabdominal diagnostic laparoscopic examination failed to reveal the herniated structure.

Indications for partial bladder resection include a hernia neck with a diameter of less than 5 mm, bladder wall necrosis, perforation, and the presence of a diverticulum or bladder tumor. There is no consensus on the optimal repair strategy; the surgical approach is based on the surgeon's preference and the state of the patient (5). Because the herniated tissue's blood supply was compromised, we decided on resection.

As a result, inguinal bladder hernia is a rare condition requiring a high level of clinical suspicion for diagnosis. Preoperative imaging is crucial to avoid iatrogenic damage.

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