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Case Report

A RARE CASE OF INGUINAL HERNIA WITH URINARY BLADDER AS CONTENT OF THE HERNIAL SAC

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ABSTRACT

Groin hernia may have very unusual sac content. Vermiform appendix, acute appendicitis, ovary, fallopian tube and urinary bladder have been rarely reported. The incidence of groin hernias containing urinary bladder was 0.36% (Minordi *et al.,* 2004). We report the case of urinary bladder in the inguinal hernia sac in a 75-year-old male who came to surgical Emergency department with a painful irreducible swelling in the right groin since two days duration. He was a known case of right sided inguinal hernia of two years duration. On examination a single spherical shaped swelling of about 7x6 cms in size on the right inguinal region. The swelling was firm in consistency and tender with no expansile cough impulse. The skin over the swelling was not warm and no discoloration with sluggish bowel sounds. So we took up for emergency inguino-scotal exploration and found the urinary bladder as the content. So the bladder reduced inside and mesh repair was performed. The post operative period was uneventful and discharged on sixth post operative period. It is being presented for its rarity.

Keywords: *Hernia, Urinary Bladder, Mesh, Inguinal Region*

INTRODUCTION

Inguina hernia containing the urinary bladder is a highly rare condition, and it is always associated with recurrent episodes of urinary tract infection (UTI). To the best of our knowledge, only a few cases have been reported in the literature to date. The incidence of inguinal hernia containing urinary bladder is 0.36% (Minordi *et al.,* 2004).

Herniation of bladder is often asymptomatic and only a small percentage of them are diagnosed preoperatively. Even though most of them are associated with direct hernias, there are reports of its occurrence in indirect hernias. Male sex, obstructive urinary symptoms, older age group and obesity are some of the risk factors.

There is a potential risk of injury to the bladder (28.6%), particularly when it is incarcerated in an indirect inguinal hernia (Mehendale *et al.,* 2004). The injury, if not detected on table, should be suspected

CASES

A 75-year-old male came to Surgical Emergency department with a painful irreducible swelling in the right groin of two days duration. The patient had the swelling in the right groin of two years duration which was started as a small one gradually increased over a period of two years. For the past two years swelling was reduced in size but for the past two days it was not so. In the same way initially it was not painful but for the past two days it was painful. No symptoms suggestive of obstruction of bowels like constipation, vomiting.

No history of difficulty in passing urine or stools. The patient passed flatus and stools in the concerned day. There was no history of burning micturition. He was a known hypertensive and diabetic on regular treatment. On General examination a single spherical shaped swelling of about 7x6 cms sized on the right inguinal region (Figure 1.1). The swelling was firm in consistency and tender without expansile cough impulse.

Figure 1.1: Shows the irreducible right groin swelling

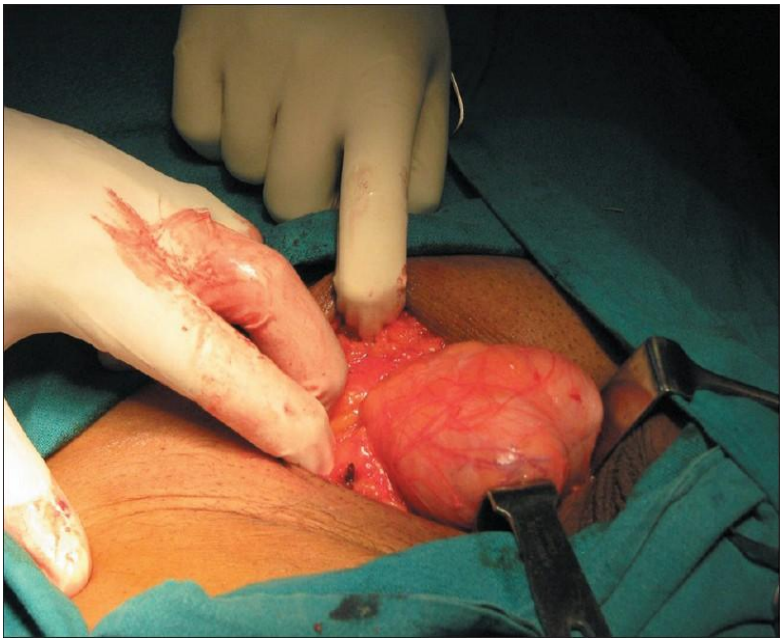

Figure 1.2: Shows intraoperative image of urinary bladder in the inguinal hernia sac

The skin over the swelling was not warm and no discoloration. The bowel sounds were normal. Left inguinal region and both scrotum were normal. All the basic blood investigations were normal. So we took up emergency surgery after adequate hydration and 16 sized Foleys catheter insertion under regional anaesthesia. Through right inguinal incision skin, subcutaneous layers incised. Right inguinal canal opened and separated the sac from right sided cord structures. The sac was opened and the urinary bladder was the content which was confirmed by bulb of Foleys catheter (Figure 1.2). The urinary bladder was reduced inside and posterior wall of inguinal canal repaired with 6x11 cms prolene mesh. After perfect hemostasis wound was closed in layers. Dressing done with scrotal bandage. Post operative period was uneventful and the patient discharged on sixth post operative day and doing fine.

DISCUSSION

The incidence of inguinal hernia containing urinary bladder is 0.36% (Minordi *et al.*, 2004). Herniation of bladder is often asymptomatic and only a small percentage of them are diagnosed preoperatively. Even

though most of them are associated with direct hernias. There are reports of its occurrence in indirect hernias. Male sex, obstructive urinary symptoms, older age group and obesity are some of the risk factors. There is a poten-tial risk of injury to the bladder (28.6%), particularly when it is incarcerated in an indirect inguinal hernia (Mehendale *et al.,* 2004).

Inguinoscrotal hernias containing the urinary bladder are very rare, and their repair is a real challenge for surgeons. They are uncommon in developed countries, and patients with such problems usually present with frequent UTI after years or even decades of neglect. Generally, the UTIs are of a recurrent nature, and, apart from the classical complications of inguinal hernias, the specific problems cause dramatic impairment of the patient's quality of life. The mobility of these patients is accordingly restricted, and they often have recurrent episodes of UTI for which they should receive appropriate antibiotic treatment. Giant inguinoscrotal hernias are also often associated with extreme visceroptosis and tissue expansion of vascular pedicles (Sturniolo *et al.,* 1999).

In cases that raise clinical suspicion of incarcerated viscera into an inguinoscrotal hernia, radiology can play an important role in facilitating the diagnosis. Minordi *et al.,* (2004) reported a case of a patient who presented with a massive inguinoscrotal vesical hernia complicated by bladder rupture, which was pre-operatively diagnosed on the basis of sonography and computed tomographic cystography. It is often necessary to execute adequate radiological examinations pre-operatively to prove the grade of incarceration of the bladder into the scrotum. Giant inguinoscrotal hernias often result in compromise of respiratory and cardiac function because of the augmentation of the intra-abdominal pressure that can cause abdominal compartment syndrome (Vano-Galvan *et al.,* 2009).

These kinds of problems can be present in cases that involve repair of giant inguinoscrotal hernias containing parts of the small or large intestine when the viscera is induced into the abdominal cavity. Moreover, the choice of the right surgical technique is crucial.

The Lichtenstein open tension-free hernioplasty (Vasiliadis *et al.,* 2010) technique that we used seems to be the best option in such patients. The mesh is positioned in the pre-peritoneal space. The patch decreases the tension on the weakened abdominal wall, thus reducing the risk of hernia recurrence. Serious problems can emerge in cases of giant inguinoscrotal hernias when the herniated viscera are induced de novo into the abdominal cavity.

A surgeon should always bear in mind that if a massive hernia is induced abruptly into a contracted peritoneal cavity, the patient might run the risk for a sudden increase in intraabdominal and intra-thoracic pressure, which might precipitate fatal cardiorespiratory failure (Udwadia, 1984). Moreover, it should be noted that post-operative ileum could further increase intra-abdominal and intra-thoracic pressure (Weitzenfeld *et al.,* 1980), and, in parallel, reduction of a massive hernia under excessive tension is associated with a high incidence of wound dehiscence (Condon and Nyhus, 1995) and recurrence (Kyle *et al.,* 1990) of the hernia.

There are also other important complications that can emerge after the surgical repair of an inguinoscrotal hernia. Patients who undergo hernia repair are at risk for reaction to anesthesia (Serpell *et al.,* 1988) (the main risk), site infection (Forrest, 1979) and bleeding, nerve damage (Barst, 1972), numbness of the skin and loss of blood supply to the scrotum or testicles which results in testicular atrophy (Stoppa, 1989) (all of the latter risks being infrequent). These patients can also present with post-operative complications, such as damage to the cord that carries sperm from the testicles to the penis (Saadi *et al.,* 2005) (vas deferens), resulting in inability to father children or even damage to the femoral artery or vein.

Conclusion

Hence the urinary bladder in the inguinal hernia sac was rare to ocur. The repair of an inguino scrotal hernia containing the urinary bladder is a great challenge for surgeons. The correct pre-operative management, the appropriate radiological examinations and the right surgical method chosen by the surgeon can all lead to a successful result. Surgical therapy, though challenging and demanding, may be the only mode of treatment that can offer these patients a return to a satisfactory level of function and quality of life.

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