



A CASE OF POST TRAUMATIC INFERIOR LUMBAR HERNIA CHANDRASEKARAN D

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Abstract : INTRODUCTION Lumbar hernia is a rare abdominal wall defect and clinical suspicion is necessary for diagnosis. CASE PRESENTATION We report the case of a 63-year-old woman with inferior lumbar hernia (petit hernia) following trauma 6 months back. The diagnosis was made with ultrasound and CT and the hernia was repaired using synthetic mesh. The patient was free of recurrence 4 months after the operation. CONCLUSION A lumbar or flank mass should always raise suspicion of a lumbar hernia. Ultrasound and computed tomography may confirm the diagnosis. Adequate surgical treatment should be planned on the basis of etiology and hernia size. Both open and laparoscopic techniques can be used with good results.

Keyword : TRAUMATIC LUMBAR HERNIA, INFERIOR LUMBAR HERNIA, LUMBAR HERNIA

INTRODUCTION

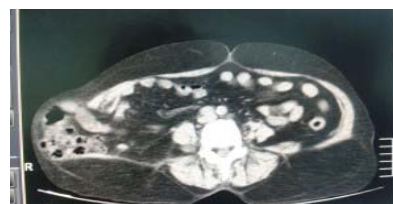
Lumbar hernias are quite uncommon as compared to other ventral abdominal wall hernias, accounting for less than 1.5% of all abdominal hernias, with fewer than 300 cases reported over the past 30 years [1]. About 25% of all lumbar hernias have a traumatic etiology [2]. This may be post-surgical or following blunt injuries associated with intra-abdominal injuries. The management of such patients constitutes a surgical challenge. Clinical diagnosis of this entity is difficult due to non-specific symptoms. The diagnosis is particularly elusive in obese individuals or in post-surgical patients. Though rare defects, lumbar hernias are prone to incarceration and strangulation [1].

Case Report

A 63 year old female presented with gradually increasing painless and reducible swelling in right flank for the past 3 months. There was history of trauma 6 months back followed by formation of hematoma which resolved spontaneously and produced muscle weakness that led to hernia formation. There was no change in bowel habits. Over the past three months, the swelling was painless and reducible. On admission, there was a 15x8cm non-tender, non-pulsatile and reducible swelling in the right lumbar region with an expansile cough impulse (Fig. 1).



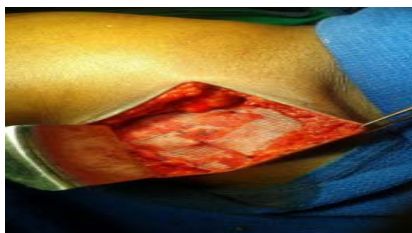
The examination of rest of the abdomen, left flank, back and hernial orifices were normal. Plain radiograph of the abdomen revealed gas shadows within the swelling. Ultrasonography revealed a 10x6 cm ill defined mass in the right lumbar region with areas of mixed echogenicity within the swelling. Computed tomography (CT) scan of the abdomen was carried out which confirmed the presence of right lumbar hernia containing bowel loops (Fig 2).



A diagnosis of a reducible right lumbar hernia was made and patient was taken up for surgery. The patient was placed in a left lateral position. The swelling was explored through a right flank incision. Operative Findings: Hernia sac of size 6X4 cm with caecum as the content (Fig 3).



The content was reduced and the defect closed with 1 - o prolene. A prolene mesh was fashioned as onlay prosthesis and was placed in the extra peritoneal space through the defect in the muscle layer (Fig 4).



The wound was closed in layers. The immediate postoperative period was uneventful (Fig 5). Oral feeds were started on the second postoperative day. The patient recovered satisfactorily and was discharged after removal of the skin sutures on the eighth postoperative day. During the follow-up visit after one month, the operation scar was healthy and the patient was asymptomatic.

Discussion

Lumbar hernias are relatively rare. These occur more commonly in males and are twice as common on the left than the right side. Patients are usually between 50 to 70 years old. These hernias can occur anywhere within the lumbar region but are more common through the superior lumbar triangle (of Grynfeltt-Lesshaft), an inverted triangle bounded by 12th rib, erector spinae and the posterior border of the internal oblique muscle. The inferior lumbar triangle (of Petit), bounded by iliac crest, posterior border of external oblique and the anterior border of latissimus dorsi is the next most frequent site [2]. Lumbar hernias have been classified as congenital (20%) or acquired (80%). If acquired, they may be primary (55%) or secondary following trauma, surgery or inflammation (25%). Patients are usually asymptomatic but may complain of backache, flank pain or a dragging sensation. These hernias have a natural history of a gradual increase in size over time and may assume large proportions [3]. The differential considerations at this stage include lipoma, soft tissue tumors, hematoma or abscess. The hernia may contain retroperitoneal fat, kidney, colon or less commonly small bowel, omentum, ovary, spleen or appendix. On auscultation, bowel sounds may be audible over the swelling if the hernia contains bowel loops. In obese patients detection of a mass is particularly difficult. Bowel incarceration occurs in 25% but strangulation is rare because of wide hernial neck [4]. Lateral or oblique radiograph of the lumbar region may show gas filled loops of the bowel lying outside the abdominal cavity. Upper or lower gastrointestinal contrast studies are useful in delineating the herniated bowel segment. In addition, an intravenous urogram may be performed to visualize any displacement of the kidney or ureter into the hernia. Ultrasonography may fail to demonstrate the hernia due to low index of suspicion and presence of fat.

CT scan can accurately distinguish the muscular and fascial layers, detect the presence of a defect in these layers, visualize herniated fat or viscera and differentiate a hernia from a hematoma abscess or soft-tissue tumor [5,6]. The goal of hernia repair is to eliminate the defect and to construct an elastic and firm abdominal wall that will withstand the stress of daily physical activities. A lumbar hernia should be repaired surgically, as it is prone to both obstruction and strangulation [7,8]. A wide variety of techniques have been described for repair of lumbar hernias. These include anatomical closure, overlapping of the aponeuroses, use of musculofascial flaps, prosthetic meshes and laparoscopic mesh repair in case of uncomplicated lumbar hernias [4]. Currently, extraperitoneal mesh repair is considered the optimal treatment for isolated unilateral lumbar hernia. The Rives Stoppa approach, wherein, a large rectangular mesh is fashioned to be placed in the pre peritoneal space extending from umbilicus to retropubic space and between the two anterior superior iliac spines, appear to be the

most promising open technique for bilateral lumbar hernia, recurrent hernias or multiple site hernias with comparatively low recurrence rates [8]. Extra- peritoneal position of the mesh is advantageous as no bony anchorage is essential. The weight of the intraperitoneal contents is an additional support to maintain the mesh in correct position in the early postoperative period. Laparoscopic transabdominal preperitoneal mesh repair for lumbar hernia confers all the benefits of minimal access surgery to the patient. It is a tensionless repair. It follows the current principle of hernia surgery and is based on the sound physiological Principle of diffusing the total intra-abdominal pressure on each square inch of the mesh implanted [9,10].

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