

## PRIMARY LUMBAR HERNIA- A CASE REPORT

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### PRESENTATION OF CASE

The patient is a 47-year-old, average built male patient presenting in the outpatient department with complaints of left-sided back swelling with vague pain for last 6 months. On further evaluation, the patient revealed that the swelling is gradually increasing in size and the swelling further increases on sitting and coughing. There was no history of trauma, surgery or infection at that site. Bowel and bladder was within normal limit with no history of obstructive uropathy or constipation. No history of any addiction. On examination, a swelling was noted in left superior lumbar region. It was 5×5 cm in size, globular in shape, non-tender and non-pulsatile, partially reducible in nature. Auscultation was non-specific. On review of his labs, his routine investigation was within normal limit. High resolution ultrasonography of swelling showed an intramuscular defect in the left superior lumbar region with herniation of omentum through the defect. Hence, a diagnosis of primary lumbar hernia was established. The patient was posted for operation after all required investigations and defect was closed by mesh hernioplasty by polypropylene mesh. Postoperative period was uneventful.

### DIFFERENTIAL DIAGNOSES

**Based on History and Clinical Examination, the various Differential Diagnoses Includes**

- Lumbar hernia.
- Lipoma.
- Fibroma.
- Chronic Abscess.
- Chronic Haematoma (post trauma).

### CLINICAL DIAGNOSIS

Clinically, the most obvious diagnosis in this case appears to be that of a left-sided primary lumbar hernia.

### PATHOLOGICAL DISCUSSION

Lumbar hernias are rare among all other hernias. Hafner et al stated that general surgeons will get only one opportunity to repair a lumbar hernia during their lifetime.<sup>1</sup> Lumbar hernia was first suggested by P. Barbette in 1672 and R. J. C. Garangeot published a case for the first time in 1731. Since then, only about 310 cases have been reported.<sup>2</sup>

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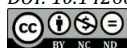
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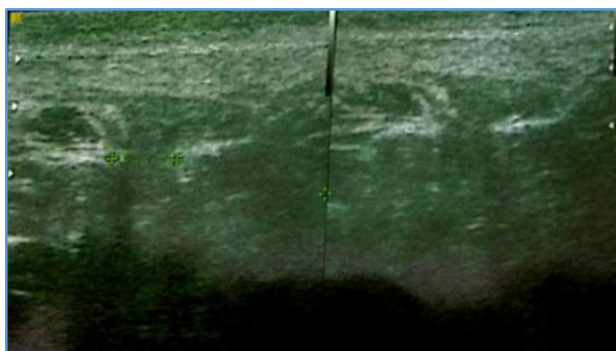


The lumbar region is bordered superiorly by the 12th rib inferiorly by the iliac crest, medially by the erector spinae muscles and laterally by the external oblique muscle. Lumbar hernias occur through two potential weak spaces, which are superior and inferior lumbar triangles. The superior lumbar space of Grynfeltt and Lesshaft is the larger one. It is an inverted triangle the base of which is formed by the 12th rib and the lower edge of serratus posterior inferior muscle, anteriorly bounded by the posterior border of internal oblique muscle, posteriorly bounded by the anterior border of sacrospinalis muscle. Floor is formed by the aponeurosis of transversus abdominis muscle and roof by the latissimus dorsi muscle. The inferior lumbar triangle of Petit is bounded anteriorly by the posterior border of external oblique muscle, posteriorly by the anterior border of latissimus dorsi muscle, base is formed by iliac crest, floor by the internal oblique muscle with contribution from transversus abdominis muscle and roof by skin and subcutaneous tissue.<sup>2</sup> Lumbar hernias may be acquired or congenital (20%) and typically the later manifest in childhood<sup>3-4</sup> as an isolated phenomenon or in association with hereditary disorders such as syndrome of lumbar vertebral deficiency, meningocele and neurofibromatosis. Acquired hernia may be primary (50% - 55%), occurring in aged individuals, situations of increased intra-abdominal pressure or excessive weight loss and secondary (25% - 30%) caused by surgical procedure, blunt or open traumas.<sup>3-6</sup> Other causes of acquired lumbar hernias include penetrating wounds (75% - 80%), pregnancy, tuberculosis, Pott's disease and extreme malnutrition. The most common site for the occurrence of lumbar hernias is in the superior lumbar triangle.<sup>7</sup>

### DISCUSSION OF MANAGEMENT

The diagnosis is based on history and clinical examination of the patient. It usually presents as a tumour in the lumbar region with softened consistency, producing a sound at percussion, of reducible nature but susceptible to become irreducible and may be associated with vague pain.<sup>4,8</sup> Symptoms worsen under conditions of stress and typically cause discomfort and non-specific abdominal pain or back pain. Lumbar hernia is predominantly left sided and most frequently affects male individuals aged between 50 - 70 years.<sup>4</sup> As lumbar hernias may resemble with lipoma, tumour, chronic abscess, fibroma, or if a trauma have been involved a flank haematoma, advanced imaging becomes a necessity for the confirmation of diagnosis.<sup>9</sup> CT scan/ MRI in patients with suspected hernias can confirm the diagnosis adding information on parietal defect size, hernial content and muscular trophism.<sup>10-16</sup> Complications of lumbar hernias include incarceration, bowel obstruction, strangulation and volvulus.<sup>11,12</sup> Surgery is the only treatment.<sup>17</sup> Before the era of mesh plasty, Dowd repair<sup>18</sup> was practiced. It involves closure of the defect, primarily using muscle flaps from

gluteus major and medius muscle, latissimus dorsi muscle and tensor fascia lata.<sup>19</sup> But the recurrence rate was high due to poor fascial strength and high tension of the repair. Later artificial mesh made of polypropylene was used to bridge the gap by Dowd-Ponka technique.<sup>20</sup> In 1996, the first trans-abdominal laparoscopic approach was introduced by Burick and Parascandola.<sup>21</sup> A similar technique was introduced by A Sharma et al.<sup>22</sup> The balloon dissector was used in 1999 for total extraperitoneal approach, which was described by Woodward et al.<sup>23</sup> A paper published in 2005 shows a prospective study of lumbar hernias repair- Classical versus Laparoscopic approach. It shows superiority of the laparoscopic group.<sup>24-26</sup> More recently use of biosynthetic mesh has shown good result.<sup>27</sup> Recurrence of lumbar hernia has not been reported yet.<sup>4</sup> In children surgical repair is performed at the age of 6 - 12 months and in adults it is done immediately after diagnosis.<sup>4,5</sup>



**Figure 1. HR-USG of the Left Lumbar Region shows the Hernial Defect**



**Figure 2. Hernial Defect with Omentum as the Content**



**Figure 3. Intraoperative Images after Mesh Placement**



**Figure 4. Intraoperative Images after Mesh Placement**

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