Case Report

INFERIOR LUMBAR HERNIA OF PETIT IN A PATIENT WITH NEUROFIBROMATOSIS TYPE-1

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ABSTRACT
Lumbar hernias are rare lesions that account for less than 1.5% of total hernia incidence. Only 250-300 cases have been reported in literature. Diagnosis may be difficult because they are either asymptomatic or may present with vague complaints. Differential diagnosis includes a lipoma, a fibroma, a retroperitoneal or intra-cavitary tumor, hematoma or a chronic abscess. They may occur in association with defects of the musculoskeletal system including some syndromes. Lumbar hernia in patients with neurofibromatosis has been reported in a very few number of cases. We report a case of 40 year old female with type 1 neurofibromatosis who presented with left lumbar hernia of Petit.

KEY WORDS: Lumbar hernia, Inferior lumbar hernia, Petit’s triangle, Neurofibromatosis type-1.

INTRODUCTION
Lumbar hernias involve extrusion of visceral contents through a defect in the postero-lateral abdominal wall in the quadrilateral that is bounded above by the 12th rib, below by the iliac crest, behind by the erector spinae muscle and in front by a vertical line drawn from the tip of the 12th rib to the iliac crest. This area encompasses the two anatomical triangles, which form the two sites for lumbar hernias.¹ Thus they can be classified as Grynfeltt’s hernias of the superior lumbar space, Petit’s inferior lumbar space and diffuse hernias concerning the whole hip.²

The superior lumbar triangle (of Grynfeltt and Lesshaft) is defined by quadratus lumborum muscle medially, twelfth rib superiorly, and internal oblique muscle laterally. The floor of the triangle is transversalis fascia and aponeurosis of the transversalis abdominis muscle. Roof is formed by external oblique and latissimus dorsi muscles.

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The inferior lumbar triangle (Petit) is bounded by posterior free margin of external oblique muscle in front, latissimus dorsi behind and iliac crest below. Floor is formed by the internal oblique muscle and the lumbar fascia. They occur most often in the superior lumbar triangle.

We report a case of inferior lumbar hernia in a patient with neurofibromatosis type 1 which was treated successfully at our institution.

**CASE REPORT**

A 40 year old lady presented to the surgical OPD with complaint of swelling in left lumbar region associated with dull aching pain for past 7-8 years. Initially the swelling was small and had not increased much in size. Over the past one year, the swelling had increased in size. There was also no history of trauma, surgery or localized muscular paralysis. Her bowel habits and micturation were normal. She was married and having normal menstrual cycles. She had conceived nine times, all the conceptions ended either in miscarriages or abortions and thus had no alive issues.

On examination, the patient was of small built and was pale. Her vital signs were within normal limits. There was a single large oval swelling arising from the left lower lumbar area and reaching up to the crease of the buttock [Fig-1]. The swelling was soft, non-tender, nonfluctuant and irreducible with no cough impulse. Auscultation revealed bowel sounds in the swelling. The opposite lumbar region and other hernial orifices were normal. The abdominal muscle tone was normal. She had multiple small neurofibromas along with numerous café-au-lait spots all over her body [Fig-2].

**Fig-1:** Patient with large left lumbar hernia of petit.

**Figure-2:** Back of the patient showing multiple small neurofibromas with portion of hernia.

**Figure-3:** Intra-operative view showing opened hernial sac containing milky white chylous fluid and bowel loops.
Investigations revealed iron deficiency anemia. MRI scan showed that swelling contained multiple bowel loops herniating through a body wall defect. It also showed fluid in the swelling as well. A diagnosis of left lumbar hernia was thus made. Anesthesia fitness was evaluated. Her ECG showing sinus arrhythmia, therefore high risk consent was taken.

The swelling was explored through a vertical incision over the swelling with the patient lying in right lateral position. A peritoneal sac was found herniating through the left inferior lumbar triangle of Petit. There was a semicircular bony defect in the iliac crest. The contents of the hernia included whole of the small and large bowel along with five litres of milky white chylous fluid [Fig-3]. The bowel was viable but edematous and dilated. The neck of the sac was quite narrow forming a constricting ring. It was enlarged by incising into the lateral edge and the contents reduced. An onlay mesh was placed over the defect with anchoring prolene sutures over the surrounding musculature. Redundant skin was removed. The wound was closed with two suction drains in situ. She received transfusion during the operation and two more in the immediate post-operative period. The patient was well on follow up.

DISCUSSION

Inferior and superior lumbar hernias may be congenital (20% of total) or acquired (80%). Congenital hernias are usually discovered in infancy but maybe noticed later on in life and are due to defects in the musculoskeletal system. They may occur individually or in association with other abdominal hernias, Lumbocostovertebral syndrome and Neurofibromatosis type 1.

Acquired lumbar hernias can be primary or secondary. Primary lumbar hernias (55% of all lumbar hernias) are spontaneous, without a causal factor such as surgery, infection, or trauma. Secondary, or acquired, lumbar hernias (25% of all lumbar hernias) may be caused by blunt, penetrating, or crushing trauma; fractures of the iliac crest; surgical lesions; hepatic abscesses; infections in pelvic bones, ribs, or lumbodorsal fascia; or infected retroperitoneal haematomas, post laparoscopic cholecystectomy.

In conclusion, lumbar hernia is a rare condition that may be seen in patients having congenital bony defects associated with certain syndromes.

REFERENCES