

An Open Approach to Primary Posterior Lumbar Hernia Repair: A Case Report

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Abstract

Posterior lumbar hernias are rare types of hernia with either primary or secondary causes. Diagnosis is often missed. Moreover, surgical treatment is still controversial. We present a 74-year-old female with a history of swelling in the left lumbar region and acute colonic obstruction for 3 days. She had a palpable mass below the left twelfth rib. Computerized tomography scan confirmed a left superior lumbar hernia with a herniating colon. Although primary posterior lumbar hernias are extremely rare, careful evaluation with planned operative management are important. CT scan remains the investigation of choice. Mesh-based hernioplasty is the repair method of choice.

Keyword: Posterior lumbar hernia

INTRODUCTION

Posterior lumbar hernia was first described by the French surgeon, Jean-Louis Petit (1672-1750) in 1738.^{1,2} Posterior lumbar hernias are rare types of hernia, constituting is less than 2% of all abdominal wall hernias.³ Patients are usually between 50 to 70 years old.⁴

Posterior lumbar hernia can be congenital or acquired, representing 20% and 80% of all lumbar hernias, respectively.³ In addition, acquired hernia can be of primary and secondary types. Primary lumbar hernias are more common, accounting for 55% of all lumbar hernias.³ Risk factors for primary lumbar hernia included obesity, connective tissue disease, and conditions that can increase intra-abdominal pressure. Secondary lumbar hernia may occur after infection, trauma or previous

flank surgeries.³ Moreover, they can be classified by location into superior (Grynfelt-Lesshaft) and inferior (Petit) lumbar hernias.³ (Figure 1)

Owing to the wide neck of defect, incarceration occurs in less than 10% of cases.³ Diagnosis is often missed. Moreover, surgical treatment is still controversial. Both open and laparoscopic techniques can be used. In the literature, minimally invasive surgery is often advocated, due to less pain, shorter length of hospital stays, and fewer wound complications. In addition, laparoscopy offers excellent visualization, thus avoiding possible injury to neighboring structures.⁵ But under certain circumstances, as in the present case report, the open transabdominal approach was used due to the presentation with acute colonic obstruction.

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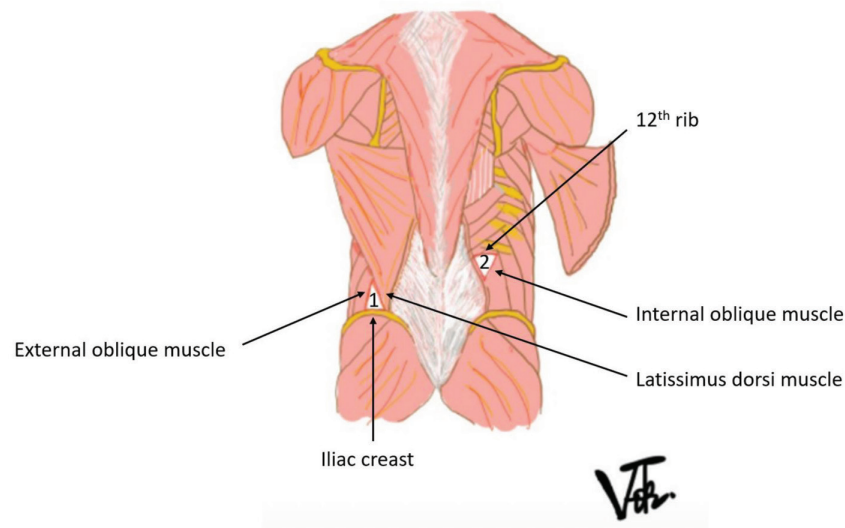


Figure 1 (1) The borders of inferior triangle are composed of the iliac crest inferiorly, external oblique muscle laterally, and latissimus dorsi muscle medially.
(2) The borders of superior lumbar triangle are composed of the 12th rib superiorly, internal oblique muscle laterally, and quadratus medially. (Redrawn from Rafols M, Bergholz D, Andreoni A, et al.³)

PRESENTATION OF CASE

A 74-year-old woman with a body mass index of 16 kg/m² and no history of trauma or previous surgery presented at the emergency room complaining of swelling in the left lumbar region for 3 days. There was evidence of acute colonic obstruction. She had a palpable mass below the left twelfth rib (Figure 2). On examination there was a 5 cm×4 cm irreducible tender mass located at the superior lumbar triangle. Computerized tomography scan confirmed a left superior lumbar hernia with herniating colon. (Figure 3). Urgent surgical reduction and repair of the hernia was advised.

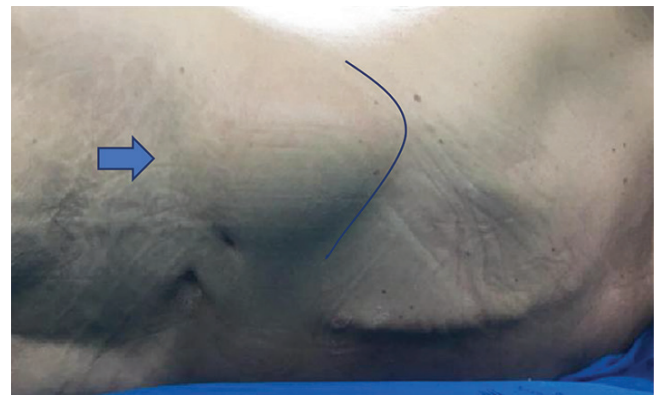


Figure 2 Showing a 5 cm × 4 cm irreducible tender mass (arrow) below the left twelfth rib located at the superior lumbar triangle

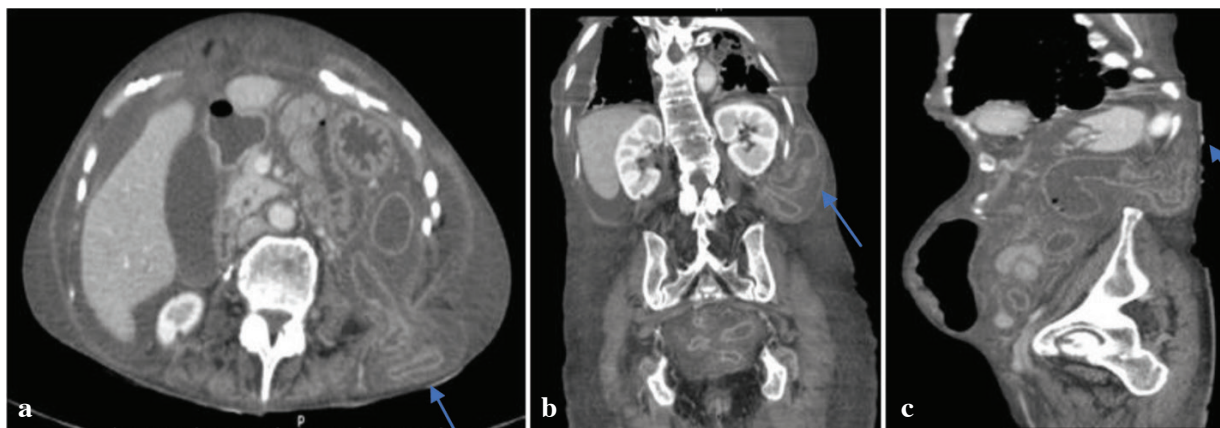


Figure 3 Computerized tomography (CT) scan of the whole abdomen: a, axial view; b, coronal view; c, sagittal view; showing the herniating colon in the superior lumbar hernia (arrows).

The open transabdominal approach was chosen due to presentation with acute colonic obstruction. Intraoperative findings revealed a part of the descending colon incarcerated in the hernia sac leading to proximal colonic dilatation (Figure 4). The dense adhesions were released meticulously and the colon was reduced completely. The defect in the superior lumbar triangle was 5 cm × 4 cm (Figure 5). A polypropylene mesh was placed in the preperitoneal space to close the defect (Figure 6). The peritoneum was closed over the mesh (Figure 7). One month after surgery, patient's symptoms had resolved and there was no recurrence of the hernia.

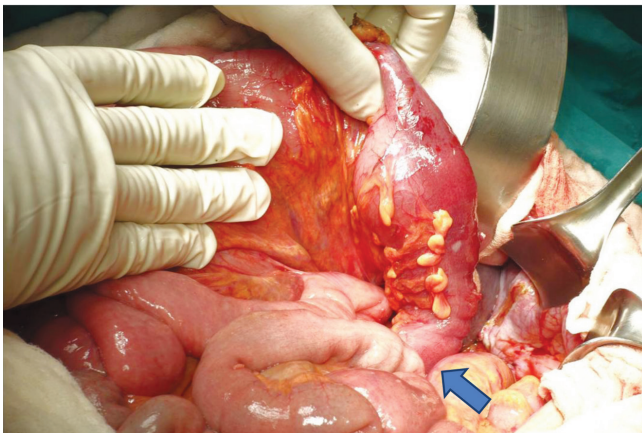


Figure 4 Intraoperative findings revealed the content of the hernia to be a part of the descending colon, leading to proximal colonic dilatation

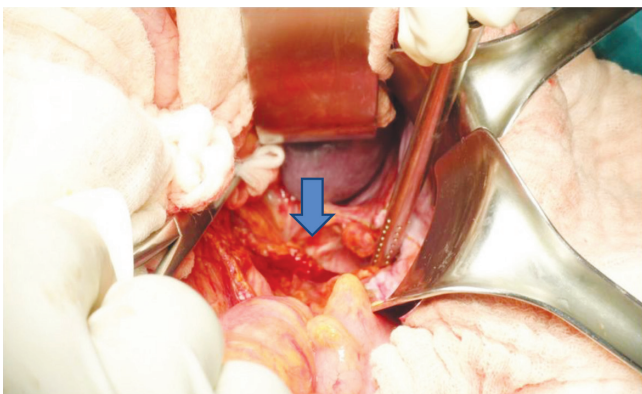


Figure 5 Showing a defect in the superior lumbar triangle of size 5 cm × 4 cm after reduction

DISCUSSION

The patient in the present case report had acquired primary superior posterior lumbar hernia. The development of a posterior lumbar hernia could be caused by the weakness of abdominal wall following old age and

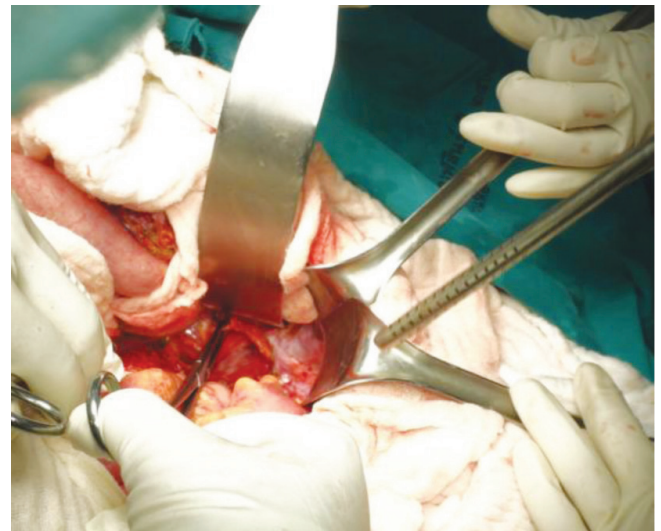


Figure 6 Showing a polypropylene mesh placed in the preperitoneal space

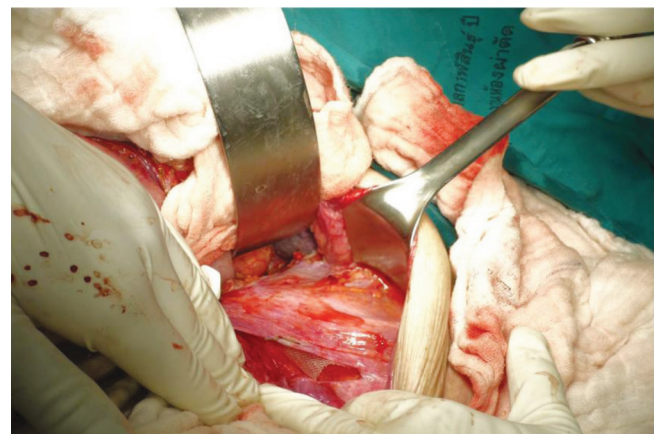


Figure 7 Closure of the peritoneum covering the mesh.

poor nutritional status. These hernias are usually reducible due to wideness of the defect, but obstructed lumbar hernia as in the present case can occasionally occur and might result in bowel gangrene. Bowel ischemia should be suspected in the present patient because of the tenderness of the hernial mass. Therefore, we decided to perform urgent surgery. Because of generalized bowel dilatation and suspected of bowel ischemia, the open transabdominal approach was chosen for this particular patient. With successful reduction of the colon into the abdominal cavity without bowel resection and no evidence of gangrene, a prosthetic mesh was placed to close the defect.

CONCLUSION

Although the posterior lumbar hernia is a rare, when encountering a posterior lumbar mass careful evaluation

must be made with an awareness of a possible posterior lumbar hernia. CT scan remains the imaging study of choice. Operative planning depends on the urgency of the case, possible etiology, and hernia size. Laparoscopic surgery is a recommended alternative method. The use of a mesh closure follows the current principles of hernia surgery.

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POTENTIAL CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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