



Diagnosis and Treatment of Lumbar Hernia

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Abstract

Objective: Lumbar hernia is rare type of hernia occurred in the posterolateral abdominal wall and its diagnosis usually is made by CT scans. The aim of this study was to review patient's records with respect to CT scan findings, and surgical treatment.

Methods: From April 2017 to September 2018, two female patients diagnosed as lumbar hernia by computed tomography scan were admitted into hospital. The medical records were reviewed with respect to findings of CT scan and the outcomes of operation.

Results: CT scans demonstrate the hernias lie in the left superior lumbar triangle and with adipose tissue herniation. The hernia was repaired with sublay placement of mesh and no recurrence was observed during the period of follow-up.

Conclusion: The diagnosis of lumbar hernia can be made by CT scan preoperatively; sublay placement of mesh is reliable method for repair of lumbar hernia.

Keywords: Lumbar hernia; Computed tomography; Sublay mesh placement

Introduction

Lumbar hernia is defined as the protrusion of the intraperitoneal or extraperitoneal contents through a defect in the posterolateral abdominal wall [1]. In adults Lumbar hernias can be categorized into primary and secondary, depending on the existence of a causal factor [2]. The primary types are those that occur spontaneously, and the secondary types refer to the acquired lumbar hernias related to trauma, lumbar abscess, or a prior surgical procedure [3]. In 1963, Hafner et al. described the diagnosis and repair of a lumbar hernia as a once-in-a-career event [4]. Owing to their rarity, lumbar hernias are easily missed and misdiagnosed [5]. The aim of this study was to review patient's records with respect to CT scan findings, and surgical treatment.

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Methods

From April 2017 to September 2018, two female patients diagnosed as lumbar hernia by computed tomography scan were admitted into hospital. There were no discomforts associated with the lumbar hernia. CT scans demonstrate the hernias lie in the left superior lumbar triangle and with adipose tissue herniation. At the axial CT images showed a protrusion of the extraperitoneal fat tissue through a defect in the posterolateral abdominal wall (Figure 1), and the mass inferior to 12th rib was detected in Figure 2, 3.

Under general anesthesia, the patient is placed in the lateral decubitus position with the right side down and the incision overlies the hernia bulge and is oriented parallel to the edge of the 12th rib. Once the hernia sac is identified, blunt and sharp dissection was used to locate fascial edges to permit separation of the hernia sac from surrounding abdominal wall musculature. The sac is freed and inverted. The preperitoneal space is entered and developed by blunt dissection; a 12 cm × 12 cm polypropylene mesh was introduced into the extra-peritoneal space between the peritoneum and the muscle layer. The defect is closed with interrupted non-absorbable sutures. Postoperative recovery was uneventful and during the period of 4 years follow-up, there is no recurrence.

Discussion

Surgically, the lumbar area is referred to the area between the lower edges of the 12th rib superiorly, the iliac crest inferiorly, the erector spinae muscle medially, and the external oblique muscle laterally. The superior lumbar triangle and inferior lumbar triangle are areas of relative weakness in the posterolateral abdominal wall. The superior lumbar triangle is bounded by erector spinae muscle medially, laterally by the internal oblique muscle, the 12th rib superiorly, and inferior lumbar triangle is formed by the latissimus dorsi medially, the external oblique laterally, the iliac

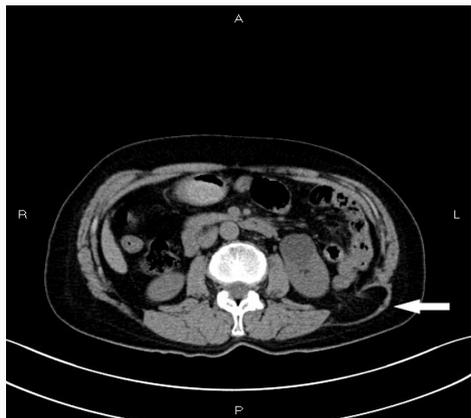


Figure 1: Axial CT image shows the protrusion of the extraperitoneal adipose tissue through a defect in the posterolateral abdominal wall.

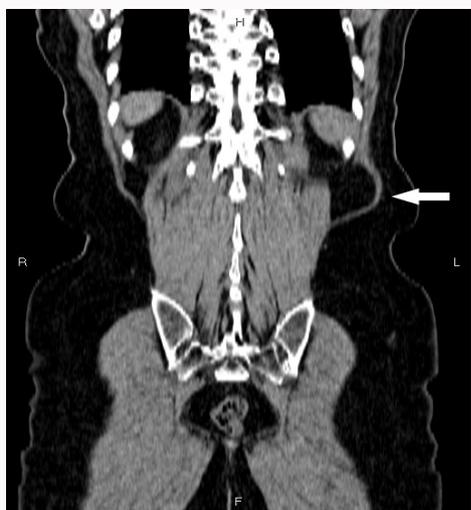


Figure 2: Coronal CT image shows adipose tissue herniation below 12th rib.

crest inferiorly. The two patients present bulge in the in the area of lumbar and no discomfort associated with the bulge. CT scans can confirm the diagnosis of lumbar hernia and delineate the contents of the hernia as well [6,7].

With a 25 per cent risk of incarceration and an 8 percent chance of strangulation, surgical repair is necessary [1]. The concern that the defect may enlarge over time is another reason for timely repair.

Operative approaches largely depend on patient preference and surgeons' experience in managing this disease. Primary closure with interrupted tension-free sutures has been advocated for small defects [8], whereas larger hernias may be repaired using a non-absorbable mesh and sublay placement of mesh has been advocated for protecting the hernia orifice with help of underlying intra-abdominal pressure [5]. Same authors have advocated that laparoscopic approach as an initial choice should be given when encountering lumbar [9,10].



Figure 3: Sagittal CT image shows adipose tissue herniation below the 12th rib.

In conclusion, lumbar hernia is a rare hernia and often misdiagnosed as lipoma. CT scan with coronal or sagittal reformatted images might provide useful tool in diagnosing lumbar hernia.

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