

*Prikaz bolesnika/
Case reports*

GRYNFELTT-LESSHAFT HERNIA – *Case report*
GRYNFELTT-LESSHAFT HERNIJA – *Prikaz
slučaja*

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Key words

Superior lumbar, Grynfeltt-Lesshaft hernia, rare, MR scan

Ključne reči

gornja lumbalna hernija, Grynfeltt-Lesshaft hernija, retko, magnetna rezonanca.

Abstract

Lumbar hernias are quite uncommon as compared to all other ventral abdominal wall hernias, accounting for less than 1,5 % of the abdominal hernias with approximately only 300 cases reported in the literature so far. Lumbar hernias may be superior or inferior. The Grynfeltt-Lesshaft hernia (or superior lumbar hernia) is a rare posterolateral abdominal wall defect and a herniation of abdominal contents through the superior lumbar triangle (also known as Grynfeltt-Lesshaft's triangle).

There are two broad aetiologies for Grynfeltt-Lesshaft hernias: congenital or acquired. Most common in patients aged between 50 and 70 years with a male predominance. Grynfeltt-Lesshaft hernia may contain a number of intra- or retro-peritoneal structures including: fat tissue, stomach, small or large bowel, mesentery, omentum, ovary, spleen or kidney. Clinically, patients can present with a variety of nonspecific symptoms, including a posterolateral mass, back pain, bowel obstruction (if contents contain bowel), or urinary obstruction (if contents are kidney/ureter). Given their rarity and their nonspecific presentation, lumbar hernias are an easy diagnosis to overlook. Even though the diagnosis is clinical, CT or MR imaging study is broadly recommended. Surgery is typically recommended to repair the defect and prevent complications, including strangulated hernia, however, the optimal technique should be selected on an individual basis.

Our goal herein is to increase awareness of upper lumbar hernias.

INTRODUCTION

Lumbar hernias are quite uncommon as compared to all other ventral abdominal wall hernias, accounting for less than 1, 5% of the abdominal hernias with approximately only 300 cases reported in the literature so far. (1) Lumbar hernias may be superior or inferior. The Grynfeltt-Lesshaft hernia (or superior lumbar hernia) is a rare posterolateral abdominal hernia. Herniation of abdominal contents occurs through the superior lumbar triangle (also known as Grynfeltt-Lesshaft's triangle).(2-4)

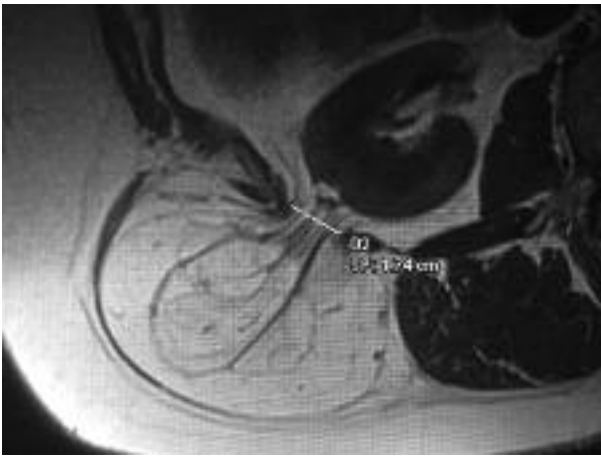
There are two broad aetiologies for Grynfeltt-Lesshaft hernias: congenital or acquired. Clinically, they may present from asymptomatic to painful masses. Most common in patients aged between 50 and 70 years with a male predominance. Grynfeltt-Lesshaft hernia may contain a number of intra- or retro-peritoneal organs and structures. Even though the diagnosis is clinical, CT or MR imaging study is broadly recommended. Surgery is typically recommended to repair the defect and prevent complications.⁵

CASE REPORT

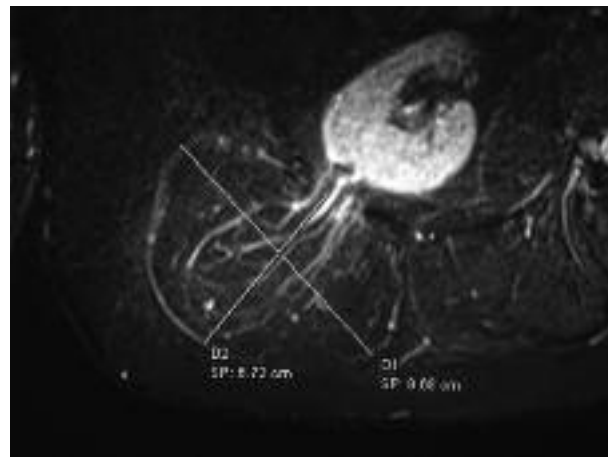
A 56-year-old woman presented with findings appeared to be in line with the criteria for this diagnosis as her physical exam revealed a soft, reducible subcutaneous mass ca. 7x9 cm below the 12th rib on her right lower back with a history of slow growth (1 year). The mass was reducible with manual compression but protruded when the patient coughed or during Valsalva's maneuver. The pain was intermittent, but had become worse during the last 10 days. No history of previous procedures was reported. Inflammatory markers and plain abdominal X-ray were unremarkable. Radiologist ordered magnetic resonance (MR) scan of abdomen without intravenous contrast, performed on GE 1,5 T magnetic resonance scanner. Patient proceeded to surgery, which was used as the reference standard.

RESULTS

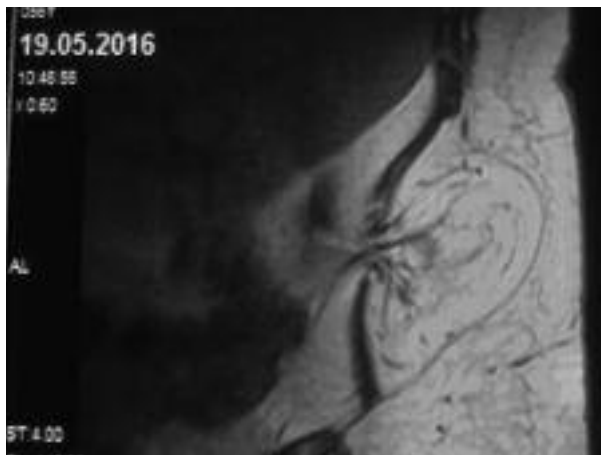
MR scan of the abdomen showed herniation of the intraabdominal fat tissue, 11x10x7 cm (CCxAPxLL) in diameter (Picture2), through the abdominal wall defect was 2x2 cm in right superior lumbar triangle (Picture 1). There were no signs of incarceration or peritonitis (Picture 3, 4).



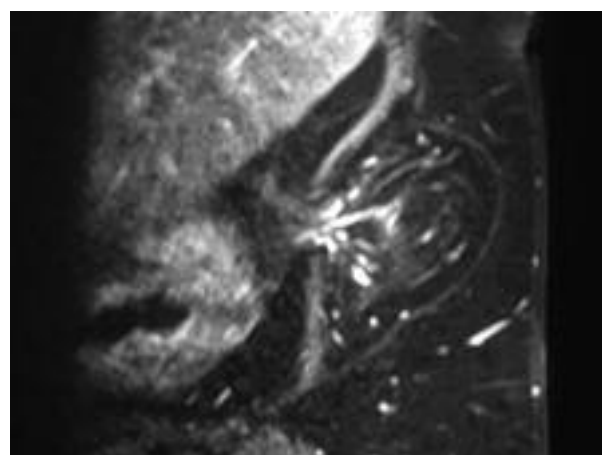
Picture 1 - T1 TSE TRA



Picture 2 - T1 TIRM TRA



Picture 3 - T1 TSE SAG



Picture 4 - T1 SE FS SAG

DISCUSSION

The Grynfeltt-Lesshaft hernia is a rare posterolateral abdominal wall defect occurs due to weakening of the transversalis fascia and the aponeurosis of the transversus abdominis1 through the superior lumbar triangle.(2-4)

Superior lumbar triangle (also known as Grynfeltt-Lesshaft's triangle) is a region bound by the quadratus lumborum muscle medially, twelfth rib superiorly and internal oblique muscle laterally. Floor is bounded with transversalis fascia and the aponeurosis of the transversalis muscle of the abdomen and roof with external oblique and latissimus dorsi muscles(6)

Grynfeltt-Lesshaft hernia may contain a number of intra- or retro-peritoneal structures including: fat tissue, stomach, small or large bowel, mesentery, omentum, ovary, spleen or kidney.(2)

There are two broad aetiologies for lumbar hernias: congenital or acquired. Predisposing factors in spontaneous acquired lumbar hernia are age, obesity, extreme thinness, chronic debilitating disease, muscular atrophy, intense slimming, chronic bronchitis, wound infection, and postoperative sepsis. They are also usually associated with strenuous physical activity.(2-4)

While Grynfeltt-Lesshaft hernia may initially present as a small asymptomatic bulge, the defect typically enlarges over time and can become symptomatic with potentially serious complications. Clinically, they may present from

asymptomatic to painful masses, usually reducible and exercise-related. Patients can present with a variety of symptoms, including a posterolateral mass, back pain, bowel obstruction (if contents contain bowel), or urinary obstruction (if contents are kidney/ureter).(7) Given their rarity and their nonspecific presentation, lumbar hernias are an easy diagnosis to overlook. Differential considerations includes lipoma, soft tissue tumors, hematoma or abscess. Even though the diagnosis is clinical, CT or MR imaging study is broadly recommended (1,6-8). Surgery is typically recommended to repair the defect and prevent complications, including strangulated hernia, however, the optimal technique should be selected on an individual basis. The laparoscopic approach seems to be the best option for treating small or moderate defects; open surgery can be reserved for large defects and to salvage failures with the laparoscopic approach.(1)

CONCLUSION

Given their rarity and their nonspecific presentation, lumbar hernias are an easy diagnosis to overlook. Diagnostics of Grynfeltt-Lesshaft at times often presents greater challenge than its treatment. Differential considerations includes lipoma, soft tissue tumors, hematoma or abscess. When no obvious clinical signs are present, patients should be evaluated with radiological investigation to establish a diagnosis. The diagnostic potential of magnetic resonance, multidetector CT and ultrasonography in detecting

clinically unrecognized cases of Grynfeltt-Lesshaft hernia is significant and these imaging modalities can provide promptly and reliably diagnose.⁽⁴⁾ Surgery is typically recommended to repair the defect and prevent complications,

including strangulated hernia, however, the optimal technique should be selected on an individual basis.⁽⁷⁾ Our goal herein is to increase awareness of upper lumbar hernias.

Sažetak

Lumbalne hernije su veoma retke i čine manje od 1,5% svih abdominalnih hernija. Po lokaciji, mogu biti gornje ili donje lumbalne hernije. Grynfeltt-Lesshaft hernija ili gornja lumbalna hernija predstavlja hernijaciju abdominalnog sadržaja kroz gornji lumbalni trougao (Grynfeltt-Lesshaft-ov trougao). Može biti urođena ili stečena. Najčešće se javlja kod osoba između 50 i 70 godina, nešto češće kod muškaraca. Sadržaj kilne kese može varirati od masnog tkiva do intra- i retro peritonealnih struktura i organa od čega zavisi i klinička prezentacija. Upravo zbog različite kliničke slike česti su previdi u dijagnostici ovog entiteta. Iako ultrazvuk kao neinvazivna i dinamička metoda pruža dosta korisnih informacija, najčešće se preporučuju CT ili MR dijagnostika kao dijagnostički imidžing modaliteti. Sam defekt abdominalnog zida kao i evaluacija sadržaja kilne kese najbolje se mogu analizirati pomoću magnetne rezonance ili multi-detektorske kompjuterizovane tomografije. Terapija je jednostavna elektivna hirurška.

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