Case 14814

Eurorad

Grynfeltt hernia

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Section: Abdominal imaging
Area of Interest: Abdominal wall
Procedure: Diagnostic procedure
Imaging Technique: CT
Special Focus: Hernia Haemorrhage Case Type: Clinical Cases
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Patient: 57 years, male

Clinical History:

57-year-old male patient with no previous trauma presented with two months of left lumbar swelling, without pain, that increases with Valsalva manoeuvre.
Imaging Findings:

CT was performed showing perirenal fat herniation of 70 x 38 x 9 mm (craneocaudal, transverse and anteroposterior axis respectively) swelling on the left side. It was delimited by the 12th rib in the roof, medially by erector spinal muscle group, laterally by internal oblique muscle being diagnosed as left Grynfeltt hernia or superior lumbar hernia.
Discussion:

Lumbar hernias represent 2% of all abdominal hernias [1, 2]. The lumbar area contains two weak areas: the superior lumbar triangle or Grynfeltt-Lesshaft´s triangle (described by Grynfelt in 1866) [2] and the inferior lumbar triangle or Petit´s triangle [3] (described in 1783 by Petit) [2] (Fig.1).
The first one, the aim of this case, is usually more frequent and is limited superiorly by the 12th rib, medially by the erector spinal muscle group and laterally by the internal oblique muscle [1, 4]. Petit hernia is more frequent when it is post-traumatic (as a result of a trauma).
Lumbar hernias are more frequently found on the left side in male patients between 50-70 years of age. [5]
Acquired hernias represent 80% of hernias, with 55% of them being spontaneous or primary forms [4] in patients with risk factors such as elderly obese patients, muscular atrophy, and increased abdominal pressure [6]. The remaining 45% are secondary forms [1] due to infections, penetrant wounds, previous surgery, and traumatism [4]. The last ones require early diagnosis because there is an 8-10% chance [1] of strangulation and a 5% chance of incarceration. [4]
20% are congenital [1, 4, 6] and perforate predominantly through the inferior lumbar triangle (Petit) [6].
The contents of lumbar hernia can be mesentery, omentum, small or large bowel. Some studies support that 42% of cases contain fat, 41% large bowel and 32% small bowel [4].
The most frequent clinical presentation is as a bulge or swelling area in the lumbar area that increases with Valsalva manoeuvre and disappears in prone position [5]. They can be asymptomatic, especially those of small size, or produce local discomfort and pain. In less than 10% of cases the clinical onset is with acute abdominal obstruction [3].
Diagnosis is based on high suspicion, physical examination and imaging methods to confirm [2, 5]. CT is most commonly used to diagnose but also to plan the surgery [4].
All lumbar hernias should be treated, including asymptomatic ones, with surgery being the only therapeutic option

[1]. Surgery should be done as early as possible because in advanced cases the correction is more difficult [7]. Our patient underwent polypropylene mesh hernioplasty, and is now asymptomatic.

Differential Diagnosis List: Grynfeltt hernia, Lipoma, Haematoma, Abscess

Final Diagnosis: Grynfeltt hernia

References:

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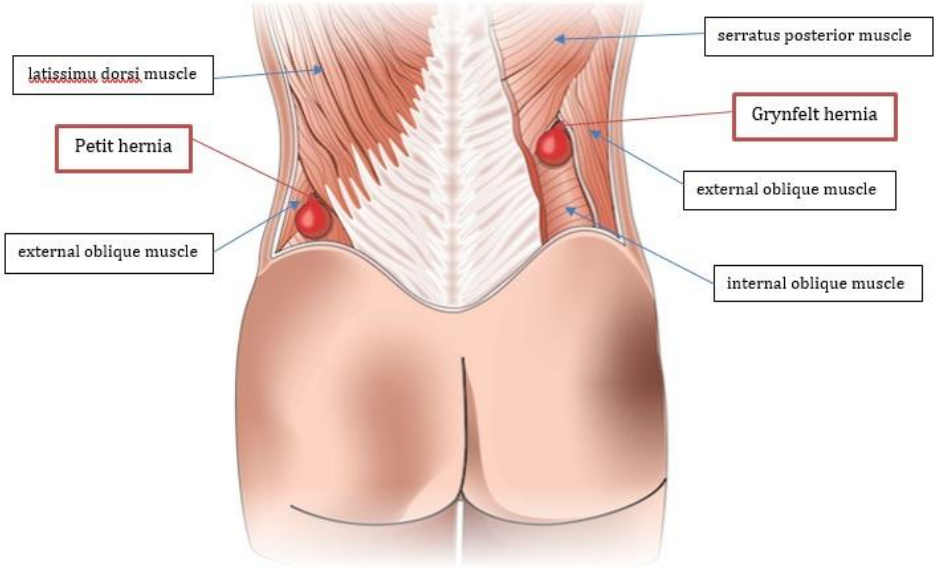
Figure 1

a



Description: Anatomic illustration of lumbar hernias. **Origin:** Department of Radiology, Severo Ochoa Hospital (Leganés), Madrid.

Figure 2

a

Description: NECT (Axial): Perinephric fat hernia of 70 x 38 x 9 mm (craneocaudal, transverse and anteroposterior axis respectively) inferiorly to renal lower pole. Medially lumbar square muscle. Uppermost twelfth rib. And posteriorly broad back muscle. **Origin:** Department of Radiology, Severo Ochoa Hospital (Leganés).

Figure 3

a

Description: NECT, sagittal reconstruction: Perinephric fat hernia through superior lumbar triangle. Uppermost twelfth rib. Posteriorly broad back muscle and anteriorly perirenal fat. **Origin:** Department of Radiology, Severo Ochoa Hospital (Leganés).

Figure 4

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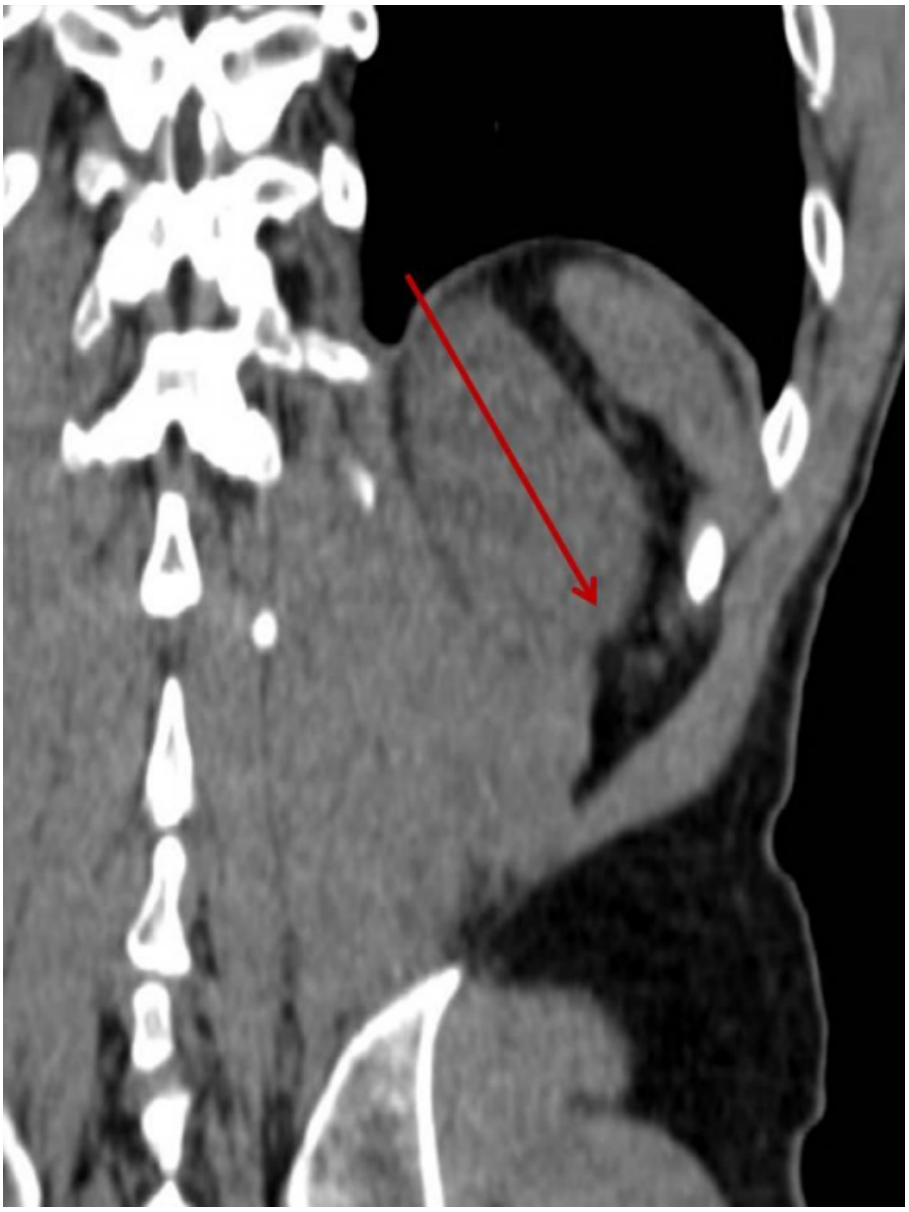

Description: NECT, coronal reconstruction: Perinephric fat hernia in superior lumbar triangle. Laterally broad dorsal muscle. Medially lumbar square muscle and uppermost twelth rib. **Origin:** Department of Radiology, Severo Ochoa Hospital (Leganés).