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Hernia

Case report

Grynfeltt's hernia

E. Prieto-Díaz-Chávez, J.L. Medina-Chávez and S. Prieto-Díaz,

Surgical Department, San Francisco Medical Center, Colima, Mexico

Summary: The aim of this study is to report a case and review the relevant literature. The patient was a 64-year-old male with a right lumbar mass of 5 x 6 cm, which protruded when abdominal pressure was increased. Surgery revealed a defect of 3 x 2 cm in the transversalis fascia in the superior lumbar triangle; prosthetic material was used in the preperitoneal space. Lumbar hernias are rare defects of the abdominal wall (2% of wall hernias); fewer than 300 cases have been reported in the literature. All lumbar hernias can be corrected with surgical treatment. A tension-free mesh repair is almost always necessary, and gives satisfactory results.

Key words: Hernia – Grynfeltt – Lumbar hernia – Surgery

Correspondance to: E. Prieto-Díaz-Chávez, Corregidora 380, Jardines de la Corregidora, Colima, Col. Mexico

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Abdominal cavity hernias can develop through the lateral abdominal wall [Morton 1984]. Petit described the anatomic limits of the inferior lumbar triangle in 1783; Grynfeltt in 1866 and Lasgaft in 1870 independently described the superior lumbar triangle [Geis 1989]. The lumbar area is bordered superiorly by the twelfth rib, inferiorly by the iliac crest, laterally by the external oblique muscle, and medially by the sacrospinalis muscle [Morton 1984, Lipton 1995] (Fig. 1). These rare hernias can be classified as Grynfeltt's hernias in the superior lumbar space, as Petit's hernias in the inferior lumbar space, and as diffuse hernias occupying the whole hip. Until 1866, Petit's triangle was considered as the site where lumbar hernias protrude [Baeza 1985, D'Amico 1993]. Lumbar hernias tend to be asymptomatic, and are most often discovered by the patient. Because they are rare, this article reports a particular case of lumbar hernia and reviews the relevant literature to date.

Case report

The authors report a case of a superior lumbar hernia in a 64-year-old man admitted to our hospital in January 1998. The patient complained of a painful right lumbar mass; physical examination revealed a 5 x 6 cm soft, smooth-surfaced mass, which protruded with increasing abdominal pressure. When the patient was relaxed, the hernia was reduced and the pain disappeared (Fig. 2). A lumbar hernia was diagnosed and surgical treatment effected. During the operation, we found a defect of 3x2 cm in the transversalis fascia in the superior lumbar triangle (Fig. 3). The hernia was reduced and the defect was repaired with prosthetic material. A polypropylene mesh of 115 cm^2 was put in the preperitoneal space using a tension-free technique and fixed with sutures to the external oblique and latissimus dorsi muscles (Fig. 4). The postoperative follow-up fifteen months after surgery showed good evolution, without recurrence.

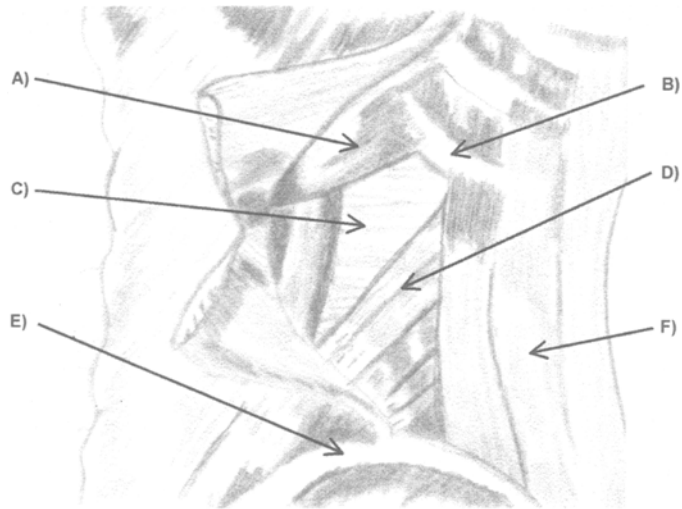

Fig. 1
Posterior oblique vision of the superior lumbar triangle. A) sacrospinal muscle, B) 12th rib, C) superior lumbar triangle, D) internal oblique, E) iliac crest, F) external oblique

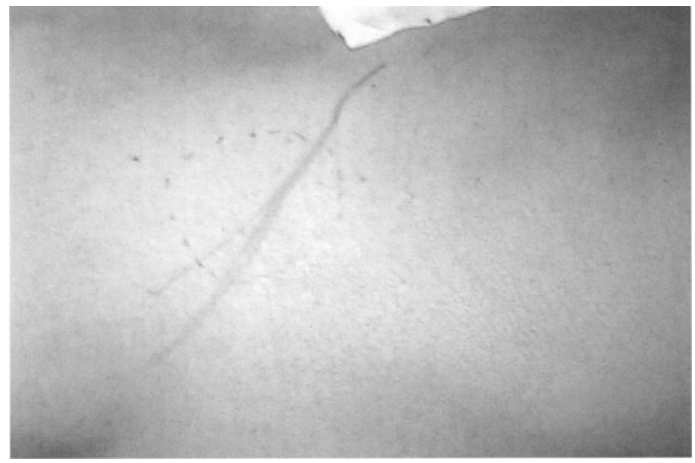

Fig. 2
Physical examination showing soft mass and planning the incision

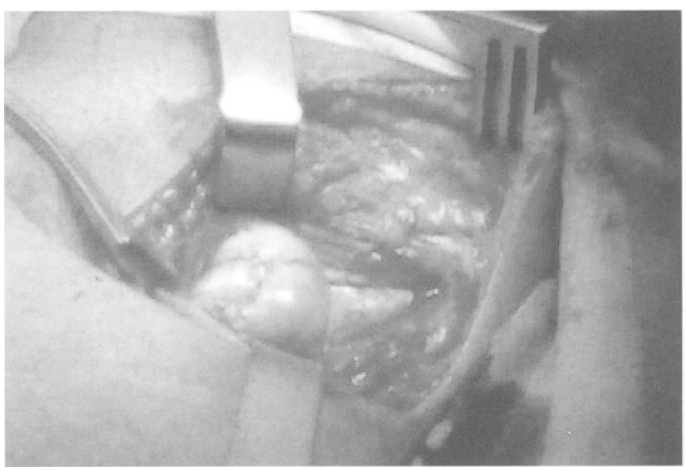

Fig. 3
At the operation, the hernial defect is shown on the transversalis facia

Fig. 4
The defect was repaired with a polypropylene mesh

Discussion

Lumbar hernias are very rare defects of the abdominal wall, representing 2% of all hernias of the abdominal wall [Le-Neel 1993]; approximately 300 cases have been reported in the literature [Fakhry 1991, Rosato 1996, Alves 1995, Nyhus 1981, Esposito 1994]. These hernias have also been divided into congenital (10% of cases) or acquired types; the latter, in turn, are subdivided into spontaneous or traumatic (25% of the total) and postoperative or incisional (50%) [Fakhry 1991, Le-Neel 1993]. They can be in the superior lumbar triangle (Grynfeltt's hernia, Lasgaft's hernia, or Larrey's iliac crest hernia), or the inferior lumbar triangle (Petit's lumbar hernia, Huguier's suprailiac or iliolumbar hernia), or diffuse hernias (incisional postoperative or traumatic lumbar hernias of the flank) [Geis 1989]. In adults, these occur twice as frequently in women and the majority are unilateral and on the left side [Baeza 1985, Le-Neel 1993]. The diagnosis is usually simple when the hernia is large, but is more difficult with those less than 5 cm in diameter. These defects usually increase in size slowly and progressively. The most common feature is a protrusion in the flank described by the patient and often diagnosed as a lipoma or parietal tumor [Esposito 1994]; this tends to be accompanied by pain, which disappears when the hernia is reduced [Geis 1989]. The hernia contents, disrupted muscle layers, as well as size can be seen clearly in a CT scan [Chenoweth 1989, Faro 1990]. All Grynfeltt's hernias can be corrected surgically. Primary repair, autologous tissues, or prosthetic material can be used to obliterate the defect

[Alves 1996]. The treatment for superior lumbar hernias was reported by Dowd in 1997; the defect was closed using a tensor facia lata musculocutaneous flap and the same technique was employed for the inferiorlumbar hernia with neighboring tissues [Nyhus 1981]. Defects of about 2 cm in the center of the superior lumbar triangle can be closed with numerous interrupted sutures [Hammasaki 1994, Bolkier 1991, Shiki 1991], but satisfactory closure of the defect without alloplastic material occasionally can be difficult or impossible [Esposito 1994]. Large defects require insertion of a reinforcing nonabsorbable mesh [D'Amico 1983, Le-Neel 1993]; polypropylene or mersilene meshes seem to be the most suitable materials [Rosato 1996]. Recently, Arca et al described the advantages of laparoscopic repair in seven patients [Arca 1998]; we have not yet done this procedure in our hospital.

Conclusions

The authors report the case of a Grynfeltt's hernia in a adult male located on the right side. The sex of the patient and the location of the hernia are contrary to reports in the literature. The hernia was treated satisfactorily with a reinforcing mesh. There are no previous reports of this type of hernia in adults in the Mexican literature.

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