



Draft Manuscript for Review

A very simple technique to repair Grynfeltt hernia

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Review

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Title:

A very simple technique to repair Grynfeltt hernia

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Category of manuscript

How to do it

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None

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3 **Abstract**
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5 Superior lumbar hernia is an extremely rare posterior abdominal wall defect. The location of this type of hernia,
6 also known as the Grynfeltt hernia, is defined by a triangle placed in the lumbar region. An unusual case of a 67-
7 year-old woman with a superior lumbar hernia is reported. The diagnosis was made by the physical examination.
8 The defect of the posterior abdominal wall was repaired with a polypropylene dart mesh. A control at eleven
9 months showed no sign of recurrence. In literature there are no cases which report the technique to repair this
10 type of hernia with this kind of prosthesis.
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18 **Key words**
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20 Lumbar hernia, surgical repair, dart mesh
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Clinical Presentation and Surgical Treatment

A 67 year old woman complained of lumbar pain associated with a feeling of an enlarging mass, which had started a month before. She never underwent flank surgery. On examination, a smooth, non tender mass with regular margins, which measured about 3 centimetres in diameter, located just beneath the 12th rib in the left lumbar region was found. It evoked mild pain when palpated and no bowel sounds could be heard over the mass. It was easily reducible and the cough impulse was present. There were no clinical manifestations of bowel obstruction and the laboratory values were normal. No instrumental scanning was required. It was diagnosed a superior lumbar hernia and the surgical procedure was planned. During surgery an incision following the inferior margin of the 12th rib was made. A 3cmx3cm piece of retroperitoneal fat, herniating through a lumbar wall defect located under the big dorsal muscle beneath the 12th rib where the trasversalis fascia is not covered by the external oblique muscle, was found. The hernia was easily reduced and a dart mesh (*Bard Mesh Dart, Small Monofilament knitted Polypropilene*) was used to repair the defect (*fig.1*). A loop suture with two-zero sutures was performed to secure the plug medially to the quadratus lomborum, externally to the internal oblique, superiorly to the periosteum of the 12th rib and to the serratus posterior-inferior. A blanked suture was performed to place the big dorsal muscle above the plug in order to reinforce the posterior abdominal wall. The patient did not have postoperative complications and was discharged on the first postoperative day. Only mild pain killers in the first two days were used as analgesic treatment. A control at eleven months showed no sign of recurrence.

Discussion

Superior lumbar hernia is an extremely rare posterior abdominal wall defect, firstly described by Grynfeltt. The location of this type of hernia, also known as the Grynfeltt hernia, is defined by a triangle placed in the lumbar region whose base is the 12th rib and the portions of the serratus posterior inferior, the external side is the internal obliquus, and the internal side is the quadratus lomborum [3]. The floor of the triangle is the trasversalis fascia. Most of the lumbar hernias are secondary to trauma or previous flank surgery (nephrectomy, aortic aneurism repair, iliac bone grafting harvest, latissimus dorsi myocutaneous flap), which is considered an important factor in developing incisional lumbar hernia [1]. Primary lumbar hernias are rare[2]. Predisposing

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3 factors of spontaneous superior lumbar hernia are age, emaciation, and debilitating disease [3]. The most
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5 common contents of a lumbar hernia are retroperitoneal fat, small and large bowel, omentum, cecum, appendix,
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7 stomach, ovary, spleen, and rarely kidney[4]. A sense of heaviness in the back or flank and back pain are the
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9 most common symptoms but it could also manifest itself as an asymptomatic condition [3]. Lumbar hernias are
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11 associated with a 25% risk of incarceration and a 8% chance of strangulation [2]. Diagnosis could be done with a
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13 singular clinical approach, but nowadays the CT scan is considered the diagnostic modality of choice[4],
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15 although it is an high cost investigation and involves an high radiation intake. Surgery is the unique treatment for
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17 this kind of defect. Primary repair, tissue flaps, and mesh repair including laparoscopic transabdominal and
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19 retroperitoneoscopic approaches were described as possible procedures but due to the rarity of this disease there
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21 is not enough evidence to select one procedure as the best treatment [2]. In our opinion the method proposed is
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23 simple and easy to perform and its result is comparable with other techniques much more sophisticated. In
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25 literature there are no cases which report the repair of this type of hernia with dart mesh (*Bard Mesh Dart,*
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27 *Small Monofilament knitted Polypropilene*).
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Figure legend

Figure 1. The lumbar hernia and the method which was applied to repair the defect

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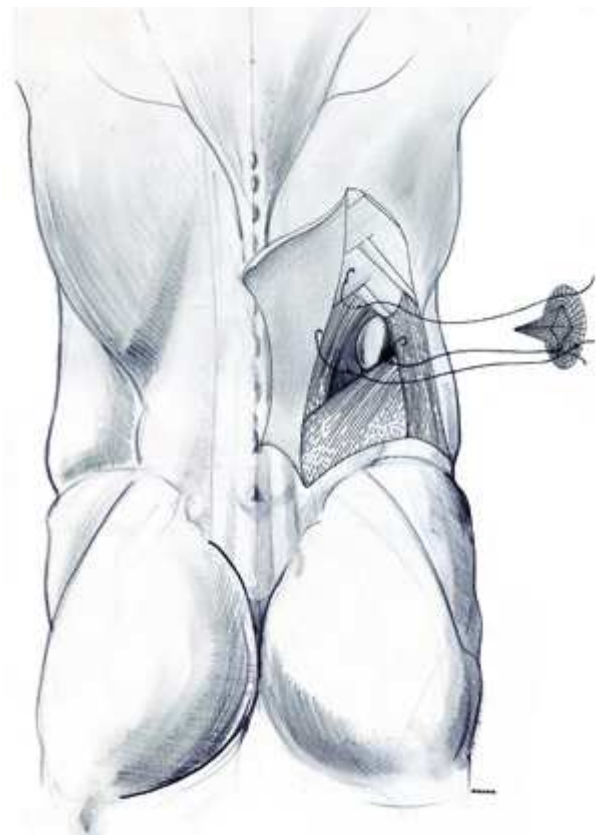


Figure 1. The lumbar hernia and the method which was applied to repair the defect 21x29mm (360 x 360 DPI)

view