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Scientific letter

Surgical management of recurrent intraparietal hernia following disruption of the semilunar line by pararectus incision[☆]

Manejo quirúrgico de hernia intraparietal recurrente tras disrupción de la línea semilunar por incisión pararectal

Postsurgical intraparietal hernias are rare and complex entities, presenting significant challenges in their management.¹ We present two cases of patients with multiple recurrences of incisional hernia after a pararectal incision that caused a disruption of the semilunar line.

Case 1: A 74-year-old patient with a history of appendectomy in 2007 due to pararectus incision, with subsequent and multiple recurrences of incisional hernia, treated with a supraaponeurotic mesh, was referred to our unit. The patient presented with a palpable and reducible tumour at the site of previous surgery and on clinical examination, recurrence of hernia was confirmed.

A CT scan with Valsalva manoeuvre reported a small M3W1 incisional hernia of 2 cm. However, upon review of the images we found a notable disruption of the semilunar line, with a separation of up to 9 cm between the anterior rectus and lateral abdominal muscles, already present in the 2013 CT scan but not reported. Aponeurosis of the greater oblique muscle remained intact except for the 2 cm disruption. This finding correlated with the patient's symptoms, suggesting an L3W2R4 intraparietal hernia (Fig. 1).

Case 2: A 69-year-old man who had undergone an appendectomy in 2013 through a pararectus route and later an incisional hernia repaired with a supraaponeurotic mesh. He came to our unit with a palpable and reducible tumour on the scar. On clinical examination we found a recurrence of the incisional hernia. A CT scan was requested, which showed integrity of the anterior fascia of the abdomen and a disruption of the semilunar line of up to 15 cm. This finding correlated with the patient's symptoms, also suggesting an L2L3W3R1 intraparietal hernia.

The two cases were handled in a similar way. Prehabilitation with botulinum toxin was initiated to improve muscle approximation according to the standard technique of 5 points on each side under ultrasound control, administering a total of 500 IU of botulinum toxin. The surgical approach included a Hemi-TAR technique from the midline, dissecting the retrorectus space and accessing the preperitoneal space through the posterior fascia of the rectum, without the need to cut the transverse muscle insertion because it had already been sectioned and retracted. Previous adhesions were released and the oblique muscles were reinserted into the anterior rectus by continuous suture with long-resorptive monofilament. Subsequently, a 30 x 45 cm polypropylene mesh was placed in the preperitoneal space fixed to the hip bone (iliac crest and upper pubic ramus) by means of absorbable tackers and sutured to the midline. In the second case, the midline did not allow a tension-free approach, so an endoscopic anterior component separation on the contralateral side was performed in the same surgical procedure. In neither of the cases were drains used.

The postoperative period was favourable, with an uncomplicated recovery. Clinical and ultrasound evaluation confirmed resolution of intraparietal hernia.

The cases presented highlight the need for early referral of complex eventrations to specialised abdominal wall surgical units, given the complexity of the diagnosis and management of intraparietal hernias. The specificity of these pathologies requires a high level of specialisation from the outset.

Disruption of the semilunar line, as observed in these cases, is often a consequence of inadequate technique in the initial pararectal laparotomy. Possibly, paramedian incisions were

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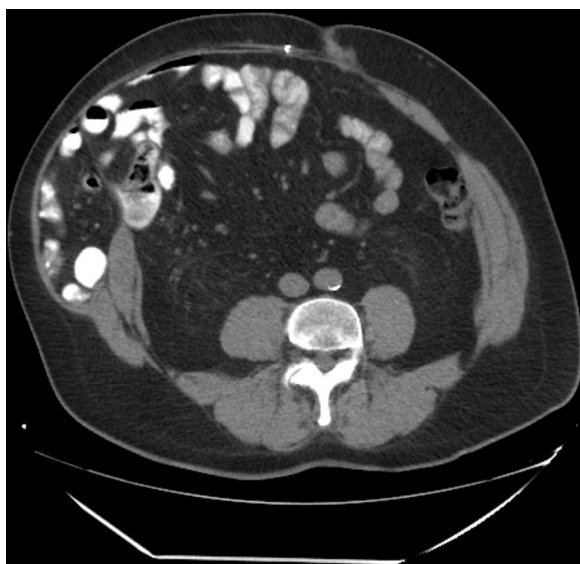


Fig. 1 – CT showing intraparietal hernia with disruption of the semilunar line.

made that were too lateral, so that the semilunar lines were sectioned, thus causing the retraction of the internal oblique and transverse muscles. This disruption did not behave like a typical incisional hernia, since the anterior abdominal aponeurosis of both the anterior rectus and the greater oblique muscles remained intact. These hernias, which can be considered pseudo-Spiegelian, require a different approach than the supraaponeurotic mesh repair that does not address the underlying problem, which is the separation between the lateral and rectus muscles of the abdomen.

Diagnosing an intraparietal hernia can be difficult. Clinical presentations may vary from a typical incisional hernia and accurate imaging studies are often required for correct identification.² In our cases, the use of CT with Valsalva manoeuvre and its correct interpretation was instrumental in visualising the extent and nature of muscle and fascial disruption.

Prehabilitation with botulinum toxin type A (botox) is a useful tool for the surgical management of complex hernias and enables approaching the retracted muscles without tension.³

When it comes to repairing complex hernias, the supraaponeurotic approach is not effective⁴ because it is not

sufficient to place a mesh on that same plane. To achieve adequate repair, it is necessary to use a posterior approach, which consists of accessing the retromuscular space, moving the rectus and oblique muscles more closely and placing a mesh on that plane.

In summary, these cases underscore the importance of avoiding paramedian incisions so as not to produce complex hernias that require an accurate diagnosis and a surgical approach adapted to the management of intraparietal hernias. Early referral to specialised abdominal wall surgical units and the use of techniques such as TAR and botox prehabilitation treatment are essential for success in the management of these complex pathologies.

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