



Use of Vicryl Mesh as a Temporary Inlay Barrier in the Management of Posterior Sheath Dehiscence after Retromuscular Hernia Repair

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Introduction

Minimally invasive techniques for the repair of ventral and incisional hernias have significantly evolved in recent years. Since the introduction of the Enhanced-View Totally Extraperitoneal (eTEP) approach by [1] and further developed by [2] and [3], and the Mini- Or Less-Open Sublay Operation (MILOS) described by [4] in 2018, many surgeons have adopted these retromuscular mesh repair techniques. It has been claimed that these procedures eliminate the major complications associated with the Intraperitoneal Onlay Mesh (IPOM) technique, such as bowel erosion, adhesions, and chronic pain. However, despite these advances, rare but clinically significant complications may still occur. One such complication is the Interparietal Hernia (IH) [5-8].

Background

An interparietal (or interstitial) hernia is characterized by the presence of a hernia sac between the layers of the abdominal wall, rather than through all layers. This entity was first described by the Danish physician Thomas Bartholin in 1661. In the context of modern minimally invasive retromuscular hernia repair, this rare complication can develop due to postoperative deformation or separation of the posterior rectus sheath. Clinically, patients may present with signs of small bowel obstruction, sometimes requiring emergency surgical exploration. However, not all patients develop obstruction, and many cases may remain clinically silent and underdiagnosed, which may explain why the true incidence remains unknown. While the incidence of preperitoneal hernias after TAPP (transabdominal preperitoneal) repair has been reported to be up to 0.3%, only isolated reports exist of interparietal hernias anterior to the posterior rectus sheath, and their frequency is not established in the literature [9-12].

Discussion

Over the past five years, in our Hernia Surgery Center, we have performed 175 minimally invasive ventral hernia repairs, including both eTEP and MILOS techniques. We observed two cases of postoperative retromuscular (interparietal) hernia following minimally invasive repair, corresponding to an incidence of approximately 1.1%.

These cases highlight the importance of early recognition and adequate postoperative imaging. Although symptoms such as anorexia, abdominal distension, and vomiting developed gradually, CT imaging failed to identify the true cause in both cases. The defect in the posterior rectus sheath was not clearly visible on CT, suggesting that radiological evaluation alone may not always be diagnostic. Surgeons should therefore maintain a high index of suspicion and consider diagnostic laparoscopy in patients with unexplained postoperative symptoms. In both cases, the posterior rectus sheath was reconstructed using a Vicryl mesh (polyglactin 910) patch in an inlay position between the bowel and the polypropylene mesh. The Vicryl mesh acts as a temporary biological barrier, preventing direct contact between the bowel and the permanent mesh, thereby reducing the risk of adhesion and erosion. Our team has extensive experience with Vicryl mesh in open abdomen management and programmed relaparotomies, where it resorbs within 2-3 weeks while stimulating the formation of a thin connective tissue layer. We hypothesize that this layer functions as a protective interface, allowing tension-free closure of the posterior abdominal wall and preventing direct bowel-mesh contact, without requiring additional procedures such as Transversus Abdominis Release (TAR) [13-16].

Conclusion

Interparietal hernia represents a rare but clinically relevant

complication following modern minimally invasive ventral hernia repair. Surgeons should be aware of this entity, particularly when patients present with atypical postoperative symptoms and inconclusive imaging results. The Vicryl mesh inlay technique provides a simple, effective, and biologically sound solution for posterior sheath reconstruction and prevention of bowel–mesh adhesion. Further clinical experience and long-term follow-up are needed to evaluate the durability and safety of this approach.

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