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Enhanced view total extraperitoneal technique (eTEP) vs laparoscopic intracorporeal rectus aponeuroplasty (LIRA) in the treatment of ventral hernias

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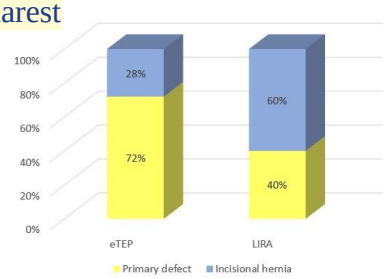
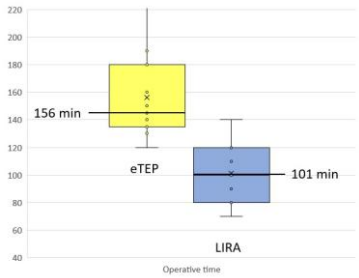
Due to the lower surgical site infections, reduced postoperative pain and a shorter hospital stay, minimally invasive repair of ventral abdominal hernias has gained widespread acceptance during the last years, compared to their open approach. Despite all efforts no ideal minimally invasive technique has been found yet, contouring in two directions in: extraperitoneal (also called endoscopic) and the intraperitoneal (IPOM + and, recently, LIRA).

We present a comparison between two "top" representatives of these categories - the enhanced view total extraperitoneal technique (eTEP) technique and the newly described technique laparoscopic intracorporeal rectus aponeuroplasty (LIRA) and our experience with them (15 LIRA cases, 16 eTEP cases).





eTEP

Advantages

- **retromuscular** – Rives Stoppa mesh positioning
- fewer intraperitoneal **adhesions** and associated complications
- less postoperative **pain**
- mean **costs** lower

Disadvantages

- longer operative **time**
- higher **learning curve**
- **neurovascular bundle** injury

LIRA

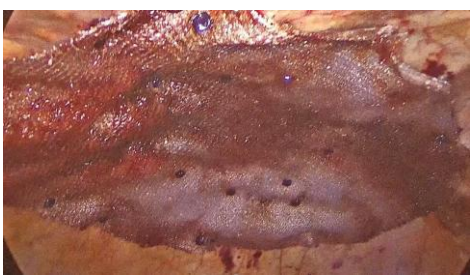
Advantages

- shorter **learning curve** (good for **beginners**)
- shorter operative **time**
- when **retrorectus** plane is **already used**
- suspicion of no **peritoneum**

Disadvantages

- intestinal **adhesions** to the mesh
- increased postoperative **pain** due to **fixation**
- higher **costs**

The enhanced view total extraperitoneal technique (eTEP) technique places the mesh in the retromuscular space, reducing the risk of intraperitoneal and visceral-mesh adhesions, visceral injury, postoperative ileus. However, it has a prolonged operative time and a long learning curve, being recommended to experienced surgeons only. On the other hand, laparoscopic intracorporeal rectus aponeuroplasty (LIRA) is the second technique used by us in the repair of ventral abdominal wall defects. This technique aims to close the defect in a tension-free manner after making a relaxation incision in the posterior abdominis muscle sheath combined with placement of an intraperitoneal underlay mesh.



Final aspect, after positioning the mesh **LIRA** technique – **intraperitoneal** aspect

Final aspect, after positioning the mesh **eTEP** technique – **retromuscular** aspect

Conclusions: **Starting from the relatively few studies comparing the two techniques, LIRA and eTEP, and continuing with our team's experience, we can state that both eTEP and LIRA are considered safe and feasible for ventral hernia repair, with advantages, disadvantages and specific indications.**