

## Intraoperative Fascial Traction for Increasing Intra-Abdominal Volume in Loss-of-Domain Incisional Hernias: A Report of Two Cases

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### Innovative Technique for Complex Hernia Repair

#### Introduction:

The primary goal in incisional hernia repair is achieving primary fascial closure and reinforcing the area with a synthetic mesh. However, when Loss of Domain (LoD) is present, serious complications such as intra-abdominal hypertension (IAH) and abdominal compartment syndrome (ACS) may arise. Various strategies have been employed to overcome these challenges and increase the reduced intra-abdominal volume, including preoperative botulinum toxin (BTA) injection, progressive pneumoperitoneum (PPP), various component separation techniques, and their combinations. Intraoperative fascial traction (IFT) has recently been added to this armamentarium. The two cases presented here aim to demonstrate the potential benefits of this innovative technique and offer a different perspective to surgeons dealing with such challenging cases.

#### Presentation of Cases:

**Case 1:** A 49-year-old male with recurrent umbilical hernia (17 years post-mesh repair) presented with a 6×7 cm defect (Tanaka Index 30%). Preoperative BTA injections (200U to EO/IO/TA) and smoking cessation counseling were performed. Surgical repair included adhesiolysis, Rives-Stoppa dissection, retrorectus mesh placement (15×20 cm), and intraoperative fascial traction (IFT) using Fasciotens®. Successful primary closure was achieved with transient postoperative ileus. The patient was discharged on day 5 with no recurrence at 1-year follow-up.

**Case 2:** A 64-year-old male developed recurrent umbilical hernia (5 years post-repair) with a 9×12 cm defect (Tanaka Index 51%). After preoperative BTA injections (200U to EO/IO), surgical management included adhesiolysis, Rives-Stoppa technique, retrorectus mesh placement (18×30 cm), and IFT. The patient achieved primary fascial closure without complications and was discharged on postoperative day 1 with no early recurrence.

#### Discussion & Conclusion:

Repairing incisional hernias with LoD requires both preoperative optimisation and techniques to increase intra-abdominal volume. IFT has proven effective in these complex cases, enabling primary fascial closure while reducing risks of IAH and ACS. The presented cases demonstrate IFT's potential, though larger studies are needed to confirm its long-term benefits.

