

Evaluating Outcomes of Giant Ventral Hernia Repair (GVHR): Are They Suboptimal? A Propensity-Matched Analysis

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Aim: To examine clinical outcomes in GVHR with hernia defect size (HDS) ≥ 200 cm² vs non-GVHR (nGVHR) with defect size < 200 cm² using a propensity-matched approach.

Introduction:

Strategies for Addressing GVHR

- Component separation (CST)
- Botulinum Toxin A (BTA)
- Preoperative optimization, “prehabilitation”
- Extensive mesh overlap



Results:

PSM Data

254 well-matched pairs (all p>0.05): Age, BMI, Diabetes, Current & Former smokers, # comorbidities, Fascial closure, Primary hernia, CDC 1/2, and ASA score

Preoperative & Operative Data

All p<0.001:

Defect size: 354.7±132.1 vs. 103.8±61.9 cm²

Mesh size: 1161.9±450.0 vs. 771.2±388.4 cm²

Botulinum Toxin: 15.4% vs. 2.8%; p<0.001

CST: 50.6% vs. 23.7%; p<0.001

Outcomes

Hernia recurrence: 4.3% vs. 2.4%; p=0.217

Follow-up: 24.0±37.8 vs. 27.4±40.4 months; p=0.558

Wound complications: 33.5% vs. 15.4%; p<0.001

Respiratory insufficiency/failure: 4.7% vs. 0.8%; p=0.012

Avg LOS: 6.9±5.1 vs. 5.0±2.0 days; p<0.001

Reoperation: 9.8% vs. 4.7%; p=0.028

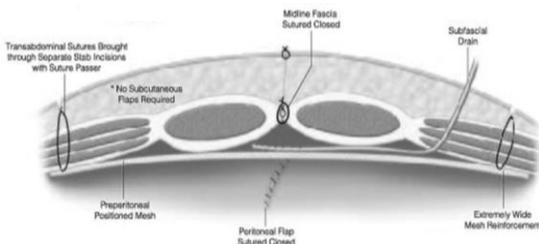
Predictors of Recurrence

Recurrent repairs (OR 1.44, 95% CI: 1.41–225.9)

Wound complication (OR 2.82, 95% CI: 1.03–7.67)

Methods:

- Prospectively maintained hernia database
- Tertiary hernia center in USA
- 1:1 propensity-score matching
- Excluded: CDC 3/4 wounds and concomitant intraabdominal procedures
- Primary outcome: hernia recurrence
- Multivariable regression (MVR) to determine predictors of hernia recurrence



Conclusions:

In a matched cohort of patients where fascial closure was achieved, GVHR had comparable rates of long-term hernia recurrence to nGVHR. GVHR required greater rates of component separation and preoperative adjuncts, such as BTA injection, in order facilitate fascial closure.