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THEME to be specified

+ Incisional hernia

Outcomes of Combined Hernia Repair and Panniculectomy in Abdominal Wall Reconstruction: A Retrospective Single-Center Study

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Introduction

- Significant variations exist in the surgical management of complex ventral hernias
- Key differences include mesh selection, plane placement, and the choice between open or minimally invasive techniques
- Many patients require both functional and cosmetic corrections, requiring collaboration between plastic and general surgeons
- Despite the growing use of combined hernia repair and panniculectomy for abdominal wall reconstruction, outcomes data remains limited

Objectives

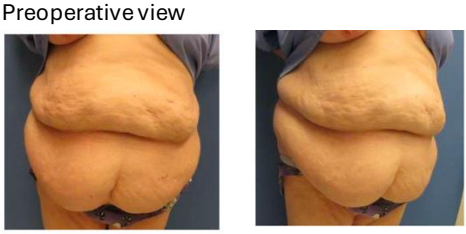
- **Primary objective:** To evaluate outcomes of patients undergoing single-stage open abdominal wall reconstruction with panniculectomy
- **Secondary objective**: To compare patient outcomes based on mesh position (underlay versus onlay)

Methods

- **Study Design:** Retrospective single-center study of adults (>18) undergoing elective ventral hernia repair with panniculectomy from 2014–2024
- **Outcomes:** Hernia recurrence, surgical site complications, and 30-day adverse events
- **Statistical Analysis:** Descriptive summary statistics using Wilcoxon rank sum and Fischer's exact test; p-value <0.05 considered statistically significant

Figure 1. Representative Case

Preoperative view



3-month post-operative

Results

- **Patient Cohort Overview**
  - Total patients: 57
  - Prior hernia repair: 27 (50.9%)
  - Mean BMI: 35.1
  - Mean pannus weight: 2,730.8 g
- No statistically significant difference in surgical site complications between underlay and onlay mesh placement

Characteristic	Underlay Mesh (n = 24)	Onlay Mesh (n = 24)	p-value
Male, n (%)	4 (16.7%)	2 (8.3%)	
Age, mean (SD), years	60 (13)	62 (9)	
BMI, mean (SD), kg/m²	36 (10)	34 (8)	
History of Smoking, n (%)			
– Never	19 (79.2%)	12 (50%)	
– Within last year	2 (8.3%)	3 (12.5%)	
– Ever	3 (12.5%)	9 (37.5%)	
Diabetes, n (%)			
– Yes	6 (25%)	9 (37.5%)	
– No	18 (75%)	15 (62.5%)	
Immunosuppression, n (%)			
– Yes	0 (0%)	1 (4.2%)	
– No	24 (100%)	23 (95.8%)	
COPD, n (%)			
– Yes	1 (4.2%)	1 (4.2%)	
– No	23 (95.8%)	23 (95.8%)	
Recurrent Incisional Hernia, n (%)			
– No	10 (41.7%)	11 (45.8%)	
– Yes	14 (58.3%)	13 (54.2%)	
Fascial Release, n (%)			
– Performed	1 (4.2%)	0	
– Not required	23 (95.8%)	24 (100%)	1 (f)
Hospital Length of Stay, days	4.5 (3–7)	5.5 (3–7)	0.6 (w)
Surgical Site Infection, n (%)	4 (16.7%)	6 (25%)	0.72
Seroma, n (%)	5 (20.8%)	3 (12.5%)	1
Skin or Soft Tissue Ischemia, n (%)	3 (12.5%)	1 (4.2%)	0.61
Stitch Abscess, n (%)	2 (8.3%)	0	0.49
Infected or Exposed Mesh, n (%)	0	1 (4.2%)	1
Chronic Pain, n (%)	3 (12.5%)	0	0.23

f: Fisher's exact test, w: Wilcoxon rank-sum test

Conclusion

- **Outcomes:** Low hernia recurrence rates and high success in fascial closure with open hernia repair and panniculectomy
- **Mesh Placement:** No significant difference in surgical site complications or 30-day adverse events between underlay and onlay mesh