Management of Recurrent Hernias: An Opportunity for Improvement?

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Background

- Recurrent abdominal wall hernias are a complex, common, and morbid condition.
- Few guidelines directly address surgical management of these hernias. Where consensus exists, there is minimal data evaluating the incorporation of these recommendations into modern hernia practice.

AIM: To characterize contemporary management practices for recurrent abdominal wall hernias.

Methods

- Data Source: Michigan Surgical Quality Collaborative Core Optimization Hernia Registry (MSQC-COHR).
- Cohort: Adult patients who underwent elective abdominal wall hernia repair between January 1, 2020, to March 31, 2023.
- Analysis: Descriptive analysis via t-tests and Fischer exact tests.
- Outcomes of Interest:
  - Approach (open, laparoscopic, robotic), use of mesh, use of component separation, intra-operative conversions.
  - Outcomes: 30-day complications, readmissions.

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Results

Table 1: General demographic data

	Primary Repair (n=7887)	Recurrent Repair (n=700)	p-value
Age, mean (SD)	53.8 (14.4)	57.5 (13.4)	<0.001
Female sex, n(%)	3302 (41.9)	366 (52.3)	<0.001
White race, n(%)	1383 (17.5)	126 (18.0)	>0.05
BMI, mean (SD)	32.4 (7.2)	33.4 (7.1)	<0.001
Comorbidities, n(%)			
Hypertension	3552 (45.0)	371 (53.0)	<0.001
Diabetes	1183 (15.0)	137 (19.6)	<0.005
COPD	468 (5.9)	61 (8.7)	<0.01

Patients with recurrent hernias are older, more commonly female, have a higher BMI, and have more comorbidities.

Table 2: Hernia- and operative-specific data. Post-operative outcomes

	Primary Repair (n=7887)	Recurrent Repair (n=700)	p-value
Defect width in cm, mean (SD)	3.0 (3.0)	5.9 (5.1)	<0.001
Mesh used, n (%)	6142 (77.9)	643 (91.9)	<0.001
Component separation used, n(%)	386 (4.9)	129 (18.4)	<0.001
Initial operative approach, n(%)			
Open	4377 (55.5)	377 (53.9)	>0.05
Laparoscopic	874 (11.1)	76 (10.9)	>0.05
Robotic	2636 (33.4)	247 (35.3)	>0.05
Intra-operative conversions, n(%)			
Total	92 (2.6)	26 (8.0)	<0.001
Laparoscopic to open	40 (4.6)	9 (11.8)	<0.05
Robotic to open	52 (2.0)	17 (6.9)	<0.001
Any complication, n(%)	149 (1.9)	45 (6.4)	<0.001
Surgical site infection, n(%)			
Organ space	17 (0.2)	5 (0.7)	<0.05
Deep incisional	21 (0.3)	7 (1.0)	<0.01
Superficial incisional	42 (0.5)	15 (2.1)	<0.001
Readmission, n(%)	17 (0.2)	3 (0.4)	>0.05

Recurrent hernias are larger, more commonly use mesh and component separation techniques, and have a higher rate of intra-operative conversions.

Post-operatively, recurrent hernia repairs are more likely to have any complication, including surgical site infections. There are no differences in rates of readmission.

Key Takeaways

- Significant variation persists in the operative approach to recurrent abdominal wall hernias.
- Despite size indications, not all recurrent hernias are managed with mesh, which may precipitate additional recurrences and further morbidity.