

Long Term Outcomes of Primary and Recurrent Ventral Hernia Repair

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+Incisional Hernias

Introduction

- For patients undergoing any type of ventral hernia surgery, reported recurrence rates are broad, ranging from 10% to 50% after initial repair¹
- Most hernia recurrence literature records follow-up periods are only from one to five years²

Methods

- Retrospective single medical center review of 200 patients from August 2008-July 2014
- Demographics and surgical characteristics were recorded and long-term outcomes including recurrences, mesh related complications, and hernia reoperations were obtained from a retrospective chart review
- Recurrence as defined as documentation of a hernia by physical exam or imaging.

Data Analysis and Results

	Non-Recurrent n=100	Recurrent n=100	Combined n=200	p-value	Statistical Test
Age	54.46 (15.82)	54.62 (12.72)	54.54 (14.32)	0.9373	T-test
Sex					
Female	70 (70.0%)	68 (68.0%)	138 (69.0%)	0.7598	Chi-square
Male	30 (30.0%)	32 (32.0%)	62 (31.0%)		
Indication					
Primary	20 (20.0%)		20 (10.0%)		
Incisional	80 (80.0%)		80 (40.0%)		
Recurrent Incisional	0	100 (100%)	100 (50.0%)		
Approach					
Open	70 (70.0%)	70 (70.0%)	140 (70.0%)	1	Chi-square
Laparoscopic	27 (27.0%)	27 (27.0%)	54 (27.0%)		
Laparoscopic to open	3 (3.0%)	3 (3.0%)	6 (3.0%)		
Hernia width	7.00 [4.00, 11.00]	8.00 [6.00, 15.00]	8.00 [5.00, 12.00]	0.0049*	Mann-Whitney

* - denotes statistical significance at $\alpha = 0.05$

	Non-Recurrent n=100	Recurrent n=100	Combined n=200	p-value	Statistical Test
Follow-up days	4466 [3703, 4787]	4102 [2107, 4799]	4322 [2959, 4787]	0.0833	Mann-Whitney
Hernia recurrence					
No	84 (84.0%)	58 (58.0%)	142 (71.0%)	<0.0001*	Chi-square
Yes	16 (16.0%)	42 (42.0%)	58 (21.0%)		
Re-operation					
No	91 (91.0%)	71 (71.0%)	162 (81.0%)	0.0005*	Fisher's
Yes	9 (9.0%)	29 (29.0%)	38 (19.0%)		
Complications (any)					
No	81 (81.0%)	75 (75.0%)	156 (78.0%)	0.3057	Chi-square
Yes	19 (19.0%)	25 (25.0%)	44 (22.0%)		
Mesh complications					
No	98 (98.0%)	84 (84.0%)	182 (91.0%)	0.0008*	Fisher's
Yes	2 (2.0%)	16 (16.0%)	18 (9.0%)		

* - denotes statistical significance at $\alpha = 0.05$

Discussion

- 21% long-term recurrence rate when analyzing the recurrent and non-recurrent VHR groups in combination
- Recurrent ventral hernia repairs were associated with higher recurrence, re-operation, and mesh related complications compared to non-recurrent hernia repairs
- There was a significant differences in initial hernia defect length with non-recurrent hernia defects (7.00cm) being smaller than recurrent hernia defects (8.00cm)

References

- Millikan, K. W. (2003). Incisional hernia repair. Surgical Clinics, 83(5), 1223-1234.
- Magnusson, N., Nordin, P., Hedberg, M., Gunnarsson, U., & Sandblom, G. (2010). The time profile of groin hernia recurrences. Hernia, 14, 341-344.