Short-term Outcomes Following Open vs. MIS Inguinal Repair

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Introduction

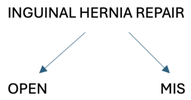
- The Lichtenstein technique is the gold standard for open inguinal hernia repair.
- With recent advancements in surgical innovation, the utilization of minimally invasive surgery (MIS) has increased dramatically in hernia surgery.

Objective

The aim of this study is to compare outcomes of open vs. MIS inguinal hernia repairs at our institution.

Materials and Methods

Retrospective study at a high-volume hernia center using a prospectively maintained database from November 2022-July 2024



Primary outcome	Secondary outcomes
Hernia recurrence	Surgical site infection Hematoma Seroma Inguinodynia

Results

Patient Demographics/Operative Details

	Open repair (N = 30)	MIS repair (N = 113)	p-value
Patient demographics			
Age (years)	71.72 ± 14.20	60.30 ± 15.17	0.0003
Gender, n (%)			0.8163
Male	27 (90.0%)	100 (88.50%)	
Female	3 (10.0%)	13 (11.50%)	
BMI (kg/m2)	25.55 ± 4.69	25.58 ± 3.52	0.9652
ASA Class, n (%)			0.0017
1	2 (6.67%)	16 (14.16%)	
2	12 (40.00%)	75 (66.37%)	
3	14 (46.67%)	21 (18.58%)	
4	2 (6.67%)	1 (0.88%)	
5-item frailty index, n (%)			<0.0001
0	6 (20.00%)	72 (63.72%)	
1	18 (60.00%)	38 (33.63%)	
2	6 (20.00%)	3 (2.65%)	
3	0 (0.00%)	0 (0.00%)	
4	0 (0.00%)	0 (0.00%)	
5	0 (0.00%)	0 (0.00%)	
Nicotine use, n (%)			0.1639
Current (within 1 month)	0 (0.00%)	5 (4.42%)	
Former (within 1 year)	1 (3.33%)	0 (0.00%)	
Distant former (>1 year)	4 (13.33%)	14 (12.39%)	
Never	25 (83.33%)	94 (83.19%)	
Immunosuppression, n (%)	1 (3.33%)	2 (1.77%)	0.5953
Prior pelvic operation, n (%)	2 (6.67%)	3 (2.65%)	0.2876
Recurrent hernia, n (%)	1 (3.33%)	1 (0.88%)	0.3100
Operative course			
Operative time (minutes)	82.57 ± 25.76	57.87 ± 29.51	<0.0001

Postoperative Outcomes

	Open repair (N= 30)	MIS repair (N=113)	p-value
Follow up period	56.76 ± 57.56	60.26 ± 59.02	0.7718
Recurrence, n (%)	1 (3.33%)	1 (0.88%)	0.3100
Surgical site infection, n (%)	0 (0.00%)	0 (0.00%)	N/A
Hematoma, n (%)	1 (3.33%)	1 (0.88%)	0.3100
Seroma, n (%)	0 (0.00%)	7 (6.19%)	0.1621
Inguinodynia*, n (%)	1 (14.29%)	1 (4.00%)	0.3204

*Calculation only include patients with > 90 day follow up

Discussion

- Our results indicate that the short-term outcomes of MIS repair at our institution are comparable to those of open repair.
- Long-term follow-up is necessary to evaluate the rates of recurrence and inguinodynia.
- The selection of a surgical approach should be guided by patient-specific factors, the surgeon's expertise, and the availability of hospital resources.

References

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Acknowledgements

Thank you to the Columbia Hernia Center for the opportunity to work on this project. The Columbia Hernia Center brings together a group of world-class physicians focused on delivering the highest-quality hernia care possible.