Association of Mesh Fixation with Reoperation and Readmission Risk

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Background

- Mesh fixation in laparoscopic inguinal hernia repair is used to reduce the risk of mesh displacement and subsequent recurrence.
- Mesh fixation has its associated risks, including chronic pain.
- Hypothesis: Mesh fixation is not associated with readmission or reoperation after laparoscopic inguinal hernia repair.

Methods and procedures

- Design: A retrospective cohort study was performed at a single academic institution.
- Inclusion criteria: All patients undergoing elective laparoscopic inguinal hernia repair from 2013 to 2021.
- Primary outcome: a composite variable of readmission and reoperation relating to the inguinal hernia repair within 6 months of surgery.
- Analysis: logistic regression of readmission/reoperation as the outcome was performed adjusting for fixation, surgery type, unilateral versus bilateral hernias, and recurrence.

Results

Table 1. Patient demographic information

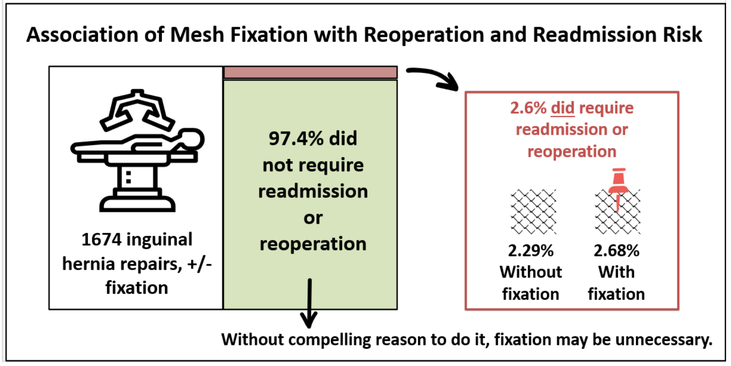
Variable	Fixation (n=1193)	No Fixation (n=481)	P-value
Age, mean (SD)	55 (14.73)	55 (14.95)	0.950
BMI, mean (SD)	26.94 (4.25)	26.90 (3.91)	0.862
Sex, male (%)	1097 (93.76)	432 (92.70)	0.435
Race, White (%)	1108 (93.27)	450 (93.75)	0.325
Surgery type, TAPP (%)	525 (44.01)	276 (57.38)	<0.0001
Laterality, Bilateral (%)	435 (36.65)	180 (37.05)	0.744
Nonrecurrent (%)	1073 (91.24)	434 (91.56)	0.835

Table 2. Multivariable logistic regression

		Reoperation/readmission within 6 months	OR (95% CI), p-value
Mesh Fixation	Yes	32 (2.68%)	1.26 (0.63, 2.55), 0.513
	No (ref)	11 (2.29%)	
Surgery type	TAPP	29 (3.62%)	2.31 (1.20, 4.45), 0.013
	TEP (ref)	14 (1.60%)	
Laterality	Bilat.	19 (3.08%)	1.53 (0.83, 2.85), 0.176
	Unilat. (ref)	23 (2.19%)	
Recurrence	Yes	5 (3.50%)	1.27 (0.49, 3.30), 0.630
	No (ref)	38 (2.52%)	

Conclusion

- Mesh fixation during laparoscopic inguinal hernia repair is not associated with reoperation/readmission within 6 months.
- Without a clear benefit to mesh fixation, it may be an unnecessary step that increases both costs and risk of chronic pain.
- Further studies are needed to evaluate longer term recurrence rates in this cohort.



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