Use of Biosynthetic Mesh for Robotic-Assisted Cruroplasty in Hiatal Hernia Repairs

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BACKGROUND

- Recurrence rates after hiatal hernia repair remains high
- The use of mesh during hiatal hernia repair remains controversial
- Residency programs have been developing their own curriculum

RESEARCH OBJECTIVES

- The goal of this study was to compare recurrence rates after robotic-assisted primary cruroplasty to biosynthetic mesh reinforcement in patients undergoing hiatal hernia repair

METHODS

- A prospectively maintained database was reviewed for patients undergoing robotic-assisted hiatal hernia repair at a single center from January 2016 to June 2022.
- Utilization of mesh was at the discretion of the surgeon
- Biosynthetic absorbable mesh (Bio-A or ENFORM) was fixated in a “U” or reverse “C” configuration based on surgeon preference.
- Recurrences were identified radiographically or endoscopically and were investigated based on patients’ symptoms at any point during follow up.
- Emergency surgery cases and cases involving relaxing incisions were excluded.

RESULTS

- 516 patients were included in the analysis
- Mesh was utilized in 59% of cases; with 35% Bio-A mesh, and 24% ENFORM mesh.
- There were no significant differences in age, sex, BMI, or smoking status between cohorts (p>0.05

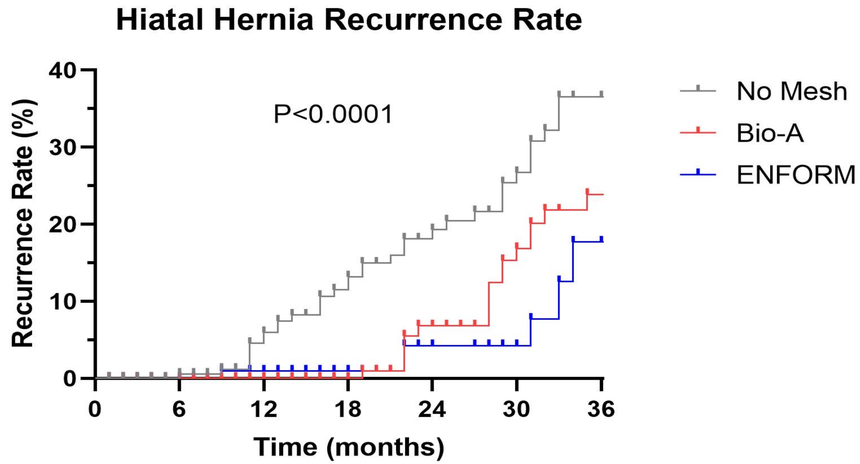
The use of biosynthetic mesh for robotic-assisted cruroplasty is both safe and effective in reducing the recurrence rate.

Intermediate-term outcomes suggest a recurrence-free benefit with the use of biosynthetic mesh compared to a non-mesh repair.

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RESULTS



	No Mesh N=210	Bio-A Mesh N=181	ENFORM Mesh N=125	P Value
Concomitant procedure:				
None	0	3	4	
Fundoplication	59	52	50	0.30
Bariatric	41	45	46	
Operative time (min)	78±49	88±48	84±44	0.62
Intraoperative complications (%)	0.5%	0.6%	0%	0.72
Postoperative Morbidity 90 day (%)	4.3%	5.0%	4.0%	0.91
EBL (cc)	22±17	20±18	23±18	0.82
LOS (days)	1.2±1.3	1.7±1.5	1.4±1.3	0.41
Dysphagia at 30 d (%)	2.9%	4.4%	4.0%	0.70
EGD postop at 90 d (%)	1.9%	2.2%	2.4%	0.95
Follow-up (month)	18 (1-62)	17 (1-62)	14 (1-44)	0.28
Overall Recurrence rate	28.1%	14.9%	4.8%	<0.001