

Synthetic Mesh is not Associated with Worse Outcomes following Repair of Large Ventral Hernias in Transplant Patients: An Analysis of the ACHQC Database

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Background



Transplant patients are a unique ventral hernia repair patient population



Current debate surrounding ideal mesh type for ventral hernia repair in transplant patients



Limited data investigating the association of mesh type and ventral hernia repair outcomes in transplant patients

Objective

The objective of our study was to determine if there is a difference in 30-day morbidity and long-term durability between transplant patients undergoing incisional hernia repair with biologic, slowly resorbable, and permanent synthetic mesh.

Methods

- Abdominal Core Health Quality Collaborative Database 2012-2023
- Adult patients with a history of liver or kidney transplant undergoing elective open incisional hernia repair with mesh
- At least 30-day follow-up data
- 3 mesh categories:
 - Permanent synthetic mesh
 - Resorbable synthetic mesh
 - Biologic mesh

Results

Patient Population

34,386 elective, adult cases for incisional hernia

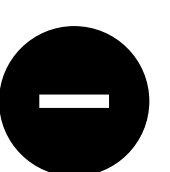
9,817 with hernia width > 10 cm and at least 30-day follow up available

9,380 incisional hernia cases involving mesh and mesh type described

385 cases with a history of abdominal transplant
8,995 without a transplant history

Mesh Type by Transplant History

Type of Mesh Used	History of Abdominal Transplant (N=385)	No History of Abdominal Transplant (N = 8,995)
Biological Tissue-Derived, n (%)	19 (5%)	473 (5%)
Resorbable Synthetic, n (%)	8 (2%)	411 (5%)
Permanent Synthetic, n (%)	358 (93%)	8,111 (90%)



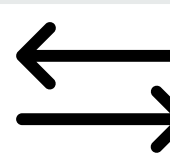
Mesh type did not differ significantly between groups (p = 0.06)



Mesh was placed in a sublay fashion for the majority of both groups, onlay more common in transplant group (p = 0.007)

30-Day Outcomes of Interest

Primary Outcome of Interest	History of Abdominal Transplant (N = 385)	No History of Abdominal Transplant (N = 8,995)	p-value
Clinical Recurrence, n (%)	1 (0%)	23 (0%)	1
Patient-Reported Recurrence, n (%)	53 (23%)	724 (17%)	0.03
SSI at 30 Days, n (%)	9 (2%)	718 (8%)	<0.001
SSO at 30 Days, n (%)	44 (11%)	1488 (17%)	0.008
SSO/I Requiring Procedural Intervention at 30 Days, n (%)	20 (5%)	890 (10%)	0.002
Bleeding Transfusion at 30 Days, n (%)	24 (6%)	181 (2%)	<0.001



No difference in recurrence at 1 year.

Conclusion

- Transplant patients were less likely to experience SSI/SSO or require an intervention for SSI/SSO
- No difference in clinical or patient-reported recurrence over the long-term
- Large ventral hernia repair with permanent synthetic mesh in transplant patients appears to be safe