TITLE: Long-Term Outcomes and Quality-of-Life After Incisional Hernia Repair with STRATTICE™ Mesh

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Running Head: Outcomes after STRATTICE™

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Introduction:
Mesh implantation during incisional hernia repair (IHR) is widely accepted. Selection between synthetic and biologic mesh is still controversial, as long-term outcome data after biologic mesh placement is limited. This study aimed to evaluate long-term outcomes after incisional hernia repair (IHR) with STRATTICETM biologic mesh reinforcement.

Methods:
Under an-IRB approved protocol, patients who underwent IHR with non-cross-linked, porcine, acellular dermal matrix (STRATTICETM) at three tertiary care centers between January 2013 and July 2017 were identified. Patient characteristics and operative details were retrospectively collected. Long-term (greater than 24 months) recurrence rates and quality-of-life (QOL), as measured by the validated Hernia-Related Quality-of-Life Survey (HerQLes), were collected prospectively via phone interviews.

Results:
A total of 63 patients (30% male) were evaluated. Median age was 53 (range 25-80). Median BMI was 32 (19-80). Hernia grades, as classified by the Ventral Hernia Working Group, included I (2%), II (49%), III (35%), IV (14%). Twenty-seven (43%) were recurrent hernias. Median follow-up was 44 (24-83) months. Thirty-three (52%) reported hernia recurrence, with a recurrence rate of 1.1 per 100 person-months. Sixteen (25%) developed a post-operative wound infection. Recurrence was more common among patients with longer follow-up (p=0.011). Most (63%) reported mild to significant improvement in their QOL since repair. Median HerQLes score was 38 (12-72) (12 indicating no reduction in QOL from hernia, 72 indicating significant reduction). HerQLes scores were significantly worse for patients with post-operative weight gain (p=0.002), postoperative wound infection (p=0.029), and hernia recurrence (p < 0.001).

Conclusions:
This study indicates that greater QOL can be expected after IHR with STRATTICETM biologic mesh in patients who avoid postoperative wound infection, postoperative weight gain, and hernia recurrence. While a longer follow-up was associated with a higher recurrence rate, QOL was improved in most patients at a follow-up of nearly four years.