Comparison of the 3-D mesh and Sugarbaker repair for parastomal hernia: a single center experience in China

Hekai Shi, & Yan Gu

Department of General Surgery, Fudan University Affiliated Huadong Hospital, Shanghai, China

Background:
Parastomal hernias (PSH) are difficult to manage and associated with high rates of postoperative recurrence and complications. Sugarbaker and three-dimensional (3-D) mesh repair are commonly used methods for the surgical treatment of PSH. However, the efficacy and safety of these surgical techniques have not been adequately compared.

Methods:
Patients with PSH who received 3-D mesh or Sugarbaker repair at our center from August 2012 to May 2023 were included. We retrospectively analyzed their demographic data and postoperative outcomes. The primary outcome measure was the recurrence rate at 1-year follow-up.

Results:
A total of 86 patients were enrolled, involving 53 in the 3-D mesh (62%) group and 33 in the Sugarbaker (38%) group (Fig.1). Most cases (73%) involved were the laparoscopic approach. The recurrence rate at 1-year follow-up was 15% (eight cases) in the 3-D mesh group and 24% (eight cases) in the Sugarbaker group, with no statistical significance (P = 0.29; Table 1). Additionally, no differences were observed between the 3-D mesh and Sugarbaker groups in the length of hospitalization or in short- and long-term complications.

Conclusion:
Sugarbaker and 3-D mesh repair have similar clinical efficacy in the surgical treatment of PSH. Further randomized controlled trials are required to confirm these results.

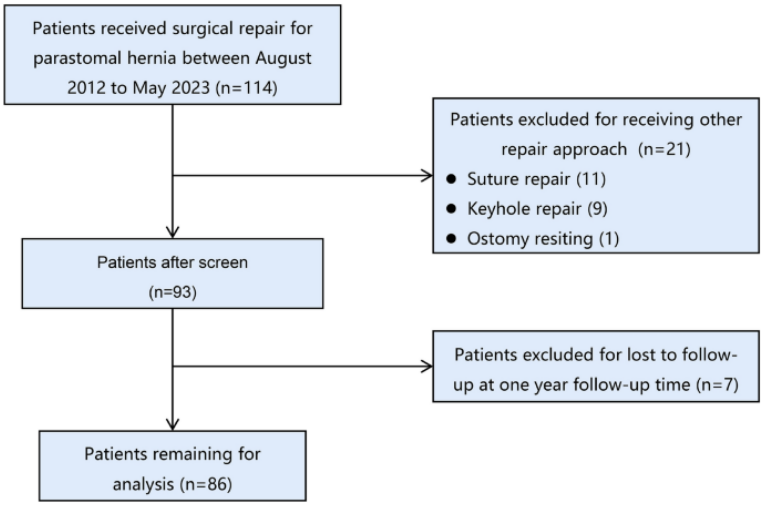

Fig. 1 Flow chart of patient selection

Table 1 Baseline characteristics, intraoperative and postoperative variables of included patients with parastomal hernia.

Variables	3-D mesh (N =53)	Sugarbaker (N =33)	*P* value
Age (years), mean (SD)	68.4±9.4	69.8±7.8	0.47
Colostomy	52 (98%)	27 (82%)	0.02
Previous parastomal hernia repair, n (%)	3 (6%)	5 (15%)	0.28
Intraoperative and postoperative variables			
Operation duration (min), median (IQR)	170 (53)	161 (72)	0.91
Clavien-Dindo III- IV in 1 year, n (%)	0	2 (6%)	0.14
1 year recurrence, n (%)	8 (15%)	8 (24%)	0.29