

Suture repair versus mesh repair in elderly populations with incarcerated or strangulated groin hernia

Hekai Shi, & Yan Gu

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

Background:

Tension-free hernia repair is the gold standard for groin hernia repair. However, the optimal surgical treatment for incarcerated or strangulated groin hernia in elderly populations is controversial. The aim of this study was to compare the clinical efficacy of mesh repair and suture repair in the treatment of incarcerated or strangulated groin hernia in elderly patients.

Methods:

Patients ≥ 65 years who underwent urgent surgical repair for incarcerated or strangulated groin hernia from January 2012 to June 2022 were included. Patients' demographic data and postoperative outcomes were retrospectively analyzed. Patients with limited life expectancy * were screened from the elderly population for subgroup analysis.

Results:

A total of 103 patients (median age: 84 years old, range 65–96; mean follow-up time: 36.8 ± 24.8 months; Fig.1) were included, involving 42 cases in the suture repair group and 61 cases in the mesh repair group. Suture repair and mesh repair had similar lengths of ICU and hospital stay, and rates of small bowel resection, chronic pain, surgical site infection, and surgical-related death. However, suture repair had a significantly higher recurrence rate than mesh repair (7% vs. 2%, $P = 0.04$; Table 1). In our subgroup analysis, for patients with limited life expectancy (41 patients; median age: 88 years old, range: 80–96), suture repair had no statistical difference in postoperative outcomes compared with mesh repair.

Conclusion:

Mesh repair is suitable for elderly patients with acutely incarcerated or strangulated groin hernias. However, for elderly patients with limited life expectancy, suture repair and mesh repair showed similar clinical outcomes.

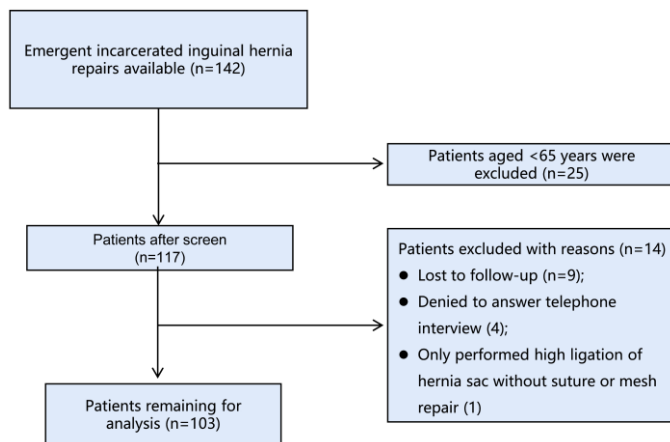


Fig. 1 Flow chart of patient selection

Table 1 Baseline characteristics, intraoperative details and postoperative outcomes of elderly patients with incarcerated groin hernia

Variables	Suture repair group (N = 42)	Mesh group (N = 61)	P value
Age (years)	81 (13)	81 (15)	0.80
ASA class >2 , n (%)	19 (45%)	27 (44%)	0.92
Intraoperative variables			
Open surgery, n (%)	42 (100%)	54 (88.6%)	0.06
Operation duration (min)	108 (36)	110 (40)	0.54
Outcomes			
Mean follow-up (months)	34.76 ± 24.17	38.21 ± 25.38	0.49
Any complication, n (%)	18 (43%)	19 (31%)	0.22
Recurrence, n (%)	7 (17%)	2 (3%)	0.04

* Limited life expectancy was defined as (1) patients with metastasis malignant tumor; (2) patients ≥ 80 years old with ASA grade ≥ 3 ; (3) patients ≥ 80 years old with possibility of bowel necrosis.