

Fibrin glue versus staple for mesh fixation in laparoscopic transabdominal preperitoneal repair of inguinal hernia: a meta-analysis and systematic review.

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Abstract:

Background: The aim of this study was to compare outcomes of mesh fixation using fibrin glue versus staple in laparoscopic transabdominal preperitoneal (TAPP) repair of inguinal hernia.

Methods and procedures: Database searches were carried out in PubMed, Embase, Cochrane Library, Web of Science and Cochrane databases until February 2016 using specific search terms.

Studies which compared fibrin glue and staple for mesh fixation in laparoscopic transabdominal preperitoneal repair of inguinal hernia were enrolled. Outcomes, including inguinal hernia recurrence, chronic inguinal pain, seroma or hematoma formation and operating time, were measured. **Results:** Four randomized controlled trials (RCTs, 430 patients) and six non-randomized controlled trials (non-RCTs, 8637 patients) were analyzed. Meta-analysis of the four RCTs showed no significant difference in hernia recurrence (OR 2.10, 95 % CI 0.61, 7.22), seroma or hematoma formation (OR 0.55, 95 % CI 0.27, 1.14) and operating time (SMD 0.80, 95 % CI -0.34, 1.94).

Similarly, there was no significant difference in most of the outcomes of the six non-RCTs.

Conclusions: Our meta-analysis and systematic review shows that the use of fibrin glue fixation may provide an alternative approach to staple fixation in TAPP inguinal hernia repair without increasing the postoperative morbidity. Large-scale RCTs with long-term follow-up are still needed to further assess postoperative outcomes such as chronic pain and disease recurrence.

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