

Staple versus fibrin glue fixation in laparoscopic total extraperitoneal repair of inguinal hernia: A systematic review and meta-analysis.

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Abstract:

Background Fixation of mesh is typically performed to minimize risk of recurrence in laparoscopic inguinal hernia repair. Mesh fixation with staples has been implicated as a cause of chronic inguinal pain. Our study aim is to compare mesh fixation using a fibrin sealant versus staple fixation in laparoscopic inguinal hernia and compare outcomes for hernia recurrence and chronic inguinal pain.

Methods and procedures PubMed was searched through December 2010 by use of specific search terms. Inclusion criteria were laparoscopic total extraperitoneal repair inguinal hernia repair, and comparison of both mesh fibrin glue fixation and mesh staple fixation. Primary outcomes were inguinal hernia recurrence and chronic inguinal pain. Secondary outcomes were operative time, seroma formation, hospital stay, and time to return to normal activity. Pooled odds ratios (OR) were calculated assuming random effects models.

Results Four studies were included in the review. A total of 662 repairs were included, of which 394 were mesh fixed by staples or tacks, versus 268 with mesh fixed by fibrin glue. There was no difference in inguinal hernia recurrence with fixation of mesh by staples/tacks versus fibrin glue [OR 2.13; 95% confidence interval (CI) 0.60-7.63]. Chronic inguinal pain (at 3 months) incidence was significantly higher with staple/tack fixation (OR 3.25; 95% CI 1.62-6.49). There was no significant difference in operative time, seroma formation, hospital stay, or time to return to normal activities.

Conclusions The meta-analysis does not show an advantage of staple fixation of mesh over fibrin glue fixation in laparoscopic total extraperitoneal inguinal hernia repair. Because fibrin glue mesh fixation with laparoscopic inguinal hernia repair achieves similar hernia recurrence rates compared with staple/tack fixation, but decreased incidence of chronic

inguinal pain, it may be the preferred technique. © Springer Science+Business Media, LLC 2011.