

Mesh fixation methods and chronic pain after transabdominal preperitoneal (TAPP) inguinal hernia surgery: a comparison between fibrin sealant and tacks.

Authors: Andresen K., Fenger A.Q., Burcharth J., Pommergaard H.-C., Rosenberg J.

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Abstract:

Introduction: Mesh fixation techniques have been associated with pain after groin hernia surgery. The aim of this study was to compare fibrin sealant and tacks for mesh fixation in laparoscopic inguinal hernia repair regarding long-term persistent pain. Methods: Through the Danish Hernia Database, we identified patients operated for groin hernia using the transabdominal preperitoneal laparoscopic technique (TAPP) from 2009 to 2012 with fibrin sealant for mesh fixation. These were matched in a ratio of 1:2 with patients operated with TAPP using tacks. All patients were sent a validated questionnaire (the inguinal pain questionnaire) between March 2013 and June 2014. The primary outcome was pain at follow-up. Results: A total of 1421 patients (84% males) answered the questionnaire (34% fibrin sealant, 66% tacks). The median follow-up was 35 months (range 12-62). Preoperative pain was associated with postoperative pain ($p < 0.005$), which was confirmed by multivariate analysis (OR 1.57 (CI 95% 1.40-1.77)). Furthermore, male gender was protective against postoperative pain (OR 0.47 (CI 95% 0.29-0.74)). A total of 18% in the fibrin sealant group and 20% in the tacks group reported pain during the past week at follow-up, and 6 and 7% reported pain not possible to ignore ($p = 0.44$). No difference was found between the fixation methods regarding getting up from a chair, sitting, or standing for more than 30 min, walking up stairs, driving a car, doing exercise, or the need for postoperative analgesics or postoperative sick leave (all $p > 0.20$). Conclusion: Mesh fixation technique did not affect long-term persistent pain. A large number of patients reported persistent pain regardless of mesh fixation technique, which emphasizes the

need for preoperative information. Preoperative pain was a risk factor for persistent pain, whereas male gender was protective.

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