

Use of human fibrin glue (Tissucol) versus staples for mesh fixation in laparoscopic transabdominal preperitoneal hernioplasty: a prospective, randomized study.

Authors: Lovisetto F, Zonta S, Rota E, Mazzilli M, Bardone M, Bottero L, Faillace G, Longoni M

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Abstract:

OBJECTIVE: The aim of this study was to compare the morbidity of fixation of prosthetic meshes using Tissucol fibrin glue versus staples in laparoscopic transabdominal preperitoneal (TAPP) repair of inguinal and femoral hernias.

SUMMARY BACKGROUND DATA: In patients undergoing laparoscopic hernia repair, fixation of mesh prostheses with staples may affect inguinocrural nerves causing early postoperative neuralgia and chronic neuralgia.

METHODS: Between June 2003 and February 2005, 197 patients with inguinal or femoral hernia were enrolled in this prospective, randomized study, to assess morbidity following hernia repair with staples (n = 98) or Tissucol (n = 99). The primary outcomes were early postoperative and late neuralgia recorded using a visual analog scale (VAS). The effects of neuralgia on functional status were evaluated using the modified SF-36 questionnaire. Secondary outcomes included complications such as nonspecific pain and recurrence.

RESULTS: Assessments took place at 1, 3, 6, and 12 months, with all patients completing each follow-up visit. Mean VAS scores were significantly lower in the Tissucol group versus the staples group (MANOVA, $P < 0.05$). Higher scores for the modified SF-36 questionnaire at 1 month were

demonstrated in the Tissucol group compared with the staples group (23.2 and 22.6, respectively; $P < 0.05$). The mean recovery time for normal physical activity was significantly shorter in the Tissucol group compared with the staples group (7.9 vs. 9.1 day, respectively; $P < 0.001$). One recurrence was seen in the fibrin glue group, which was attributable to a technical error in fixation of the mesh.

CONCLUSIONS: The use of Tissucol provides distinct advantages in laparoscopic treatment of inguinal/femoral hernias compared with conventional TAPP, including a lower incidence of postoperative neuralgia and an earlier resumption of physical and social activities.