

Beneficial effects of fibrin glue (Quixil) versus Lichtenstein conventional technique in inguinal hernia repair: A randomized clinical trial.

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Publication Date: 2014

Abstract:

Introduction: In inguinal hernia repair, many complications are due to mesh fixation technique. Therefore, new types of atraumatic methods of fixation have been proposed. In this article, we present the results of a prospective multicentric parallel randomized controlled trial aiming to compare two mesh fixation techniques: fibrin sealant (QUIXIL, Omrix Biopharmaceuticals S.A., Belgium) and Lichtenstein technique. Method: Adult patients with primary uncomplicated inguinal hernia were randomized in two groups: fibrin sealant group (FSG) and Lichtenstein group (LTG). The two groups underwent a follow-up of 15 months. Operative time is the primary outcome. Intraoperative and postoperative outcomes were analyzed. Moreover, a differential cost analysis was performed. Patients and evaluators (with exception of the surgeon who treated the patient) were blinded. Results: A total of 102 patients, 50 in FSG and 52 in LTG, were enrolled from January 2009 to June 2010, and two patients were lost to follow-up at the twelfth month. No significant differences in baseline and clinical characteristics were observed in the two groups. Operative time was longer in LTG (median/ interquartile range: 35 min/30-42.5 min vs. 31 min/28-35 min; effect size: 0.65/95 % CI 0.50-0.91; $p < 0.05$). No differences in intraoperative complications were observed. No significant differences were observed in early complication rate (RR = 0.62; $p > 0.05$). Numbness rate was lower in the FSG at 1 week (RR = 0.43; $p < 0.01$) and at 1 month (RR = 0.17; $p < 0.05$). No significant differences were observed after 6 months. Postoperative pain was lower in

the FSG at 1 week (0/0-1 vs. 1/0-2; $p < 0.05$) and at 1 month (0/0-0 vs. 0/0-1; $p < 0.05$). Pain disappeared in all patients after 6 months. Analgesic assumption rate was lower in the FSG (RR = 0.42; $p < 0.05$). Twenty per cent of FSG and 9.62 % of LTG patients were discharged within 12 h; 78 % of FSG and 90.38 % of LTG patients were discharged within 24 h. The only one recurrence we observed was in FSG group. About costs, although fibrin sealant needed for one mesh fixation is about 10 times more costly than the needed sutures, the total costs of the two procedures did not change significantly. This was mainly due to reduction in operative time. Conclusions: The use of fibrin sealant determined a significant reduction in short-term numbness rate and postoperative pain. There was no relevant difference in total costs per patient between the two procedures. © 2012 Springer-Verlag France.