Fibrin sealant versus mechanical stapling for mesh fixation during endoscopic extraperitoneal inguinal hernioplasty: A randomized prospective trial.

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Abstract:

Objective: To compare the clinical outcome of simultaneous bilateral endoscopic totally extraperitoneal inguinal hernioplasty (TEP) using fibrin sealant (FS) and mechanical stapling for prosthetic mesh fixation. Summary Background Data: Similar efficacy of FS and mechanical stapling for mesh fixation has been demonstrated in a swine model, but no clinical trial has been conducted to compare the outcomes of TEP using these 2 fixation devices. FS adheres the prosthetic mesh without causing injury to the underlying structures. Whether the application of FS improves early postoperative outcomes, namely, reduction of postoperative pain and seroma formation, has not been examined. Patients and Methods: Between July 2002 and February 2004, a total of 93 patients with 186 inguinal hernias who underwent bilateral TEP were randomized to have mesh fixation by either FS (n = 46) or mechanical stapling (n = 47). The primary endpoints were severity of pain, analgesic requirement, and incidence of seroma. Secondary endpoints were length of hospital stay, number of days required to resume normal outdoor activities and work, recurrence rate, and incidence of chronic pain. Results: The 2 groups were comparable in age, sex, and types of hernia. TEP were successfully performed in all patients. The FS group consumed significantly less analgesics compared with that of the staple group (P = 0.034). There was no significant difference in the postoperative pain score at rest and on coughing from the day of operation to postoperative day 6 between the groups. The incidence of seroma was significantly higher in the FS group (17.4%) than the staple group (5.3%) (P = 0.009). Length of hospital stay and time taken to resume normal

activities and work were comparable between the 2 groups. With a median follow-up of 1.2 years, no recurrent hernia has been detected in either group, but the incidence of chronic pain in the staple group (20.0%) was higher than that of the FS group (13.2%) (P = 0.418). Conclusions: This randomized prospective clinical trial demonstrated a significant reduction of analgesic consumption by using FS for mesh fixation during bilateral TEP, but it was associated with an increased incidence of postoperative seroma.