

Initial experience with the use of fibrin sealant for the fixation of the prosthetic mesh in laparoscopic transabdominal preperitoneal hernia repair.

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Abstract:

INTRODUCTION: Laparoscopic inguinal hernia repair offers more rapid recovery and less pain than with the traditional open approach. However, injury to the nerves of the lumbar plexus with subsequent chronic pain or neuralgia has a reported incidence of 2% during laparoscopic hernia repair, particularly when the transabdominal preperitoneal technique (TAPP) is used. These complications are inherent to the use of staples for fixation of the mesh. To avoid nerve irritation, we considered the use of fibrin sealant for the fixation of the mesh instead of staples. The aim of this study was to evaluate this technique and to compare the short-term follow-up of these patients with patients who underwent the staple repair technique. This is the first reported use of fibrin sealant in laparoscopic TAPP hernia repair. **METHOD:** Between September and November 2004, we performed 17 consecutive laparoscopic hernia repairs (TAPP) in 14 patients (3 bilateral hernias) with primary hernias. The prosthetic mesh was fixed (10 x 15 cm) with 1 ml fibrin. The fibrin was applied using a special laparoscopic applicator. The peritoneum was closed with absorbable sutures. The postoperative course of these patients was compared with a cohort of matched patients who received the traditional staple fixation of the prosthetic mesh. **RESULTS:** Patients were evaluated at a median follow-up of 10.4 months (3.8-16.0 months). All patients underwent postoperative physical examinations. No recurrent hernia was found. There were 2 seromas and one hematoma in the stapled group. In the stapled group, one patient had pain in the area of the lateral femoral cutaneous nerve. There was no postoperative complication in the non-stapled group.

CONCLUSION: Fibrin fixation of the mesh during laparoscopic transabdominal preperitoneal inguinal hernia repair is feasible without higher risk of recurrences. In addition the fibrin fixation method may decrease postoperative neuralgia and reduce the incidence of postoperative seromas and hematomas.