AS35-1

Review of 1000 Lichtenstein Inguinal Hernia repair and comparison of suture materials for mesh fixing

Suresh Raman, Jeevan M Krishnan, Venugopalan R
General Surgery, Kerala Government Health Services, India

Introduction: Lichtenstein hernia repair, technique for decades. Assessment significant in formulating strategies in reducing complications like inflammation, infection, recurrence and type of suture to use.
Objectives: 1) To compare post operative pain, inflammation, acceptance using 00 and 000 polypropylene sutures. 2) To assess prevalence of post operative inflammation, sinus formation, mesh rejection, recurrence.
Methodology: 1000 inguinal hernia repairs done as Lichtenstein described (937 male, 63 female) over a period of five year using 00 and 000 poly propylene (500 cases each) to fix mesh. Variables of post operative pain, post operative inflammation, chronic sinus formation, mesh rejection assessed for both group. Evaluation chart is attached to case record to record variables each day for 5 post operative days, two weeks, 4 weeks, 6 months and one year. Data obtained from 1000 cases operated compiled after five years.
Results: First post operative day no complaint of pain among 56% cases used with 000 suture and 38% with 00 suture. Sevier signs of inflammation 11% with 00 and 8% with 000. No foreign body sensation, for 82% with 000 and 60% with 00. Sinus formation .4% and .2%. Mesh rejection .2% for both. Recurrence .4%
Conclusion: Post operative pain inflammation and discomfort were less with 000 pp than 00 sutures for fixing. Infection rate same for both, sinus formation more with 00 sutures. 3 Recurence - faulty technique.

AS35-2

Personal experience of Lichtenstein tesion-free inguinal hernia repair

Fujio Katsumoto
Department of Surgery, Katsumoto Day Surgery Clinic, Japan

4126 cases of adult Lichtenstein tension-free inguinal hernia repairs were performed for 11 years since 2005 at Katsumoto Day Surgery Clinic under local anesthesia with sedation. 97.1% of those patients left the clinic on the same day, moreover, the reinstatement day following surgery was 2.8 days on the average. Patients can safely undergo inguinal hernia repair without cessation of anticoagulant and antiplatelet therapy, and ASA grade 3 hernia patientsu may be appropriate for ambulatory inguinal hernia repair. The Lichtenstein tension-free inguinal hernia repair under local anesthesia with sadation can apply to all the groin hernia patients, especially for ambulatory surgery at out-standing clinic.

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NBCA (n-butyl-2-cyanoacrylate) medical adhesive for mesh fixation in inguinal herniorrhaphy (Lichtenstein, TAPP or TEP)

Ying-mo Shen, Jie Chen, Shuo Yang
Department of Hernia and Abdominal Wall Surgery, Beijing Chao-Yang Hospital, Capital Medical University, China

Objective: Although the mesh fixation with non-absorbable synthetic suture has been adopted, it is disadvantaged by the large number of stitches and an increased incidence of complications such as postoperative pain, chronic pain, and hematoma or hydrops formation. With the aim of reducing these complications, some researchers have adapted medical adhesives in tension-free herniorrhaphy and have achieved satisfactory results. We conducted this study using a novel lightweight polypropylene mesh that has been proven to be associated with fewer complications for inguinal herniorrhaphy to imply the effectiveness of n-butyl-2-cyanoacrylate (NBCA) glue for mesh fixation in Lichtenstein repair and laparoscopic herniorrhaphy for inguinal hernias.
Methods: A total of 2,136 patients with primary unilateral inguinal hernia were included. NBCA adhesive was used in 893 cases of Lichtenstein repair and 1,243 cases of laparoscopic repair (TAPP or TEP) for the mesh fixation. Operation time, postoperative length of stay, visual analogue scale (VAS) score, incidence of chronic pain and hematoma, and recurrence were evaluated.
Results: The operative time was 36.2±10.3 min and the postoperative length of stay was 1.2±0.6 d. The minimum follow-up was 24 months, there were no recurrence or wound infection. The postoperative VAS score was 1.6±0.7, there was no chronic pain occurred. Thirteen (1.5%) hematomas occurred in the open group and 17 (1.4%) cases occurred in the laparoscopic group.
Conclusions: Application of chemical medical adhesive in tension-free herniorrhaphy for inguinal hernia appears to be a safe and effective approach.

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Sutureless repair of inguinal hernias by mesh plug with comparison to a single stitch

Yuki Sunagawa, Takehiro Hachisuka, Masahiro Matsuno, Naoya Takeda, Masato Shizuku, Yasuhito Suenaga, Kazuki Sakata, Masashi Hattori, Hitoshi Teramoto, Toshio Shikano, Keisuke Hattori, Yutaka Mizuno, Hirotaka Maruyama, Toshihiro Mori
Department of Surgery, Yokkaichi Municipal Hospital, Japan

Background: The plug method is one of the most widespread methods for repairing inguinal hernias. In 1992 and 1997, Gilbert et al. reported on sutureless repair of inguinal hernias using the plug method; however, this method has not spread due to a high rate of hernia recurrence. Currently, the understanding of the anatomical structures in groin has progressed, and the tissue compatibility of hernia meshes has dramatically improved. Therefore, we attempted sutureless repair of inguinal hernias.
Methods: The enrolled subjects, who were relatively sedentary and aged 70 years or older, had indirect inguinal hernias with hernia orifices 3 cm in size. For the repair, we used a Light PerFix Plug, which has high tissue compatibility. High dissection of the hernia sac was completed by detachment at the entire periphery of the transversalis fascia and superficial preperitoneal fascia, and subsequently, the plug was inserted without any sutures. Patients younger than 70 years underwent suture fixation using only a single stitch.
Results: In the 52 cases, from 20122014, no recurrence was observed. Additionally, no significant complications resulting in delayed hospital discharge were observed. A post-operative questionnaire yielded favorable results. In addition, similarly good outcomes were obtained in the 168 cases in which repair by single-stitch fixation was performed.
Conclusion: Sutureless repair is a useful method that avoids tissue damage and tissue tension caused by stitches. In our study, we obtained favorable short- and long-term results for sutureless repair by using precise surgical technique with recognition of the involved anatomical layers.

AS35-5

Use of self-gripping mesh in Lichtenstein hernioplasty compared to the sutured mesh: A systematic review and meta-analysis

Cui-hong Jin, Ming-gang Wang, Jie Chen
Department of Hernia and Abdominal Wall Surgery, Beijing Chao-Yang Hospital, Capital Medical University, China

Background: Lichtenstein repair is the most commonly used technique for open inguinal hernia. However, mesh fixation with sutures to avoid dislocation has been considered as a cause for chronic pain and discomfort. The self-gripping mesh has been explored for some time as a strategy to solve this problem. Previous studies have come to different conclusions about the superiority of one method over another. Therefore, we conducted a meta-analysis to determine the totality of evidence regarding the postoperative pain and other outcomes in using self-gripping mesh when compared to sutured mesh in inguinal hernioplasty.
Methods: Studies published up to June 2016 were searched using PubMed, EMBASE, MEDLINE, Cochrane Library. Inclusion criteria were studies comparing self-gripping mesh and sutured mesh in patients undergoing Lichtenstein inguinal hernia repairs. Mean differences (MDs) were derived from continuous outcomes and pooled odes ratios (ORs) for categoric outcomes.
Results: Eleven studies were selected, with a total of 2,154 patients. Self-gripping mesh for open inguinal hernioplasty reduced chronic groin pain (OR=0.68, 95%CI: 0.50 to 0.92) and duration of operation (MD=-9.18, 95%CI: -11.05 to -7.31,). There was no statistical difference in the hematoma or seroma (OR=0.98, 95%CI: 0.71 to 1.37), wound infection (OR=0.61, 95%CI: 0.37 to 1.02) and recurrence (OR=0.60, 95%CI: 0.25 to 1.44).
Conclusion: When compared with conventional sutured mesh in Lichtenstein technique, the self-gripping mesh had advantages in reducing chronic pain and operative time, without increasing other postoperative complications.