

Comparison of open and laparoscopic varicocelectomies in terms of operative time, sperm parameters, and complications

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Abstract

Introduction: Varicocele is one of the most common causes of infertility. In this study, we evaluated and compared the operative time, sperm analysis results, and complications of three different methods of open and laparoscopic varicocelectomies. **Materials and Methods:** From among all bilateral varicocelectomies in our center, we randomly selected 30 of each following cases: laparoscopic varicocelectomy, open subinguinal varicocelectomy under general anesthesia, and open subinguinal varicocelectomy under local anesthesia. We compared the operative time, sperm analysis results, and complications between these three groups. **Results:** The mean operative times were 30.0 ± 9.0 minutes for laparoscopies, 27.0 ± 3.0 minutes for open varicocelectomies under general anesthesia, and 28.0 ± 1.8 minutes for open varicocelectomies under local anesthesia ($P = .02$). Intra-operative complications occurred only in the laparoscopic group, and postoperative complications were seen in 22.2%, 20.0%, and 4.2% of the patients with laparoscopy, open surgery under general anesthesia, and open surgery under local anesthesia, respectively. Semen analysis did not show any significant changes after varicocelectomy except for a slight improvement of sperm morphology in patients who underwent open varicocelectomy under local anesthesia. **Conclusion:** Subinguinal varicocelectomy under local anesthesia is better than laparoscopic method in terms of recurrence, hydrocele formation, and operative time. Subinguinal method under general anesthesia has intermediate efficacy regarding less complications than laparoscopic method and shorter operative time than the two other methods.

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