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Totally Extraperitoneal (TEP) Inguinal Hernia Repair with the use of mini-laparoscopic instruments

Abstract

Inguinal hernia is one of the most frequent surgical diseases worldwide. The repair can be done with open or minimally invasive methods. There seems to be a superiority of the minimal invasive techniques, regarding the postoperative pain and patient mobilization. In an effort to further improve the results of minimally invasive surgery, the use of mini-laparoscopic instruments in Totally Extraperitoneal Repair (TEP) has been proposed. We present the retrospective results of a prospectively collected observational cohort study, which reflects our experience in performing TEP with use of mini-laparoscopic instruments, for the repair of inguinal hernias.

Material & Methods

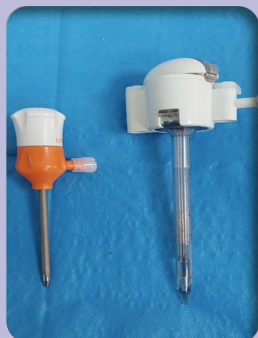
From April 2023 to April 2024, 30 consecutive patients had TEP with mini-instruments. 26 men and 4 women, with mean age $58,2 \pm 20,8$ years. 18 hernias were unilateral and 12 bilateral. 3 patients had previous prostatectomy, 1 patient had cesarean section, 2 patients had appendectomy, while 3 were recurrences. The only exclusion criteria was large scrotal hernias. The recorded data were prospectively collected and they were intraoperative (e.g. operative time, conversions) and postoperative data (length of stay, postoperative pain, postoperative mobilization, cosmetic result). The patients rated pain using numerical scale (0: no pain, 1-3: mild, 4-6: moderate, 7-9: severe, 10: worst pain possible). The cosmetic result was rated as excellent, good, moderate, bad. Patients were evaluated on discharge, 10th post-operative day, 3 and 6 months post-operatively.

Results

The median operative time was $48,5 \pm 31,5$ minutes for unilateral and $84,8 \pm 22,4$ minutes for bilateral hernias. No conversions and no intra-operative complications were recorded. 53,3% of the patients were discharged the same day and 46,7% the next day. 80% of the patients rated the postoperative pain as mild and 20% as moderate. All patients rated the cosmetic result as excellent.

Conclusions

Our data agree with relative published data and confirm that TEP with mini-laparoscopic instruments is feasible and safe. Mini-laparoscopic instruments, due to their smaller size, are very useful in TEP inguinal repair, where the working space is limited. Additionally, no training is required, since the procedure itself remains the same. On the other hand, the surgical trauma is furthermore minimized, which is translated in less pain, even faster recovery and excellent cosmetic results. The application of mini-laparoscopic surgery is a meaningful technical approach and further study is necessary.



Mini-lap
instruments
vs
classic lap
instruments

