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Comparative Evaluation of Endovideosurgical and Open Prosthetic Hernioplasty Techniques in the Treatment of Inguinal Hernias

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Relevance of the Topic. Inguinal hernias remain one of the most common surgical pathologies worldwide, with a high incidence across all age groups. The development of endovideosurgical techniques has revolutionized hernia repair by offering less invasive, safer, and more effective alternatives to traditional open surgery. Prosthetic hernioplasty using mesh implants via laparoscopic access significantly reduces postoperative pain, shortens recovery time, and lowers the risk of recurrence. However, the choice of technique, type of prosthesis, and approach (TAPP vs. TEP) still require careful evaluation to optimize outcomes. Therefore, studying the specific features and advantages of endovideosurgical prosthetic hernioplasty is highly relevant for improving the quality of surgical care in patients with inguinal hernias.

Materials and Methods. The study included 98 patients diagnosed with inguinal hernias who underwent surgical treatment between 2021 and 2024. The patients were divided into two groups: the main group (n=52) underwent endovideosurgical prosthetic hernioplasty using laparoscopic techniques (TAPP or TEP), while the comparison group (n=46) received conventional open mesh hernioplasty. All patients were evaluated preoperatively and postoperatively using standardized clinical criteria, including pain intensity (VAS scale), duration of hospital stay, complication rate, and time to return to daily activities. Follow-up was conducted over a 6-month period to assess long-term outcomes and recurrence rates.

Results and Discussion. The analysis of clinical outcomes showed that patients in the main group who underwent endovideosurgical prosthetic hernioplasty experienced significantly better postoperative recovery compared to the comparison group. Pain intensity on the first postoperative day was 40% lower in the laparoscopic group (mean VAS score 2.6 vs. 4.3), and the average hospital stay was reduced by 2.1 days. Early postoperative complications, such as hematoma and wound infection, were observed in 7.7% of patients in the main group versus 17.4% in the open surgery group. Additionally, the time to return to normal physical activity was shorter in the laparoscopic group, and no cases of hernia recurrence were recorded during the 6-month follow-up, compared to two cases in the open surgery group. These results highlight the clinical advantages of endovideosurgical techniques in the treatment of inguinal hernias.

Conclusion. The study confirms that endovideosurgical prosthetic hernioplasty offers significant advantages over traditional open techniques in the surgical treatment of inguinal hernias. Minimally invasive approaches are associated with reduced postoperative pain, shorter hospital

stays, lower complication rates, and faster recovery, without increasing the risk of recurrence. These findings support the broader adoption of laparoscopic methods, such as TAPP and TEP, as effective and patient-friendly options for inguinal hernia repair, contributing to improved surgical outcomes and enhanced quality of life for patients.