

MESH HERNIOPLASTY IN INGUINAL HERNIA: ROLE OF CLOSED SUCTION DRAIN IN PREVENTING POSTOPERATIVE COMPLICATIONS

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ABSTRACT

Background: Inguinal hernia repair is one of the most commonly performed surgical procedures in general surgery. Lichtenstein tension-free mesh hernioplasty is widely accepted because of its low recurrence rate and favorable postoperative recovery. However, complications such as seroma, hematoma, wound infection, and scrotal edema may still occur.

Aim: To evaluate the effectiveness of closed suction drain placement in reducing postoperative complications following inguinal mesh hernioplasty.

Materials and Methods: This prospective comparative study was conducted from 01/10/2024 to 30/06/2025. A total of 100 patients undergoing elective Lichtenstein mesh hernioplasty were included in the study.

Results: Seroma and hematoma formation were lower in the drain group compared to the non-drain group.

Conclusion: Selective use of closed suction drains may reduce postoperative complications following mesh hernioplasty.

Keywords: *Inguinal hernia, Mesh hernioplasty, Lichtenstein repair, Closed suction drain, Seroma, Hematoma*

INTRODUCTION

Inguinal hernia is among the most commonly encountered surgical conditions worldwide and contributes significantly to the workload of general surgeons. Surgical repair remains the definitive treatment, and tension-free mesh hernioplasty described by Lichtenstein has become the preferred operative technique because of lower recurrence rates and better postoperative recovery.

Despite improvements in operative techniques and prosthetic materials, postoperative complications such as seroma, hematoma, wound infection, and scrotal edema continue to occur. These complications are commonly related to dead space formation and postoperative fluid accumulation following dissection.

AIM AND OBJECTIVES

- To compare postoperative complications in patients undergoing mesh hernioplasty with and without drain placement.
- To assess the incidence of seroma and hematoma formation.
- To evaluate postoperative recovery in both groups.

MATERIALS AND METHODS

This prospective comparative study was carried out in the Department of General Surgery from 01/10/2024 to 30/06/2025.

Inclusion Criteria

- Patients above 18 years of age
- Patients diagnosed with unilateral or bilateral inguinal hernia
- Elective cases planned for mesh hernioplasty

Exclusion Criteria

- Recurrent inguinal hernia
- Obstructed or strangulated hernia
- Immunocompromised patients
- Patients with uncontrolled diabetes mellitus

RESULTS

Out of 100 patients included in the study, 92 were males and 8 were females. Most patients belonged to the age group of 40-60 years. The incidence of postoperative seroma and hematoma was lower in patients who underwent drain placement compared to those without drain placement.

Postoperative Complication	Drain Group (n=50)	Non-Drain Group (n=50)
Seroma	2 (4%)	6 (12%)
Hematoma	1 (2%)	4 (8%)
Wound Infection	1 (2%)	2 (4%)
Scrotal Edema	2 (4%)	5 (10%)

DISCUSSION

Lichtenstein tension-free mesh hernioplasty remains the gold standard treatment for inguinal hernia because of its low recurrence rate and excellent postoperative outcomes. Nevertheless, postoperative fluid collection remains an important concern, especially in patients with large hernias and extensive dissection. In the present study, patients who underwent drain placement demonstrated a lower incidence of seroma and hematoma formation compared to patients without drains.

CONCLUSION

Closed suction drain placement after mesh hernioplasty can be beneficial in reducing postoperative seroma and hematoma formation. Selective use of drains based on intraoperative findings appears to provide better postoperative outcomes.

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