

TRANSFASCIAL SUTURES VS TACKERS IN THE REPAIR OF UMBILICAL HERNIA - A COMPARATIVE STUDY

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INTRODUCTION

The repair of abdominal wall defects can be quite challenging even for experienced surgeons. In the laparoscopic method of hernioplasty, there have been many modifications concerning the type of mesh used and methods of fixation, which have not been standardised and poorly studied. This study aims to compare immediate post-operative and long-term outcomes of laparoscopic umbilical hernioplasty when using transfascial sutures to fix the mesh.

METHODS

A total of 120 (n=120) patients underwent laparoscopic umbilical hernioplasty in the Department of General Surgery, SRIHER, between June 2021 and June 2023. All patients included in the study underwent laparoscopic intraperitoneal onlay mesh (IPOM plus) technique of hernia repair, with lightweight composite meshes, and fixation using absorbable tackers. The study population was divided into two groups, based on whether or not transfascial sutures were used to fix the mesh. In the control group (A), only absorbable tackers were used to anchor the mesh, and in the case group (B), transfascial sutures were also used in addition to absorbable tackers. Analgesics were stopped after 24 hours of surgery, or given only on demand, and thus standardised. Mesh fixation time, total operative time, post-operative pain score (visual analogue score), seroma formation, surgical site infections, duration of hospital stay, and recurrence (at 12 months) were recorded and analyzed.

RESULT

In Group A, the median operative time for mesh fixation was 14 minutes. In group B, the duration was 26 minutes. The mean surgery duration in group A was 67.7 minutes, and in group B was 78.5 minutes, which was statistically significant with a p-value of 0.005. The mean Visual Analogue Scale (VAS) for pain on POD 0 was 1.25 in group A and 3.17 in group B, which was statistically significant with a p-value of 0.0005. The VAS for pain on POD 1 was 0.37 in group A and 1.32 in group B, which was again statistically significant with a p-value of 0.0005. The VAS for pain on POD 7 was 0 in group A and 0.15 in group B, which was statistically significant with a p-value of 0.002. The VAS for pain on POD 30 was 0 in groups A and B. On post-operative day 10, the risk of seroma formation was 1.7% in group A, and 5.1% in group B, however, this was not statistically significant on analysis. The average hospital stay post-surgery in group A was 1.8 days, and in group B was 2.4 days, which was statistically significant with a p-value of 0.005. The mean follow-up time was 1 year in both groups, however, there were no cases of recurrence in either group.

CONCLUSION

Laparoscopic umbilical hernioplasty without the use of transfascial sutures is an easy and feasible approach. The use of only absorbable tacks to fix the mesh is time-saving, results in less post-operative pain, and less duration of hospital stay. However, further randomized controlled trials are required to assess the post-operative complications due to transfascial sutures and identify a standardized method of mesh fixation.

