

A Comparative Study of Different Treatment Modalities of Inguinal Hernia

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Abstract

Background: Hernia is mainly defined as a protrusion, bulge or projection of an organ or a part of an organ through the body wall that normally contains it. The present study compared different treatment modality of inguinal hernia. **Subjects and Methods:** 80 cases of lingual hernia of both genders were divided into 2 groups of 40 each. Group I patients underwent Lichtenstein's hernioplasty and group II patients underwent preperitoneal meshplasty. Parameters such as time taken for surgery, early complications were recorded. **Results:** Group I had 22 males and 18 females and group II had 25 males and 15 females. The mean time of surgery in group I was 46.2 minutes and in group II was 55.2 minutes. The early complication was seroma 2 each in group I and 1 in group II, wound infection 3 cases in group I and 2 in group II, pain 2 in group I, mesh infection 3 in group I and 1 in group II and testicular atrophy 1 in group I. The difference was significant ($P < 0.05$). **Conclusion:** Inguinal hernias were effectively managed with both techniques.

Keywords: Hernia, Inguinal, Lichtenstein Method.

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Introduction

A hernia is mainly defined as a protrusion, bulge or projection of an organ or a part of an organ through the body wall that normally contains it.^[1] Inguinal hernias account for 75% of abdominal wall hernias, with a prevalence of 1.7% for all ages and 4% for those aged over 45 years. An Inguinal hernia is a protrusion of the abdominal cavity and its contents through the inguinal canal.^[2] It is very common in men with a lifetime risk of 27% and 3% for women. Inguinal hernias account for 75% of all abdominal wall hernias with a lifetime risk of 27% in men and 3% in women. Inguinal hernias present with a lump in the groin that goes away with minimal pressure or when the patient is lying down. Most cause mild to moderate discomfort that increases with activity. A third of patients scheduled for surgery have no pain, and severe pain is uncommon (1.5% at rest and 10.2% on movement).^[3]

There have been a number of erudite reviews on the history of hernia and its treatment. The final word on surgery for hernia is yet to be heard. Today new techniques are being explored and introduced frequently in inguinal hernia surgery. Improvement in surgical techniques, together with the development of new

prosthetic materials and a better understanding of how to use them, have significantly improved the outcome for many patients.^[4]

Risk factors for developing a primary inguinal hernia are male gender and old age, a patent processus vaginalis, systemic connective tissue disorders, and a low body mass index. Lichtenstein's method of hernioplasty and preperitoneal meshplasty are commonly used methods for the management of hernia.^[5] The present study compared different treatment modality of inguinal hernia.

Subjects and Methods

The present study comprised 80 cases of lingual hernia of both genders. All were informed regarding the study and written consent was obtained.

A thorough case history was recorded and data pertaining to patients such as name, age, gender etc was recorded. Patients were divided into 2 groups of 40 each. Group I patients underwent Lichtenstein's hernioplasty and group II patients underwent preperitoneal meshplasty. Parameters such as time

taken for surgery, early complications were recorded. Results thus obtained were subjected to statistical analysis. A p-value is less than < was considered significant.

Results

[Table 1, Figure 1] shows that group I had 22 males and 18 females and group II had 25 males and 15 females.

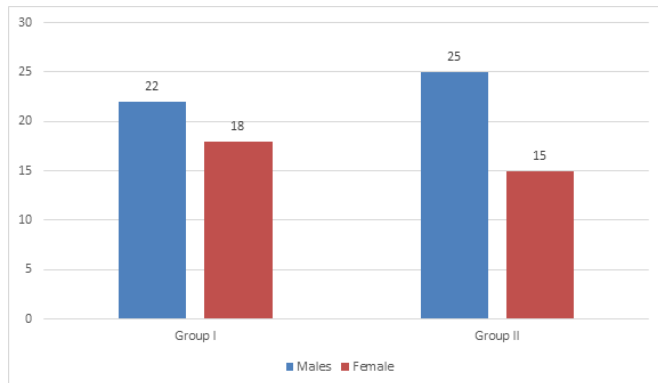


Figure 1: Distribution of patients

[Table 2, Figure 2] shows that the meantime of surgery in group I was 46.2 minutes and in group II was 55.2 minutes. Early complications were seroma 2 each in group I and 1 in group II, wound infection 3 cases in group I and 2 in group II, pain 2 in group I, mesh infection 3 in group I and 1 in group II and testicular atrophy 1 in group I. The difference was significant ($P < 0.05$).

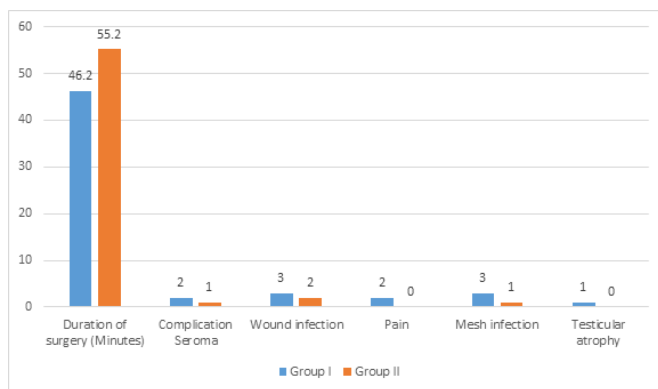


Figure 2: Comparison of parameters in both groups

Discussion

A hernia occurs when an organ pushes through an opening in the muscle or tissue that holds it in place.^[6] It is protrusions

of body parts through defects in the anatomic structures that normally contains it and are most common in the abdomen. Abdominal wall hernias are frequently encountered in surgical practice accounting for 15% - 18% of all surgical procedures.^[7] Inguinal hernias are often classified as direct or indirect, depending on whether the hernia sac bulges directly through the posterior wall of the inguinal canal (direct hernia) or passes through the internal inguinal ring alongside the spermatic cord, following the coursing of the inguinal canal (indirect hernia). However, there is no clinical merit in trying to differentiate between direct or indirect hernias.^[8] Inguinal hernia most probably has been a disease ever since mankind existed. In view of its existence in different kinds of animals, and in particular of primates, one can assume that already prehistoric human beings were affected by the disease. Inguinal hernia repair has made enormous progress throughout the ages.^[9] The main reasons for intervention however remained the same: continuous growth of the inguinal and/or scrotal swelling, the risk of incarceration of the hernia content and the bad results of conservative methods like truss placement.^[10] The present study compared different treatment modality of inguinal hernia.

In this study, a group I had 22 males and 18 females and group II had 25 males and 15 females. Fenoglio ME et al,^[11] conducted a study in which all the patients operated electively for uncomplicated inguinal hernia over a period of one year were selected for the study. They were operated by various methods and followed. There was a total of 130 cases of inguinal hernia repair during the study period. 160 cases were operated on by Lichtenstein method of hernioplasty, 17 by Preperitoneal meshplasty and 13 by TEP. Lichtenstein repair and endoscopic/laparoscopic techniques have similar efficacy. It is found that Lichtenstein’s tension-free repair is standard and cost-effective.

We found that the meantime of surgery in group I was 46.2 minutes and in group II was 55.2 minutes. The early complication was seroma 2 each in group I and 1 in group II, wound infection 3 cases in group I and 2 in group II, pain 2 in group I, mesh infection 3 in group I and 1 in group II and testicular atrophy 1 in group I. Tayshete et al,^[12] in their study a total of 25 patients scheduled to undergo elective surgery for inguinal hernia were enrolled. Only male subjects within the age range of 25 to 55 years having an uncomplicated inguinal hernia and fit for spinal anaesthesia were included in the study. Inguinal hernia repair was performed by placing mesh on the posterior inguinal wall and without applying fixation suture or glue. Sutures were removed on the 7th post-op day and all the participants were examined for complications. Mean postoperative pain among patients at 1 hour postoperatively, 6 hours postoperatively, 12 hours postoperatively, and 24 hours postoperatively was found to be 4.75, 3.66, 2.15 and 1.36 respectively. A significant reduction in postoperative pain was

Table 1: Distribution of patients

Groups	Group I	Group II
Method	Lichtenstein's hernioplasty	Preperitoneal meshplasty
M: F	22:18	25:15

Table 2: Comparison of parameters in both groups

Parameters	Group I	Group II	P-value
Duration of surgery (Minutes)	46.2	55.2	0.01
Complication Seroma	2	1	0.04
Wound infection	3	2	
Pain	2	0	
Mesh infection	3	1	
Testicular atrophy	1	0	

observed. Scrotal swelling and seroma were seen in 1 patient each.

The limitation of the study is the small sample size.

Conclusion

Authors found that inguinal hernia were effectively managed with both techniques.

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