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Original Article

Lichtenstein method of hernioplasty versus preperitoneal meshplasty in inguinal hernia management

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ABSTRACT:
Background: The present study compared hernioplasty and preperitoneal meshplasty of hernia management. **Materials & Methods:** The present study was conducted on 110 cases of lingual hernia which were divided into 2 groups of 55 each. Group I patients underwent Lichtenstein's hernioplasty and group II patients underwent preperitoneal meshplasty. **Results:** There were 30 males and 25 females in group I and 34 males and 21 females in group II. The mean time of surgery in group I was 43.2 minutes and in group II was 52.4 minutes. The difference was significant (P<0.05). Early complication were seroma 1 each in group I and II, wound infection 2 cases in group I, testicular atrophy 1 in group I, mesh infection 2 in group I and 1 in group II and post- operative pain 1 in group I and 3 in group II. The late complications were chronic pain in group I (4) and group II (1), recurrence in group I (3) and group II (2) and sinus formation 1 in group I and II. **Conclusion:** Authors found that both techniques are equally effective in management of inguinal hernia.
Key words: Hernia, Inguinal, Preperitoneal meshplasty.

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INTRODUCTION

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. 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.

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). Inguinal hernias are at risk of irreducibility or incarceration, which may result in strangulation and obstruction; however, unlike with femoral hernias, strangulation is rare.

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 (BMI). Increasing age and low BMI increase the risk of both medial and lateral hernia repairs. However, high BMI increases the intraabdominal pressure and also seems to increase the risk of developing a recurrence. The relationship probably has a risk of bias since it is easier to detect an inguinal hernia at lower BMI. Constipation does not appear to be a risk factor. Researchers have found an association to prostatic hypertrophy but it is uncertain if it truly is a risk factor. Lichtenstein method of hernioplasty and preperitoneal meshplasty are commonly used methods for management of hernia.[3] The present study compared hernioplasty and preperitoneal meshplasty of hernia management.

MATERIALS & METHODS

The present study was conducted on 110 cases of lingual hernia of both genders. Ethical clearance was taken from institutional ethical committee. All were informed regarding the study and written consent was obtained.

General information such as name, age, gender etc was recorded. Patients were divided into 2 groups of 55 each. Group I patients underwent Lichtenstein's hernioplasty and group II patients underwent preperitoneal meshplasty. Parameters such as time taken for surgery, early complications and late complications etc. were recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Groups	**Group I (55)**	**Group II (55)**
Method	**Lichtenstein's hernioplasty**	**Preperitoneal meshplasty**
Male	30	34
Female	25	21

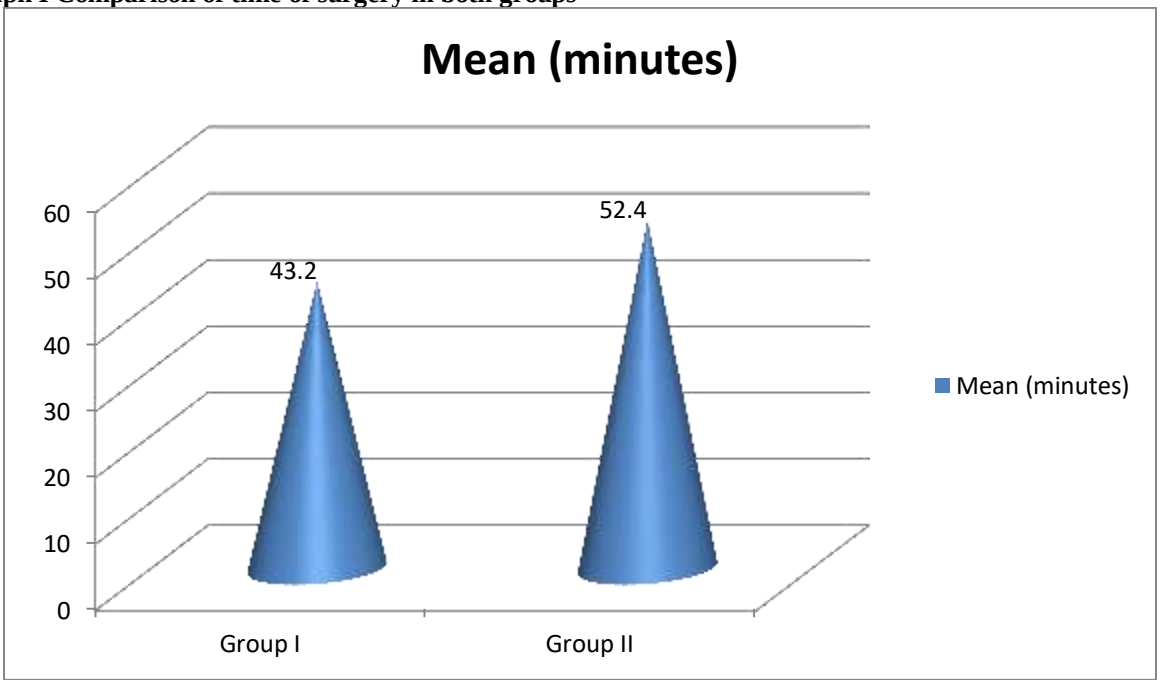
Table I shows that group I patients underwent Lichtenstein's hernioplasty and group II patients underwent Preperitoneal meshplasty. There were 30 males and 25 females in group I and 34 males and 21 females in group II.

Table II Comparison of time of surgery in both groups

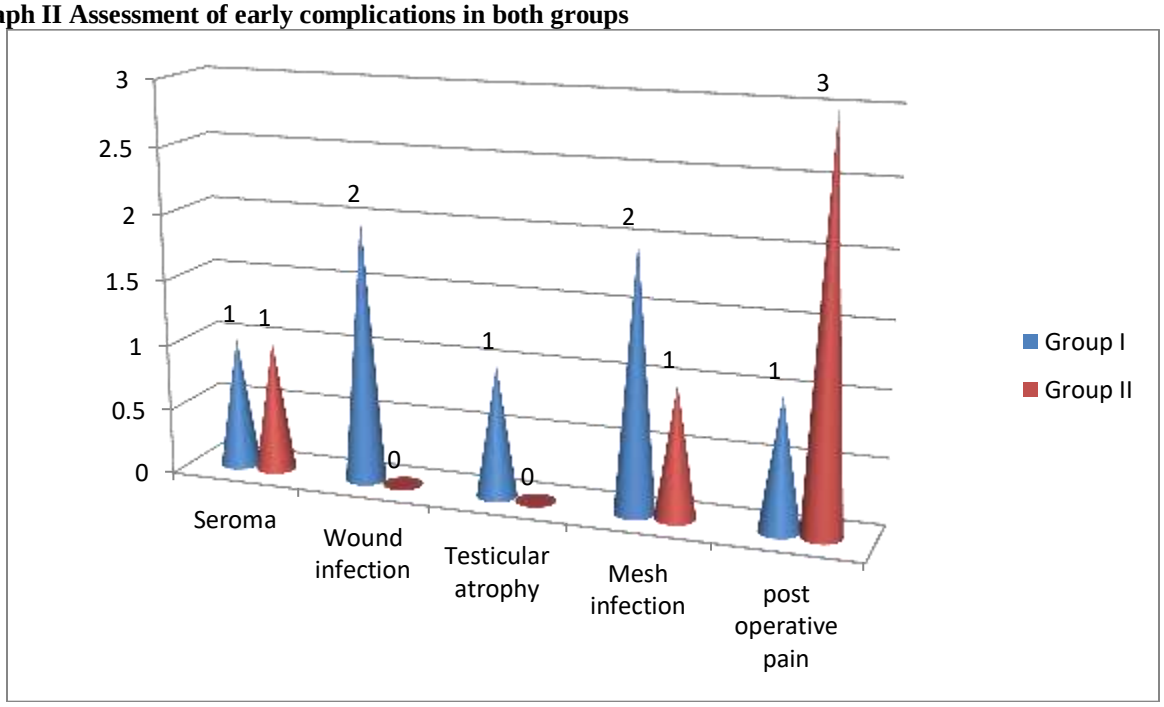
Groups	**Mean (minutes)**	**P value**
Group I	43.2	0.01
Group II	52.4	

Table II, graph I shows that mean time of surgery in group I was 43.2 minutes and in group II was 52.4 minutes. The difference was significant (P<0.05).

Graph I Comparison of time of surgery in both groups

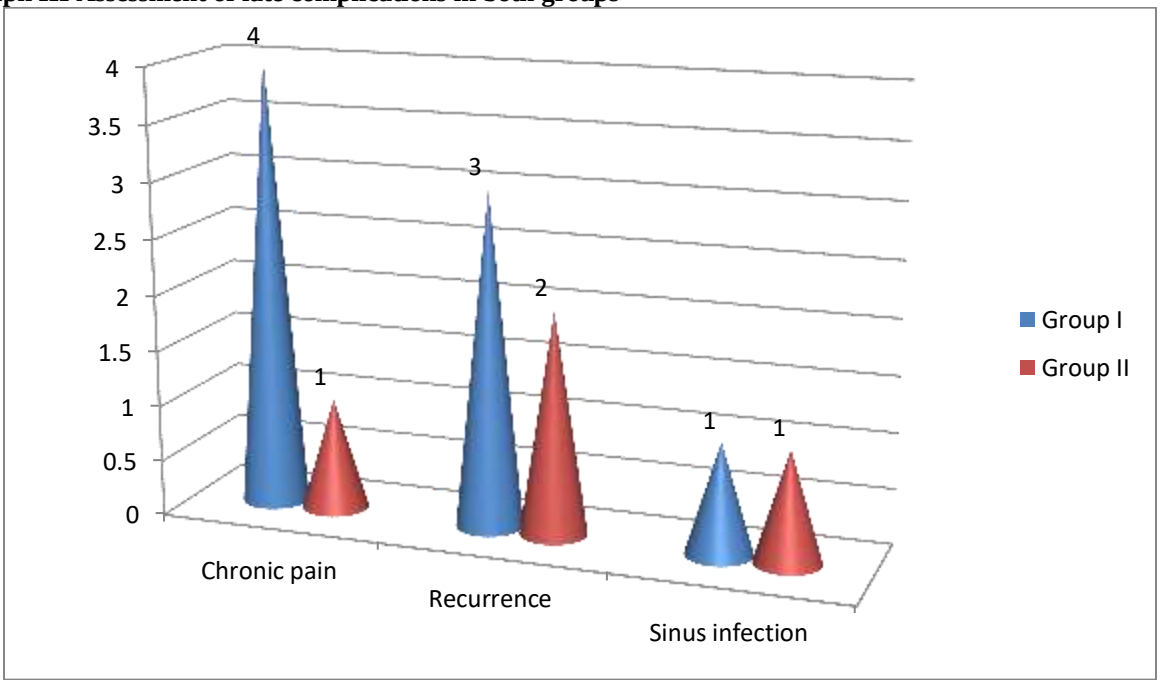


Graph II Assessment of early complications in both groups



Graph II shows that early complication were seroma 1 each in group I and II, wound infection 2 cases in group I, testicular atrophy 1 in group I, mesh infection 2 in group I and 1 in group II and post- operative pain 1 in group I and 3 in group II. The difference was non- significant (P> 0.05).

Graph III Assessment of late complications in both groups



Graph III shows that late complications were chronic pain in group I (4) and group II (1), recurrence in group I (3) and group II (2) and sinus formation 1 in group I and II. The difference was non- significant (P> 0.05).

DISCUSSION

Inguinal hernia is more common on the right than on the left with a ratio of 2:1. Inguinal hernia is much more common in men than women. The inguinal region is a locus of minor resistance in the abdominal wall.[1] Hernias in this area occur in the space described as the myopectineal orifice. This area is limited from the top and medially by connecting tendon and rectus abdominis muscle, from below by pecten ossis pubis and from laterally by the iliopsoas muscle. Inguinal hernias are a specific group of hernias because of their frequency of occurrence as well as the dynamic development of repair methods.[2]

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. The box outlines important elements in examining patients who have a suspected inguinal hernia. The present study compared hernioplasty and preperitoneal meshplasty of hernia management.

In this study, group I patients underwent Lichtenstein's hernioplasty and group II patients underwent Preperitoneal meshplasty. There were 30 males and 25 females in group I and 34 males and 21 females in group II. The mean time of surgery in group I was 43.2 minutes and in group II was 52.4 minutes. Kulacoglu H et al[9] conducted a study in which seven hundred and ninety-three operations were performed: Lichtenstein technique was carried out in 301 patients (37.9%), mesh-plug in 325 patients (40.9%) and PHS in 167 patients (21.2%). Spinal anaesthesia was performed in 787 patients (99.2%). General anaesthesia was necessary in 6 patients (0.8%) due to degeneration of the vertebral column. Complications observed include: wound suppuration, haematoma and seroma formation, chronic pain and hernia recurrence. Patients were discharged on the first postoperative day. Return to physical activity was observed usually 14 days after the operation. We found that early complication were seroma 1 each in group I and II, wound infection 2 cases in group I, testicular atrophy 1 in group I, mesh infection 2 in group I and 1 in group II and post-operative pain 1 in group I and 3 in group II. Late complications were chronic pain in group I (4) and group II (1), recurrence in group I (3) and group II (2) and sinus formation 1 in group I and II. Fenoglio ME et al[12] 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 were total 130 cases of inguinal hernia repair during study period. 160 cases were operated 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.

The limitation of the study is small sample size.

CONCLUSION

Authors found that both techniques are equally effective in management of inguinal hernia.

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