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Research Article

**EVALUATION OF THE EFFICACY OF LICHTENSTEIN MESH
HERNIOPLASY AND ITS COMPLICATIONS**¹Aimen Azher, ²Dr Abdul Ghafoor, ³Zahid Hanif¹WMO DHQ Hafizabad²Punjab Medical College Faisalabad³Medical Officer, DHQ Hospital Bagh AJK**Abstract:**

Objective: To evaluate the results of inguinal herniopathy in terms of wound infection, seroma, hematoma formation and recurrence and its clinical study.

Study Design: A prospective case-control study.

Place and Duration: In the Surgical Unit II of Jinnah Hospital Lahore for one year duration from July 2017 to July 2018.

Methodology: All inguinal hernia patients older than 19 years were included in the study. Patients under 19 years of age were excluded from the study because they did not undergo hernioplasty. Patients with chronic cough, constipation, anemia, diabetes mellitus and hypertension were checked and preoperatively optimized. Anesthesia was performed after the necessary examinations. Patients who were not suitable for general anesthesia were operated with spinal and local anesthesia. Two doses of second-generation cephalosporin or Co-amoxiclav were used as prophylactic antibiotics. The antibiotic injection in powder form is sprayed onto the web during operation. Data were collected as pre-designed proforma. Postoperative follow-up was performed for 6 months.

Results: A total of 100 men and 104 hernia were operated during this study. 65% of the patients had hernia on the right side, 31% on the left hernias and 4% on the other hand bilateral inguinal hernia. 88% of inguinal hernia could be reduced and 12% could not be reduced, and 8% was recurrent. The age of the patient ranges from 19 to 80 years. The majority of patients were under 60 years of age up to 72%. The average age was 49.63 ± 14.10. 60% of the patients were workers, 28% of heavy workers and 32% of light manual workers. Wound infection in 5%, urinary retention in 5%, hematoma in 7%, seroma in 12%, recurrence in 1% of 100%, recurrence in 104 patients, 96% in 104 hernia and there was no mortality during the study.

Conclusion: It has been shown that hernioplasty for inguinal hernia is effective with minor complications, recurrence and low morbidity and there is no mortality. Early patient mobilization and early work were easy to learn. While the cost of the network was a slight burden for patients, it was more profitable than the results.

Key words: Inguinal hernia, Hernioplasty, repair, Lichtenstein technique, relapse, early mobilization and effective cost.

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INTRODUCTION:

Inguinal hernia continues to be one of the most common surgical operations. Recently there have been many improvements in surgery for inguinal hernia. Despite these developments, the best technique for inguinal hernia repair in the literature has not yet been established. Over the past 15 to 20 years, hernioplasty is very popular in the west and Lichtenstein has reported less than 1% recurrence for prolene hernioplasty. Shouldice repair also includes less than 1% recurrence, but has a relatively long learning curve and is technically more difficult. Bassini repair and Shouldice repair are technically difficult to master and achieve good results. The technique of posterior iliopubic tract was defended by Nyhus. The strength of this repair is 2% because of the curvature adominis aponeurosis transversus suture but the recurrence rate is iliopubic. In 1975, Stoppa introduced this technique in a preperitoneum plain for large inguinal hernias using a giant . Gilbert recommended the Polypropylene Prolene Hernia System (PHS) to plug and weave (Gilbert Ruthow) or a device to repair the inguinal hernia day. After long-term follow-up, there was a recurrence rate of 1.5%, but Fasih et al¹² indicated a recurrence rate of 0.5%. In 1990, laparoscopic hernia repair was started. That is, TAPP (transabdominal preporitoneal approach) and TEP (extra peritoneum total). The basis of repair is to use a wide network price to cover the three potential areas of the hernia (indirect, direct and femoral). This technique is less painful than an open procedure and provides an early return to work, but has a higher hospital cost. A more recent technique, the data is slowly gathering.

MATERIALS AND METHODS:

This prospective case-control study was held in the Surgical Unit II of Jinnah Hospital Lahore for one year duration from July 2017 to July 2018. Patients under 19 years of age and attended in emergencies were selected. For example, the obstructed hernia was removed from the study because these patients underwent a non- repair. All patients were evaluated for cardiac, thoracic, prostatism and constipation symptoms. He was investigated and given

appropriate treatment. These patients were evaluated by anesthesia and appropriate anesthesia (general, spinal and local) was given and operated. Abocain was injected at the end of the operation and intravenous and intramuscular diclofenic narcotics were used.

Oral analgesics are followed for postoperative pain control. Three doses of prophylactic antibiotics, such as Co-Amoxiclav or second generation cephalosporin, were given. The first dose was administered during anesthesia induction and at subsequent doses at eight-hour or 12-hour intervals. Bandage was changed after 48 hours. The wound was washed with pyline and a light dressing was applied. The patient was sent home. All data were collected in a pre-designed form and followed up for 6 months.

Surgical Method

The standard open technique described by Nelson was used for direct and indirect inguinal hernia repair in Lichtenstein. The corners of the polypropylene web (6 x 11 cm) were cut and almost half of the length of the web was formed to pass the cord. The lower edge of the is connected to the inguinal ligament continuously with prolene 2/0 starting from the groin tubercle and beyond a point beyond the level of the deep ring. The is then fixed to the joint tendon with 3 to 4 discontinuous points and the non-absorbable suture with the inner oblique muscle. The upper layer of the mesh was dragged on the lower leaf as a double coat. The lower edge of the upper leaf and the lower edge of the lower leaf were planted together with 2/0 prolong in the inguinal ligament. The new deep ring that supports the tip of the small finger was carefully created. Hemostatic was achieved and externally oblique, repaired with vicryl "O" (polyglycolic acid suture). No drainage done. The skin was closed with subcutaneous 2/0 prolene.

RESULTS:

In this study, 100 male inguinal hernia patients were taken. Four patients had bilateral inguinal hernia. The ages of patients ranged from 19 to 80 years. Table 1

Table 1: Age distribution (n=100)

Age Group	Number	Percentage
19-39 years	20	20%
40-49	25	25%
50-59	27	27%
60-69	19	19%
70-79	8	8%
>79	1	1%
Total	100	100%

The side of occurrence of hernia is shown in Table II.

Table 2: Side of inguinal hernia

Side	Number	Percentage
Right side	65	65%
Left side	31	31%
Bilateral	4	4%
Total	100	100%

(Average age: 49.63 + -14.10). In the inguinal hernia, ie, 65% of the herniated hernia 88% and 8%. Table 3.

Table 3: Types of inguinal hernia (n=100)

Type	Number	Percentage
Direct	40	40%
Indirect	60	60%
Incomplete	78	78%
Complete	22	22%
Reducible	88	88%
Irreducible	12	12%
Recurrent	8	8%

The hernia was more common in patients with arm workers who had more frequent relapse on the right side, compared to other professionals in Table-4.

Table 4: Occupation of the patients (n=100)

Occupation	Number	Percentage
Heavy manual worker	28	28%
Light worker	32	32%
Office worker	15	15%
Retired	25	25%
Total	100	100%

The most common complication is seroma formation, ie 12%. The recurrence rate was 1% in 100 patients and In 104 patients, 0.96% had bilateral inguinal hernia because 4 patients had Table-5.

Table 5: Complications

Complications	Number	Percentage
Wound infections	5	5%
Urinary retention	5	5%
Haematoma	7	7%
Seroma	12	12%
Recurrence	01	01%
Total	30	30%

The patient had less pain, less hospitalization, early activities, and routine work.

DISCUSSION:

In this study, most of the patients (72%) were under 62 years of age and were therefore active in their profession. So, early return to work is very important for them. 61% of the patients are manual workers, so they need to live early ambulation. Worldwide surgeons Lichtenstein and Shulman published their papers in 1986. The hernia repair technique adopted similar results in the pubic hernias weave "a new concept of herniated patients, hernia of the surgical repair of the patients without tension, tension-free repair" results after the tension-free repair Gourgiotis et al, Kark et al. And Neumayer In 1987, inguinal hernia was used as a simple but effective method of using polypropylene for repair. This technique is easy to learn and simple. Shams Nadeem Alam and colleagues and Chan et al have described a similar experience: trainee surgeons have easily acquired skills. We did not evacuate in any case. Seven patients developed hematomas in the early postoperative period, which resolved within a few days and one of the required evacuation under general anesthesia. All seromas were generated by conservative treatment and aspiration. Urinary retention required catheterization for 24 to 48 hours.

Small wound infections were treated with regular bandages and in three cases oral antibiotics continued for one week. These results are comparable to Ahmed et al., Majeed and Mehmood. In our study, recurrence rate was 0.96%, Shams Nadeem Alam et al., 1.2%, Choudry et al. Kark is less than 1%. Another study by Saeed et al. Does not recur with hernioplasty. In another study by qureshi et al., A recurrence rate of 2.27% in the left side and 2.15% in the repair was observed.

CONCLUSION:

Lichtenstein hernioplasty is a safe and very popular technique. Easy to learn, early ambulation ensures that the beginnings begin and are profitable. While the price of the network is a slight burden for the patient, the result is very useful compared to early ambulation. It has a low complication and recurrence rate, so it is popular in the world.

REFERENCES:

1. Panda, Srikanta, Minati Mohapatra, Sudhir Kumar Panigrahi, Anshuman Sarangi, and Somanatha Jena. "An evaluation of efficacy of Lichtenstein mesh hernioplasty in emergency

- settings: a study in tertiary care hospital in Odisha." *International Journal of Research in Medical Sciences* 6, no. 5 (2018): 1761-1764.
2. Malik, Altaf Ahmed, and Ajaz Ahmad Rather. "MESH HERNIOPLASTY IN OBSTRUCTED INGUINAL HERNIA." *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH* 7, no. 6 (2018).
 3. Dileep CN, Yashwanth CN. A STUDY OF MODIFIED BASSINI'S REPAIR (ANATOMICAL REPAIR) AND LICHTENSTEIN'S MESH HERNIOPLASTY. *Journal of Evolution of Medical and Dental Sciences*. 2018 Apr 9;7(15):1877-83.
 4. Sunkar, Samrat, Dick BS Brashier, Kiran Bhagwat, Vipin Sharma, and Piyush Angrish. "A clinical study of the incidence and disability caused by mesh neuralgia after inguinal mesh hernioplasty and the effects of prophylactic ilioinguinal neurectomy and its role in preventing chronic groin pain after inguinal hernioplasty." *International Surgery Journal* 5, no. 3 (2018): 1083-1089.
 5. Guttadauro, Angelo, Matteo Maternini, Silvia Frassani, Matilde De Simone, Marco Chiarelli, Daniele Macchini, Nicoletta Pecora, Aimone Bertolini, Ugo Cioffi, and Francesco Gabrielli. "'All-in-one mesh' hernioplasty: A new procedure for primary inguinal hernia open repair." *Asian journal of surgery* 41, no. 5 (2018): 473
 6. Guttadauro, Angelo, Matteo Maternini, Nicoletta Pecora, Marco Chiarelli, Valentina Riggio, and Francesco Gabrielli. "All-in-One Mesh Hernioplasty: A New Procedure for Inguinal Hernia Repair." In *Hernia Surgery and Recent Developments*. IntechOpen, 2018.
 7. Wani, Mumtaz Ud Din, Azher Mushtaq, Mohammad Yaqoob Bhat, and Shabir Ahmad Mir. "A comparative study of skin staples versus sutures for fixing mesh in tension-free mesh hernioplasty." *Archives of Clinical and Experimental Surgery* 7, no. 1 (2018): 7-12.
 8. Kumar, Manoj, and Adil A. Kalam. "LAPAROSCOPIC TEP VS. MODIFIED LICHTENSTEIN FOR BILATERAL INGUINAL HERNIA REPAIR-A COMPARATIVE STUDY." *GLOBAL JOURNAL FOR RESEARCH ANALYSIS* 6, no. 11 (2018).
 9. Koganti, Badareesh, A. S. Prasad, and V. Radha Krishna Murthy. "COMPARATIVE STUDY BETWEEN N-BUTYL-2-CYANOACRYLATE VERSUS SUTURED MESH FIXATION IN INGUINAL HERNIA." *GLOBAL JOURNAL FOR RESEARCH ANALYSIS* 7, no. 6 (2018).
 10. Baid A, Attri PC, Chaudhary N. A Prospective Hospital based study to compare the effectiveness and safety of Laparoscopic (TEP/TAPP) and conventional open (Lichtenstein) repair and there outcomes in the management of Inguinal Hernia. *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH*. 2018 Nov 3;6(3).
 11. Garg, P., Pai, S.A. and Vijaykumar, H., 2018. Comparison of early postoperative outcome of laparoscopic and open inguinal hernia mesh repair. *International Surgery Journal*, 5(8), pp.2732-2736.
 12. Abhishek, Mahadev M., and Vishwanath M. Pattanshetti. "Intraoperative Inguinal Measurements to Estimate a Single Optimal Mesh Size for Lichtenstein Inguinal Hernioplasty: an Observational Study." *Indian Journal of Surgery* 80, no. 4 (2018): 363-368.
 13. Matikainen, M., E. Aro, J. Vironen, J. Kössi, T. Hulmi, S. Silvasti, I. Ilves, M. Hertsi, K. Mustonen, and H. Paajanen. "Factors predicting chronic pain after open inguinal hernia repair: a regression analysis of randomized trial comparing three different meshes with three fixation methods (FinnMesh Study)." *Hernia* (2018): 1-6.
 14. Talreja M, Sharma VM, Jakhmola CK. Prospective Randomised Controlled Trial of Laparoscopic Totally Extraperitoneal (TEP) Mesh Repair versus Lichtenstein Open Tension-Free Repair of Groin Hernias. *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH*. 2018 Sep 14;6(9).
 15. Reddy MV, Inamdar P, Vijayendra P. COMPARATIVE STUDY OF TISSUE REPAIR DESARDA TECHNIQUE VERSUS LICHTENSTEIN'S MESH REPAIR IN INGUINAL HERNIA. *INDIAN JOURNAL OF APPLIED RESEARCH*. 2018 Jul 31;8(7).