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Research Article

**A STUDY TO DETERMINE THE RESULTS OF MESH REPAIR
IN INGUINAL HERNIAS**Dr Ayesha Syed Iftikhar¹, Dr Roma Raj², Dr Aqsa Syed Iftikhar³¹ Baqai Medical University, Karachi, ² Dow Medical College, DUHS, Karachi, ³ Liaquat National Medical College, Karachi.

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Abstract:

Objective: To evaluate the repair of inguinal hernia network in a tertiary hospital with special reference to postoperative complications and recurrence rates.

Study Design: A prospective cohort study.

Place and Duration: In the Surgical department of Dow University Hospital Karachi for two years duration from March 2017 to March 2019.

Methods: This prospective study was performed in the Department of General Surgery. For two years, all patients were followed up. The subjects older than 18 years of age or elderly with inguinal hernia were selected for the study. Patients with occluded inguinal hernias, cirrhosis / ascites and recurrent inguinal hernias were disqualified from the analysis. Recurrence rates and postoperative complications were observed.

Results: 200 total patients were included in the study. Scrotal hematoma was the most usual complication was followed by surgical site infection and wound hematoma. In two year follow-up time, there was no recurrence.

Conclusion: The inguinal hernia repaired by Lichtenstein mesh has very low morbidity rate. It has low recurrence rate and effective and safe procedure of hernia repair. It has and less postoperative pain.

Keywords: Mesh repair, recurrence, inguinal hernia.

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INTRODUCTION:

Inguinal hernias are common public issue because the lifetime inguinal hernia risk for men is 27% and for women it is 3%. In 1700; Babylon Hammurabi was the 1st to present the first inguinal hernia documentation [1-2]. The Bassini repair was announced at the end of the 19th century. Until 1984; inguinal hernia treatment remained poorly modified when the Lichtenstein Hernia Institute first performed synthetic laparoscopic mesh hernioplasty in the form of transabdominal preperitoneal repair followed by tension-free open hernioplasty using synthetic Mesh [3-4]. Fully extraperitoneal repair (PET) potentially reduces the risk of intraperitoneal complications and adhesion [5]. There was no recurrence between open and laparoscopic mesh methods for hernia repair. Until the last years, the most important result after repair of inguinal hernia was recurrence prevention [6]. After the repair with the mesh, the recurrence proportion reduced significantly, and now the approach deviates from the recurrence rates of chronic inguinal pain that restricts any patient's daily living activities after surgery [7-9]. The inguinal hernia repair recurrence rate is low if performed by surgeons specializing in hernia is <2%. However, some analysis show 5% and 19% recurrence rates in 3-5 years after the surgery from non-specialist units [10].

MATERIALS AND METHODS:

This prospective cohort study was performed in the Surgical department of Dow University Hospital Karachi for two years duration from March 2017 to March 2019. For two years, all patients were followed

up. The subjects older than 18 years of age or elderly with inguinal hernia were selected for the study. Patients with occluded inguinal hernias, cirrhosis / ascites and recurrent inguinal hernias were disqualified from the analysis. Recurrence rates and postoperative complications were observed. In the surgical patient department; all patients were admitted and preoperative evaluation was performed as liver function tests, complete blood profile, serum electrolytes, renal function tests, hepatitis B & C detection and coagulation profile before surgery. Under spinal or general anesthesia; all surgeries were done. During induction, 1.2 g of amoxicillin and clavulanic acid was given intravenously and for 24 hours additional 2 doses were given at 12 hours difference. A polypropylene mesh was used and adjusted to the size of the defect in the rear wall. On the first postoperative day, oral analgesics and intramuscular / intravenous analgesics were used twice daily. Patients were followed up every two to six weeks after surgery and once every 3 months every 2-years. For data analysis; SPSS version 17.0 was used.

RESULTS:

200 total patients were included in the study. Scrotal hematoma was the most usual complication followed by surgical site infection and wound hematoma. In two year follow-up time, there was no recurrence. 56 years was the patients mean age with 23-78 years age range. In this study, all patients with inguinal hernia complaints were male. Postoperative complications and management plan for hernia repair are detailed in Tables 1 and 2, correspondingly.

Table 1: Indications for hernia repair (n=200)

Indications	=n	%age
Indirect inguinal hernia	120	60
Direct inguinal hernia	70	35
Bilateral direct inguinal hernia	10	5

The mean duration of hospital was 2.5 days. All scrotal hematoma patients responded well to oral antibiotics, scrotal support and conservative treatment.

Table 2: Post operative complications

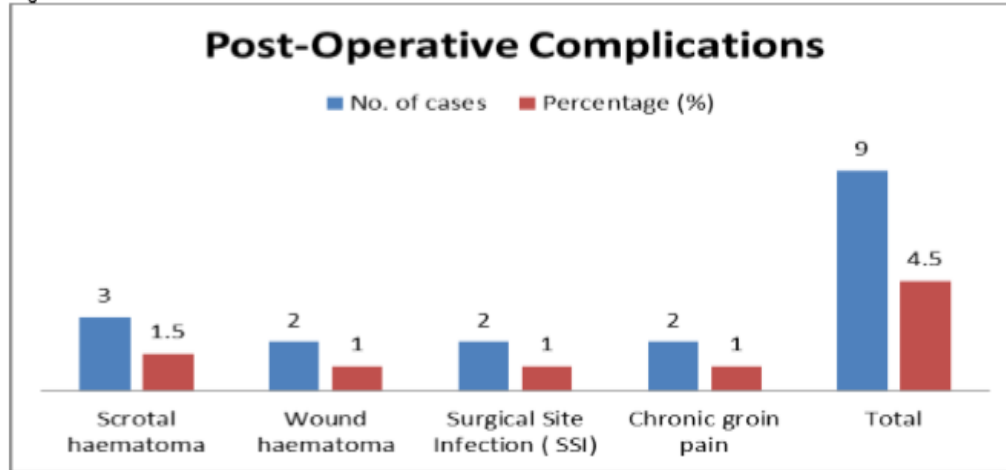
Complications	=n	%age
Scrotal haematoma	3	1.5
Wound haematoma	2	1
Surgical Site Infection (SSI)	2	1
Chronic groin pain	2	1
Total	9	4.5

The oral antibiotics were given for surgical site infections. The caries of the wound were evacuated from the medial side of the incision of both patients.

Mild pain was noted postoperatively for one week in 160 (80%) patients, but have no effect on their daily

living activities. In 2 patients only chronic groin pain was observed.

Figure 1:



DISCUSSION:

Surgical treatment of inguinal hernia repair has undergone several stages. The relapse rate decreased significantly after tension-free mesh repair, and now the repetition of studies has led to a shift in the recurrence rates of chronic inguinal pain, which limits the activity of any one's daily life [11]. Scrotal hematoma was the most usual complication was followed by surgical site infection and wound hematoma [12]. The polypropylene mesh fuses with the fibroblastic reaction to form a scaffold that induces collagen synthesis and results in development of a new resilient wall that is based on abdominal pressure once extended by the patient's abdominal effort [13].

Therefore, we can easily cover any size defects without any tension formed by suture repair with mesh, and this can help reduce the relapse rate and postoperative pain intensity and promote early recovery of daily life. In two year follow-up time, there was no recurrence. The recurrence rate reported by Alam et al. Choudry et al was increased by 1.2% and Farooq & Rehman by 1.5%. With large series such as Butters et al and Sakorafas et al, some international authors have shown less than 1% recurrence rate [14]. The postoperative surgical site infection incidence was 1%; this is superior to some national analysis such as Najamalhaq et al. (3%) 17, British Hernia Center (1.2%) 18 and Aziz et al. (3%) 16. Persistent neuralgia and chronic inguinal pain after inguinal hernia was accepted as a long-term disability and complication with a negative impact on daily activities and quality of life of patients. Chronic groin pain (1%) was reported in 2 patients in our study. Wantz et al. stated

that chronic herniorrhaphy neuralgia is the result of a technique that produces tension, not mainly a compression of a nerve. The limitation of our study is that the follow-up period is shorter than other international studies [15].

CONCLUSION:

The inguinal hernia repaired by Lichtenstein mesh has very low morbidity rate. It has low recurrence rate and effective and safe procedure of hernia repair. It has and less postoperative pain.

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