ORIGINAL ARTICLE

Outcome of Mesh Hernioplasty at Nawaz Sharif Social Security Teaching Hospital, Lahore

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ABSTRACT

Objective: To document the early outcome of open mesh repair in the management of inguinal hernia.
Study design: An observational study.
Sampling technique: Non-probability purposive.
Place & duration: Department of Surgery, Nawaz Sharif Social Security Hospital, Lahore from June 2007 to June 2010.
Material & method: 420 patients of inguino-scrotal hernias underwent open mesh repair were analyzed for early post-operative outcome as surgical site infection, haematoma, seroma, discharging sinus. Data were collected by filling special design proforma for each patient. Follow up visits were scheduled at one week, six weeks, twelve weeks post operatively.
Results: Polypropylene mesh repair was done in 420 patients, all were adult males. Age ranged from 18-72years, mean 46 years. 278 (66.19%) were right sided and 142(33.80%) left sided. Four (0.95%) were recurrent hernias and two (0.476%) were bilateral. Post-operatively 392(93.33%) had uneventful recovery, 2 (0.476%) had major wound infection required mesh removal while 10 (2.38%) had minor wound infection. 10 (2.38%) developed seroma and 06 (1.42%) had scrotal hematoma. No discharging sinus was noted.
Conclusion: Open mesh repair for inguinal hernia is a safe and effective technique, associated with low morbidity. It is associated with minimal post operative infective complications as it was feared in the past because of presence of foreign body (Mesh).
Key words: Inguinal Hernia, Lichtenstein, mesh repair.

INTRODUCTION

Inguinal hernia is the most common type of hernia, comprising of approximately 75% of all anterior abdominal wall hernias[1]. Hernia repair has been traditionally considered as one of the so-called clean operations along with thyroid and breast surgery. Mesh repair is nevertheless associated with complications such as foreign body reaction, infection, pain, fistula formation, migration, shrinkage and recurrence[2]. Surgical site infection (SSI) is the most frequent complication in inguinal herniorrhaphy[3]. SSI is related with an increase in length of stay and costs and a decrease in quality of life[4-5]. Mesh hernioplasty has been practiced since long in private set-ups and occasionally in public hospitals rather tissue repair is preferred because of fear of infective complications. Very few studies had been done locally to determine the infection rate in mesh hernioplasty, the aim of this study is to determine the early outcome of inguinal mesh hernioplasty especially infective complications at public hospital from June 2007 to June 2010.

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MATERIAL & METHODS

A total of four hundred and twenty adult patients with inguino-scrotal hernia presented in the out patient department of Nawaz Sharif social security teaching hospital, Lahore had been included in the study from June 2007 to June 2010. All patients of age 18 years and above were included in the study. Mesh (Polypropylene) hernioplasty was done in all cases by senior registrar/ Assistant professor under spinal anesthesia. Emergency cases (Obstruction & strangulated), femoral hernias and females with inguinal hernia were excluded from the study.

According to the standardized protocol pre-operative work up performed, three doses of peri-operative antibiotic (Co-amoxiclav 1.2gm) were given to all patients. In all patients polypropylene mesh was used and interrupted 2/0 polypropylene stitches applied to hold the mesh. Post operatively 75mg Diclofenac sodium I/M was used for 24hour followed by oral analgesic. Early post-operative complications (Surgical site infection, seroma, scrotal haematoma, discharging sinus) were noted in the follow up.

A superficial infection is defined as edema and minimal erythema of the wound not requiring surgical intervention. A deep infection is defined as discharge from the wound or collection of purulent fluid that requires drainage/surgical intervention. Infected

mesh is considered as treatment failure. Seroma is defined as collection of sterile serous fluid in the groin requiring aspiration.

RESULTS

Out of a total of 420 patients, all were males. Age ranged from 18-72years. Mean age was 46 years. 278 (66.19%) were right sided and 142(33.80%) left sided. Four (0.95%) had recurrent hernias and two (0.476%) were bilateral.

Post-operatively 392(93.33%) patients had uneventful recovery, 2 (0.476%) patients had major wound infection require mesh removal while 10 (2.38%) patients had minor wound infection which was settled with prolong antibiotic cover (5-7days) after culture & sensitivity. 10(2.38%) patients developed seroma and 6(1.42%) had scrotal hematoma, No discharging sinus was noted. Majority of patients were discharged between 24-48 hrs post-operatively. Follow up was done after one week, six weeks, and twelve weeks.

Table 1: Post operative out come (n=420)

Events	n=	%age
Uneventful recovery	392	93.33
Surgical site infection	12	2.85
Superficial	10	2.38
Deep	2	0.47
Seroma	10	2.38
Scrotal Hematoma	6	1.42

DISCUSSION

The inguinal hernia has first been described in 1550 BC. The first surgical treatments were recorded between 250-330 BC and today inguinal hernioplasty is the most common surgical procedure performed by general surgeons[6]. In this era of advanced technology, inguinal hernia repair has seen a revolutionary change from tissue repair technique of 1970s & 1980s to laparoscopic repair, laparoscopic mesh repair and primary repair of all inguinal hernias with some kind of mesh[7, 8,9,10].

In the present study 93.33% of the patients had uneventful recovery while 2.38% developed superficial surgical site infection, 0.476% patients had infected mesh, 2.38% had seroma and 1.42% had scrotal hematoma.

SSI and seroma were the most common complications encountered in this study. Sanna T.H.Kouhia[11] reported 4% superficial infection and 0% deep infection rate in a series of 99 cases of recurrent inguinal hernia repair at North Karelia Hospital, Finland. Anwar[12] reported 5% wound infection and Saleem[13] also quoted 5% wound infection. Our study is comparable with Shulman and Lichtenstein[14], who reported less than 2% wound infection rate, while a study conducted by Sheikh[15] noticed mesh infection in 0.4% of cases. A study conducted by George H Sakorafas[16], at Air force Hospital, Athens, Greece on 540 patients, observed that no patient developed infection related to foreign body i.e. mesh, similarly Abid K.J[17] in their study of 30 cases at Mayo hospital Lahore also reported 0% infection rate.

In the present study 2.38% of our patients develop seroma. A study conducted by Waqar T[18] reported seroma formation in 5% of cases. Our study is comparable with Tariq khanzada[19] and Sheikh[15] who noticed seroma formation in 3.2% and 3.9% respectively.

In the present study 1.42% developed scrotal haematoma which is comparable with Kurzer[20] who reported a rate of 1.3%, a study conducted by Abid K.J[17] reported scrotal haematoma in 3.3% of cases while Kouhia[11] reported 6% in recurrent mesh hernia repair. Tariq Khanzada[19] et al reported the incidence of scrotal haematoma 8.6% in their study of 93 cases.

This study is encouraging in the sense that the incidence of early complication of open mesh repair of groin hernias is well within the accepted range,especially the infective complication in a general ward of a public hospital.

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