

Original Research Article

A Comparative Study of Lichtenstein Tension Free (Using Prolene Mesh) Vs Darning Repair (Using Prolene Suture) By Open Method in the Treatment of Inguinal Hernia Repair

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Abstract: Various methods are described for posterior inguinal strengthening in inguinal hernia surgery. The present study was conducted with an objective to compare Lichtenstein tension free repair and Darning method of repair of posterior inguinal wall during inguinal hernia surgery. This comparative study was carried out in the Department of surgery at Patna medical college, Patna from July 2015 to June 2017 between two groups of patients who underwent inguinal hernia surgery. All patients are carefully monitored with the following parameters: Total duration of operative procedure, Cost of operative procedure, post operative complications and Recurrence during post operative period. Average operative time, complications after surgery for darning method group was more than Lichtenstein method of repair group. Postoperative recurrence rate was not significantly different in both groups. Cost of surgery was lower in darning method of repair group than Lichtenstein method of repair group.

Keywords: Darning repair, Lichtenstein repair, Prolene mesh

INTRODUCTION

A Hernia is a protrusion of a viscus or part of viscus through an abnormal opening in the wall of its containing cavity [1]. Various methods are described for posterior inguinal wall strengthening. Concept behind darning method of repair was that in interstices of darn fibrous tissue would be deposited which make the posterior inguinal wall strong.

Principle of mesh repair involves permanent strengthening of posterior wall of inguinal canal with purely nonabsorbable meshes and also snug closure around cord at deep ring Lichtenstein tension free anterior prosthetic groin hernioplasty is most popular in which we used prolene mesh [2, 3]. This study intends to compare immediate and late success rate and relative rate of complication, recurrence rate and overall suitability of hernia repair between these two methods.

AIMS AND OBJECTIVES

To compare the Darning method and Lichtenstein tension free anterior groin hernioplasty (L.T.A.G.H) in terms of-

- Complications
- Total time of surgery
- Recurrence
- Cost of surgery

MATERIAL AND METHODS

For the purpose of study, 100 patients of inguinal hernia, cases were admitted from outpatient department and surgical emergency of Patna medical college and hospital, Patna during June 2015 to June 2017. A detailed history and clinical examination along with examinations were performed, routine investigations, ultrasonography of inguinoscrotal region and abdomen, ECG, chest xray and culture and sensitivity of urine done. Mostly spinal anaesthesia was used for surgery.

In darning method after herniotomy posterior wall of the inguinal canal was strengthened by prolene no. 1. In Lichtenstein tension free groin anterior hernioplasty after herniotomy was done, A sheet of 8 X16 cm of prolene mesh was used, medial rounded end

of mesh was sutured with or 2-0 prolene suture to the apponeurotic tissue over pubic bone in such a manner the mesh overlaps the bone by 1 to 5 cm and suture was continued laterally to attach lower edge of mesh to inguinal ligament up to a point just lateral to internal ring. Tails are formed at lateral end positioned around either side of cord [4].

OBSERVATION

For the purpose of present study, 100 patients were taken for inguinal hernia repair of them 50 patients were selected for Darning repair and another 50 patients for L.T.A.G.H, 10 patients having bilateral hernia. The choice of operation was distributed randomly after describing the options of surgical procedure available.

DISCUSSION AND RESULT

Patients of 18 to 80 years were taken for study. The maximum percentage of patient belong to age group of 41-60 years(64%) followed by 21 to 40 years (26%) ,18-20years(4%) and 61 to 80 years(6%). Sex incidence was 96% for males and 4% for females in this study.

Incidence of Right sided inguinal hernia were 52% followed by left side 38% and bilateral inguinal hernia present in 10% of cases. 50% cases were not associated with condition which may predisposed to increased intraabdominal pressure and increased chance of herniation, other 50% cases were having predisposing factors such as chronic cough (14%), enlarged prostate (14%), stricture urethra (4%), chronic constipation (16%), undescended testis(2%). Predisposing factors were treated first and then surgery for inguinal hernia was done. In this study 60% were indirect and 36.67% were direct and 3.33% were sliding type of inguinal hernia among 110 case repairs in 100 cases.

Retention of urine were 7% for Darning repair and 5% for L.T.A.G.H. Hematoma formation were 3% for Darning repair and 5% for L.T.A.G.H. Wound infection were 6% for Darning repair AND 5% FOR L.T.A.G.H. Seroma formation were 3.83% for Darning repair and 12.49% for L.T.A.G.H. Recurrence rate were 1% for Darning repair and 8% for L.T.A.G.H. Average operating time were 45 minute for Darning method and 40 minute for L.T.A.G.H. Average cost of surgery were 318 rupees for Darning repair and 1756 rupees for L.T.A.G.H.

Both darning repair and L.T.A.G.H were associated with satisfactory immediate results at 3 months follow up. At the end of one year follow-up 10.7% of patients of darning method and 7.4% of L.T.A.G.H were lost during follow-up.

CONCLUSION:

In my setup Darning has definite superiority over L.T.A.G.H as far as cost and one of the complication seroma formations is concerned. Difference of other complications like hematoma formation, wound infection and retention of urine are insignificant in both procedures. Recurrence rate in Darning repair is 1% and for L.T.A.G.H. 8% which is insignificant.

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