

## A Study on Role of Prolene Mesh Repair in Incisional Hernia

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### **Abstract: Introduction**

A detailed study of 70 cases was conducted from July 2015 to July 2018 in Mahatma Gandhi medical college and hospital, Jaipur, Rajasthan, India. We randomly assigned 70 patient to suture repair (group A) or mesh repair (group B) of incisional hernia. The patients were followed up by physical examination at 3 month & 6 month

### **Aim & Objective**

To evaluate effectiveness of mesh repair in incisional hernia, to evaluate infection rate after prolene mesh repair and sequel of infection, to study recurrence after hernioplasty with prolene mesh in incisional hernia.

### **Method**

A Prospective clinical hospital based study was done in 70 patients over 3 year of duration,

Inclusion criteria-Age between 10-70years, patient with incisional hernia

Exclusion criteria-Laparoscopic technique for incisional hernia repair, pregnant females with incisional hernia, the presence of more than one hernia,

### **Result**

In our study we randomly assigned 35 patientsto suture repair & 35 patientsto prolene mesh repair in incisional hernia. The patient were followed up by local physical examination at 3 months & 6 months of interval. Follow-up of cases were done as an outpatient basis. at follow-up the recurrence of incisional hernia found in 25%cases in group A as compared to 3% in group B.

### **Conclusion**

In our study patient with incisional hernia, restoration with prolene mesh repair is superior to suture repair group with concern to the recurrence of hernia. Suture repair is found to have an unsatisfactory high recurrence rate because in suture repair edge of defect together under tension causes more pain, tissue necrosis and more chances of wound infection while in prolene mesh repair is a tension free repair causes less pain and recurrence.

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## I. Introduction

Many suture repair were found to disappoint mechanically and incidence of recurrence rated were up to 54%.the advantages of mesh implantation have first been established as dominant trial by luijendijk et al.(2000) who found the incidence of recurrence rates to be 46% in suture repair as compared to 23% in mesh repair

According to data there is usually based on custom rather than evidence. According to data there is a good observation that open mesh repair is better suture repair in term of recurrence. The aim of study was to compare the Effectiveness in suture versus mesh repair to small and large incisional hernia.

## II. Aims And Objectives

1. To evaluate infection rate after prolene mesh repair and sequel of infection
2. To study recurrence after hernioplasty with prolene mesh.

## III. Material & Methods

A prospective clinical hospital based study was performed at mahatma Gandhi medical college & hospital, Jaipur, rajasthan,india. Duration of study was from July 2015 to July 2018.number of subjects are 70.out of them in 35 patients suture repair done and in another 35 patient prolene mesh repair done.

**Inclusion criteria**-1.age between 10-70 years

2. patients with primary incisional hernia

**Exclusion criteria**-1.laparoscopic technique for incisional hernia repair

2. pregnant females with incisional hernia

3.the presence of more than one hernia

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4.sign of infection

Patients were randomly assigned to undergo suture repair or mesh repair. in suture repair,continuous polypropylene no 1 stiches with stitch with interval of approximately 1 cm were used.

In mesh repair polypropylene mesh was used over fascia overlay with at least 4 cm of mesh overlapping the edge and fixed with polypropylene stitches to fascia.the value obtained were entered and appropriate statical tests were applied.

**IV. Result**

In our study we randomly 70 patients were assigned from which 35patientsto suture repair & 35 patientsto prolene mesh repair in incisional hernia. The patient were followed up by local physical examination at 3 months & 6 months of interval. Long term follow up were done as per standard protocol. Follow-up of cases were done as an outpatient basis.At follow-up the recurrence of incisional hernia found in 25%cases in group A as compared to 3% in group B

**TABLE 1** Age wise distribution of cases

Age Distribution(yrs)	No.of patients	%
20-29	2	3%
30-39	6	8%
40-49	30	43%
50-59	20	29%
60-69	12	17%
Total	70	100%

**TABLE 2** Gender wise distribution of cases

Gender	No.of patients	%
Female	40	58%
Male	30	42%
Total	70	100%

**TABLE 3** Types of Surgery for Repair of Incisional Hernia

TYPE OF SURGERY	GROUP A(SUTURE REPAIR)		GROUP B (MESH REPAIR)	
	NO.OF PATIENTS	%	NO.OF PATIENTS	%
ANATOMICAL REPAIR	11	31%	0	0
DOUBLE BREASTING	10	29%	0	0
MAYO REPAIR	14	40%	0	0
MESH HERNIOPLASTY	0		35	100%
TOTAL	35	100%	35	100%

**TABLE 4** Follow Up At 3 Month

FOLLOW UP AT 3 MONTH	GROUP A (SUTURE REPAIR)		GROUP B (MESH REPAIR)	
NORMAL	27	77%	20	57%
PAIN	8	23%	7	20%
SENSATION OF FOREIGN BODY	0	0	8	23%
GRAND TOTAL	35	100%	35	100%

**TABLE 5** Recurrence of incisional hernia

Follow up	Group A (Suture repair)		Group B (Mesh repair)	
	No.of patients	%	No.of patients	%
normal	28	75%	34	97%
recurrence	07	25%	01	03%
Grand total	35	100	35	100

**V. Conclusion**

In our study patient with incisional hernia, restoration with prolene mesh repair is superior to suture repair group with concern to the recurrence of hernia. Suture repair is found to have an unsatisfactory high recurrence rate because in suture repair edge of defect together under tension causes more pain, tissue necrosis and more chances of wound infection while in prolene mesh repair is a tension free repair causes less pain and recurrence

Even in small defect incisional hernias mesh repair provides better results than suture repair modalities. According to our study in case of incisional hernias onlay reconstruction is an alternative option that provide satisfactory low rates of recurrence.

**Bibliography**

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