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A Comparative Study of Anatomical Repair With Mesh Repair For Incisional Hernia At Rims Kadapa

KEYWORDS

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ABSTRACT *Incisional hernia is an important complication of abdominal surgery and is still relatively common in our practice.*

This study compares the anatomical repair with mesh repair for incisional hernia

MATERIALS AND METHODS : This is a retrospective study of all the patients of incisional hernia operated in RIMS kadapa from april 2012 to march 2015.Exclusion criteria includes incisional hernia associated with other abdominal wall hernias,recurrent hernias.

RESULT : The incidence was found to be more common in females particularly in elderly women. The recurrences is more common in anatomical repair than mesh repair. The size of hernia did not affect the recurrence.

CONCLUSION : Among patient with midline abdominal incisional hernia mesh repair is superior to anatomical repair with regard to recurrence.

INTRODUCTION

Incisional hernia is an iatrogenic abdominal wall defect that occurs at the site of previous incision following breakdown in the continuity of the fascia closure [1]. It has been described as a bulge visible and palpable when the patient is standing and often requiring support and repair [2]. It is a very common complication of abdominal surgeries and is associated with considerable morbidity and mortality [3,4]. As many as 11% of laparotomies are complicated by the development of incisional hernias [5–7]. The figure rises to 26% in those who develop wound infection [8]. Despite increased understanding of abdominal wound closure, it is worrisome that the frequency has not diminished appreciably in the past 75 years [9, 10].

An incisional hernia occurs due to biochemical failure of the acute fascial wound early in the healing process when wound tensile strength is very low or absent (days 0–30). It is during this time, when wound strength depends entirely on suture integrity, that recovering patients start returning to increased levels of activity and thereby place increasing loads across their acute wounds [11, 12]. However, the hernia may not be obvious for days or even years [13, 14]. Various factors have been identified to be responsible for the failure, including obesity and wound infection; other contributory factors include initial closure of fascia with catgut, drainage tube through the index incision, senility, early wound dehiscence, immunosuppressant therapy, anaemia, diabetes mellitus, malnutrition, jaundice, and azotaemia, [15–17].

Suture length and technique [18, 19] have also been implicated. Occurrence of incisional hernia has also been attributed to the disturbance of collagen metabolism at the microscopic level [20]. Hence, tension free repairs are

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recommended. This entails the use of mesh, either open or laparoscopic [15, 21], but this material is not available in most poor countries such as ours. This study was carried out to identify the factors associated with incisional hernia in our region as well as factors affecting recurrence.

MATERIALS AND METHODS:

This is a retrospective study of all the patients who had presented in RIMS kadapa from year 2012 to 2015.exclusion criteria were the presence of more than 1 hernia signs of infection recurrent incisional hernia.Patients records were examined for age sex surgical technique post operative complications.All the surgeries were performed under spinal anaesthesia ceftrioxone plus antibiotic prophylaxis was given.Anatomical repair was done by approximating the edges of fascia in the midline with continous polypropylene sutures.Mesh repair was done by keeping the mesh on defect so as to extend 2 to 4 cm beyond the edges of fascia and suturing it to abdominal wall with interrupted sutures with polypropylene.A suction drain was kept in all the cases post operatively all the patient received ceftriaxone, amikacin and analgesics.All the results are expressed in percentage.

RESULT In our study 120 cases of incisional hernia operated were studied.incisional hernia more common in females(table1).Out of 120 cases of incisional hernia 52 were males and 68 were females.From table (2) we can learn that incidence is more common in age group of 30 to 50.Pain was most common symptom followed by swelling(table3).In our study 6 patients having wound infection post operative course is described in table(3).Reccurences have been noted in 33 patients.Out of this 20 patients have recurrences following anatomical repair,there was no mortality in the study.

GENDER DISTRIBUTION (TABLE 1)

	Anatomical repair	Mesh repair	total
N	55	65	120
M: F	22:33	30:35	52:68

DISCUSSION :

Incisional hernia is the 2 nd most comman hernia among all the hernias and relatively more common in females.This is because of laxity of abdominal muscles due to multiple pregnancies and also increased incidence of obesity.In anatomical repair of incosional hernia the edges of defect are brought together which may lead to excessive tension and subsequent wound dehiscence or AGE DISTRIBUTION (TABLE 2)

Age group	number	%
21-30	30	
31-40	32	
41-50	40	
51-60	12	
61-70	06	

herniation as a result of tissue ischemia and cutting of suture through the tissue (11).With prosthesis mesh defect of any size can be repaired without tension .In addition polypropylene mesh by indusing an inflammatory response sets up a scaffolding that inturn induce the synthesis of collagen .Infection did not lead to removal of mesh in this and most other series(12)but it was a risk factor for recurrence. Therefore administration of broad spectrum antibiotic at the induction of anaesthesia is recommended(13).

POSTOPERATIVE COMPLICATIONS

characteristic	Anatomical repair	Mesh repair	Total
Pain	55	65	120
Hematoma	04	06	10
Wound infection	02	04	06
Recurrence	20	13	33
mortality	0	0	0

On the basis of our results we recommend attachment of the prosthesis mesh over the defect with an overlap of 4-5 cms and the polypropylene mesh suture to the surrounding fasia with intervals not more than 2-3 cms between the sutures .Bulge must be prevented but the mesh should not be implanted under tension with through patient evaluation and meticulous operative technique, use of suction drain postoperative broad spectrum antibiotic, complications rates in our study were minimized.Our study establishes the superiority of mesh repair over anatomical repair

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with regard to the recurrence of hernia.

CONCLUSION : Inciosinal hernia is a comman complication following abdominal surgeries and is relatively more common in females compared to males. In conclusion mesh repair with polypropylene mesh is superior to suture repair with regard to the recurrence of hernia.

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