

Research Article**Comparison of Efficacy of Mesh Repair versus Sutures for Para Umbilical Hernias In Terms Of Recurrence****¹Haris Manzoor Bhatti, Saima Hanif
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Email: javairiasahar06@gmail.com, Cell No.: +92306-0406649**ABSTRACT****Aim:** Comparison of efficacy of mesh repair versus sutures for para umbilical hernias in terms of recurrence.**Methods:** A total of 100 cases (50 in mesh and 50 in suture repair) group were enrolled in the study on the basis of presence of para-umbilical hernia in either gender between 20-60 years. The cases not liable to complete the follow up and strangulated and obstructive para umbilical hernia were excluded from this randomized control trial. A special proforma was designed to collect the data from the cases under study. We enrolled these cases from OPD and emergency department. Side effects/complications of mesh repair and sutures were explained to the patients. History and physical examination of these cases was done. Two groups named A & B were selected. Group-A cases underwent mesh repair while B group was allotted to the cases undergoing suture repair. Proline-1 was used in suture repair while proline mesh of various sizes depending on the size of hernia was used. All the cases were done under supervision of a single consultant having adequate experience of hernia repair. Departmental protocols were adopted for both of the techniques, after performing the repair, all cases were asked for followup and final followup was 6 months. On final followup we recorded recurrence of the disease i.e. recurrence of hernia. **Results:** In this study, in Group-A, 42%(n=21) and 48%(n=24) in Group-B were between 20-40 years of age while 58%(n=29) in Group-A and 48%(n=24) in Group-B were between 41-60 years of age, mean±sd was calculated as 38.14±9.14 and 40.37±10.84 respectively. 62%(n=31) in Group-A and 66%(n=33) in Group-B were female whereas 38%(n=19) in Group-A and 34%(n=17) in Group-B were males. On comparison of both techniques, we found recurrence rate as 10% in Group-A and 24% in Group-B, p value was 0.000 showing a significant lower rate in Group-A.**Conclusion:** It is concluded that the recurrence rate of hernia is significantly lower in mesh group when compared with suture group.**Keywords:** *Para-umbilical hernia, mesh repair, sutures, recurrence of hernia***INTRODUCTION**

Para-umbilical and umbilical hernias are common surgical problems in Pakistan.¹ Multi-parity and increased body mass index are potential risk factors in primary and recurrent cases.²⁻³ The

commonly involved sites are umbilicus, groin, semilunar line of spiegelhel, linea alba, surgical incisions and diaphragm.⁴ To choose an appropriate surgical technique is still under

debate. Modified Mayo’s overlap technique is most established and simplest technique, non-absorbable material without using drain or a mesh is used in this technique,⁵⁻⁶ but the use of prosthesis increases the risk of infection. The risk of infection is reduced by using antimicrobial meshes by adopting laparoscopic approach.⁷

Recurrence of hernia is the most painful complication causing financial and psychological trauma. Previously, sutures were used to repair hernia, which caused recurrence of the morbidity; however, better technique was the need of the time.⁸ For the last 10-15 years, mesh repair shown promising results and also has decreased risk of recurrence.⁹ This study will expedite the use of better technique while dealing with para umbilical repair considering its complications like recurrence.

PATIENTS AND METHODS

A total of 100 cases (50 in mesh and 50 in suture repair) group were enrolled in the study on the basis of presence of para-umbilical hernia in either gender between 20-60 years. The cases not liable to complete the follow up and strangulated and obstructive para umbilical hernia were excluded from this randomized control trial. A special proforma was designed to collect the data from the cases under study. We enrolled these cases from OPD and emergency department. Side effects/complications of mesh repair and sutures were explained to the patients. History and physical examination of these cases was done. Two groups named A & B were selected. Group-A cases underwent mesh repair while B group was allotted to the cases undergoing suture repair. Proline-1 was used in suture repair while proline mesh of various sizes depending on the size of hernia was used. All the cases were done under supervision of a single consultant having adequate experience of hernia repair. Departmental protocols were adopted for both of the techniques, after performing the repair, all cases were asked for followup and final followup was 6 months. On final followup we recorded recurrence of the

disease i.e. recurrence of hernia. Computer software named SPSS was used to analyze the collected data of the study. Chi square test was used to compare recurrence rate of hernia in both groups.

RESULTS

In this study, out of 50 cases in Group-A, 42%(n=21) and out of 50 in Group-B, 48%(n=24) were between 20-40 years of age while 58%(n=29) in Group-A and 48%(n=24) in Group-B were between 41-60 years of age, mean±sd was calculated as 38.14±9.14 and 40.37±10.84 respectively. (Table No. 1) 62%(n=31) in Group-A and 66%(n=33) in Group-B were females whereas 38%(n=19) in Group-A and 34%(n=17) in Group-B were males. (Table No. 2). On comparison of both techniques, we found recurrence rate as 10% in Group-A and 24% in Group-B, p value was 0.000 showing a significant lower rate in Group-A. (Fig. 1)

TABLE 1: AGE DISTRIBUTION (n=100)

Age (in years)	Group-A (n=50)		Group-B (n=50)	
	No. of patients	%	No. of patients	%
20-40	21	42	24	48
41-60	29	58	26	52
Total	50	100	50	100
mean±sd	38.14±9.14		40.37±10.84	

TABLE 2: GENDER DISTRIBUTION (n=100)

Gender	Group-A (n=50)		Group-B (n=50)	
	No. of patients	%	No. of patients	%
Male	19	38	17	34
Female	31	62	33	66
Total	50	100	50	100

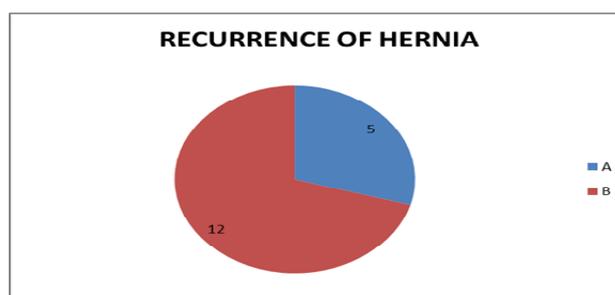


Fig. 1

DISCUSSION

Though various surgical repairing techniques are evaluated in literature, however, herniorrhaphy by using suturing technique and Mayo's technique are still the most commonly used techniques, but the recurrence rate varied between 25-50% in all these methods.¹⁰ The rate of hernias is still higher after the 4th decade of life.¹¹ The high female preponderance can be attributed to multiparity and obesity. This compares with our results, as we recorded more than 60% of the cases were females. The results of our study are comparable with a study by Malik AM and others who compared the efficacy of mesh and suture repair and recorded a significant difference regarding recurrent rate on 3 years follow up period, i.e. 23/101 (22.77%) in suture group and 10/135 (7.40%) in cases undergoing mesh repair.⁸ Another study by Arroyo A et al¹² hernia recurrence was recorded significantly higher in cases with suture repair (11 per cent) as compared to those with mesh repair (1 per cent) (P value: 0.001), they were of the view that prosthetic repair should be considered as the standard treatment for primary umbilical hernia repair. Berger and others¹³ stated that no difference in recurrence was reported in their study (5.6% in mesh v/s 7.5% suture group), $p=0.53$, our findings are in contrast with these findings. A study by Ahmad KL who used Mayo's suture repair and compared it with Onlay mesh repair, they recorded the recurrence rate of hernia in (10%) of the cases with mesh repair whereas it was found in (18.8%) in cases with suture repair.¹⁴ In last, the results of this study favor the use of mesh repair regarding controlling the recurrence rate of hernia when compared with suture group.

CONCLUSION

- It is concluded that the recurrence rate of hernia is significantly lower in mesh group when compared with suture group.

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