

Morbidity Related to Incisional Hernia Repair with Abdominoplasty

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Incisional Hernia
Repair with
Abdominoplasty

ABSTRACT

Objective: To find out the morbidity while repairing incisional hernia with abdominoplasty and comparing it with incisional hernia repair alone.

Study Design: randomized prospective study

Place and Duration of Study: This study was conducted at the Surgical Unit of Allama Iqbal Memorial Teaching Hospital Sialkot from Jan 2015 to Dec 2019.

Materials and Methods: A total of 50 cases were randomized prospectively to compare the repair of incisional hernia isolated/combined with abdominoplasty. This is randomized prospective studies which is comparing two groups of patients, one small incisional hernia repair and second one repair of incisional hernia with abdominoplasty, in the general surgical unit of a teaching hospital.

Results: The incidences were more in female as compared to male, significant relationship found between two groups regard to BMI (33.28 vs 34.96) (p 0.002), number of operation (p 0.001), defect size (p 0.001), mean hospital stay (p 0.001), insignificant relation found in regard to gender, residence, complications and recurrence (p-value>0.05).

Conclusion: Post incisional hernia repair is still a challenge for surgeon to combine the two procedures to improve the quality of life with low morbidity and recurrences in well selected patients.

Key Words: Incisional Hernia, Meshoplasty, Abdominoplasty, Seroma, Recurrence

Citation of article: Hussain S, Malik F, Zulfiqar F. Morbidity Related to Incisional Hernia Repair with Abdominoplasty. Med Forum 2020;31(7):71-73.

INTRODUCTION

Tummy Tuck is an aesthetic surgery to remove excessive protruded skin and fat by a plastic surgery carrying high morbidity¹⁻², the purpose of removal of excessive skin to tighten the laxity of abdominal wall musculature thus creating an umbilicus and leaving behind a minimal scarring. With the social awareness and morbidity associated with the obesity, few patients insist their physician for their removal of the skin fat in one sitting, forcing their physician to combine performing hernioplasty and abdominoplasty⁴⁻⁶.

So, there is rise in the incidence of the complications postoperatively which may be immediate but life-threatening complications like deep vein thrombosis, pulmonary embolism¹² and complications like hematoma, seroma, wound necrosis, wound dehiscence may occur within weeks¹³ and complications like scar hypertrophy and nerve entrapment may appear after few months¹⁴.

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Received: March, 2020

Accepted: April, 2020

Printed: July, 2020

So, the main objective of our study was to find out the morbidity associated with tummy tuck while repairing the incisional hernia and comparing it to incisional hernia repair alone for improvement in their quality of life.

MATERIALS AND METHODS

This is randomized prospective studies which is comparing two groups of patients, one small incisional hernia repair and second one repair of incisional hernia with abdominoplasty, in the general surgical unit of a teaching hospital.

Inclusion criteria: This study includes patients above 40 years of age with no co - morbidity like hepatic, renal, cardiac, pulmonary disease and bleeding disorders. The conformation of the group/defect within 5 to 10 cm seen through abdominal ultrasonography or CT scan abdomen and this is located between umbilicus and pubic symphysis.

Exclusion criteria: Defects smaller or greater than 5 to 10cm, the patients with signs and symptoms of strangulation, the patients below the age of 40 and with comorbidity like tuberculous abdomen, intestinal neoplasia and other autoimmune diseases.

Selection of the patients was recognized on the day of operation with blinding divided into incisional hernia repair group and incisional hernia with abdominoplasty, the data was collected and which was analyzed later.

Data analysis: Descriptive statistics were characterized in the form of means, (standard deviations) frequency

(percentage). Normally distributed data were compared with student t test while dichotomous were made by using Pearson test, smaller group analyzed with Fischer exact test where p value <0.05 considered significant by using SPSS 22.

RESULTS

The majority of the patients were female (18/25(72%) in group A, 15/25(60%) in group B) and the mean age of the two groups was not having any difference (54.6yrs group A, 51.8yrs in group B). The BMI of the group with abdominoplasty (33.28 group B) was higher than the group without abdominoplasty (34.96 group A). The 45(90%) patients belonged to urban area as compared to 5(10%) patients belonged to rural areas, the most involved sites were the medial site in 35(70%) patients as compared to 15(30%) patients on lateral sites of previous operations, the defect size which was assessed on CT scan or on ultrasonography between pubic symphysis and umbilicus (7.32cm vs 11.36cm respectively). These patients were also assessed postoperatively regarding their mean hospital stay which was slightly more in abdominoplasty case as compared to isolated hernioplasty while post-operative complications like wound necrosis, seroma, hypertrophic scar were more in abdominoplasty than just pain in isolated hernioplasty.

Table No.1: Age and sex

	Hernia Repair Without Abdomino-plasty (n=25)	Hernia Repair With Abdomino-plasty (n=25)	p-value
Age (Years)	54.60±12.39	51.88±11.91	0.433
BMI (Kg/m ²)	33.28±1.9	34.96±1.64	0.002
Number of Operations			
One	24 (100)	0 (0)	<0.001
Two	0 (0)	19 (100)	
Three	1 (14.3)	06 (85.7)	
Sex			
Male	08 (57.1)	06 (42.9)	0.529
Female	17 (47.2)	19 (52.8)	
Residence			
Urban	24 (53.3)	21 (46.7)	0.349
Rural	01 (20)	04 (80)	
Location			
Medial	19 (54.3)	16 (45.7)	0.355
Lateral	06 (40)	09 (60)	
Defect Size	7.32±1.97	11.36±1.60	<0.001

Majority of operations were conducted 1 hour or less than 1 hours in group A and more than 1 hour in group B, with very low rate of recurrence (3/50,3/50) in both groups postoperatively. On further data analysis while comparing the results significant relationship (p-value<0.05) was found between BMI, number of operations,

defect size, hospital stay and post-operative complications while no significance (p-value>0.05) was found regarding age, gender, residence and recurrence as shown in table 1 and 2.

Table No.2: Mean Hospital Stay

	Hernia Repair Without Abdomino-plasty (n=25)	Hernia Repair With Abdomino-plasty (n=25)	p-value
Mean Hospital Stay (Days)	43.56±4.05	68.72±5.38	<0.001
Complications			
None	17 (51.5)	16 (48.5)	<0.045
Pain	5 (50)	5 (50)	
Necrosis	0 (0)	01 (100)	
Seroma	0 (0)	03 (100)	
Scar	3 (100)	0 (0)	
Recurrence			
Yes	03 (50)	03 (50)	1.000
No	22 (50)	22 (50)	

DISCUSSION

This study was carried out in order to compare the results of the repair of incisional hernia with and without abdominoplasty, to see the demographic and clinical difference pre operatively and post operatively which have already been studied in various other studies with same conclusions^{15, 16}. The repair of the incisional hernia is a challenge both for the surgeons and the society. However, it may coexist with divarication thus producing a lot of stretching force on the skin leading to demand of the abdominoplasty in these patients. These constructions are not so simple to decide and implement thus require careful monitoring preoperatively and needs close work up before making any decision if correction is to be advised.

The mean age which was found in the repair of the incisional hernia with and without abdominoplasty is inconsistent with other studies carried out in this context¹⁷. The cases were found more in the female as compared to the male while comparing the results in both groups¹⁸. The most of these patients were belonging to the urban areas both groups with and without hernioplasty due to their life style, socioeconomic status and obesity, acquired as a result of hoteling, high caloric food consumption and sedentary life styles. Therefore, BMI of both groups were also compared which was found to be very high in the patients with repaired hernia with abdominoplasty as compared to those patients in which repair was done without abdominoplasty. This study was in consistent with the study done in other researches¹⁹. Similarly, there was a great debate regarding the defect size between these two groups but the results were satisfactory and encouraging in both groups. Likewise, no difference was found at the actual site of the operation as the mid line/para median incisions got more herniation as compared to the lateral site of involvement²⁰. The post-operative complications like pain and nerve entrapment with sensory loss was also

found in both groups which was not consistent with the study of the Von Sperling²¹. While the presence of the seroma and tissue necrosis were common in the group of repair of incisional hernia with abdominoplasty so we have found very low rate of post-operative complications in our study while others have reported seroma to occur in 4.7% to 7.14% in cases of full repair with abdominoplasty²². Very few cases of recurrence have been reported in both groups in our study, as compared to the recurrence rate as researched by other researchers like recurrence rate 49% with open repair of incisional hernia²³. All the patients of group were followed in outdoor and they have been found very much satisfied with regard to their surgical procedures in respect to their quality of improvement in their life, satisfaction and self-esteem²⁴.

CONCLUSION

Incisional hernia repair is still a challenge for surgeons to combine the two procedures safely with considerable improvement in the quality of life, low morbidity and recurrence so thus conveying message for surgeons to recommend a simultaneous repair with Tummy Tuck in a well selected patient.

Author's Contribution:

Concept & Design of Study: Sajid Hussain
 Drafting: Fatima Zulfiqar
 Data Analysis: Farhan Malik
 Revisiting Critically: Fatima Zulfiqar
 Final Approval of version: Sajid Hussain

Conflict of Interest: The study has no conflict of interest to declare by any author.

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