CODEN [USA]: IAJPBB ISSN : 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES
SJIF Impact Factor: 7.187
http://doi.org/10.5281/zenodo.4318782

Avalable online at: http://www.iajps.com *Research Article*

FREQUENCY OF EARLY COMPLICATION IN MESH REPAIR OF PARAUMBILICAL HERNIA

[1]Dr.Komal Mushtaq, [2]Dr.Arif Hussain, [3] Dr.Ammara Akbar

[1]Riphah Islamic International Medical College, [2]Faisalabad Medical University, Faisalabad 3 Aziz Fatima Medical and Dental College Faisalabad

Article Received: October 2020 **Accepted:** November 2020 **Published:** December 2020

Abstract:

Objective- *This study aimed to analyze the"frequency of early complications in mesh repair of paraumbilical hernia."This is a descriptive case series study.*

Methodology- *this study was conducted in Holy Family Hospital Rawalpindi where total 170 patients were selected including both males and females having the age between 20 to 50 years. To look for early complication like hematoma formation, seroma, and wound infection, every patient were followed in post -operative period. Every patient signed a written consent paper. SPSS ver 20 was used for statistical analysis. Percentage and frequency has been calculated for hematoma formation, seroma, wound infection and gender while for BMI and age Mean standard deviation was calculated. To address effect modifiers data has been stratified for BMI, gender and age.*

Results- *The selected people belonged to the agr group of 20 to 50 years with mean age of 42.1±6.9 years. While majority of the selected patients i.e. 86.5% or N=147 belonged to the age group of 36 to 50 years. The male to female ratio of selected patients was 1:4 i.e.in selected patients 136 are males and 34 are females. The mean BMI was 30.3±2.8 Kg/m2 ranged from 24.0 Kg/m2 to 34.8 Kg/m2. Among the various complications, one of the most frequent complication was wound infection which was observed in 8.8% i.e. n=15 then seroma in 7.1% i.e. n=12 and hematoma formation in 3.5% i.e. n=6. When stratified, there was no significant difference in hematoma formation, seroma, wound infection across various subgroups based on BMI, gender, age of patient.*

Conclusion- *Patients suffering mesh repair of paraumbilical hernia, seroma formation and wound infection were observed in a considerable proportion which warrant appropriate antibiotic prophylaxis and meticulous surgical dissection and minimize the chances of such kind of complications "as well as watchful follow up to timely identify and treat at the time of occurrence."*

Key Words: *Complications, Mesh Repair, Paraumbilical Hernia.*

Corresponding author:

Dr Komal Mushtaq

Riphah Islamic International Medical College.

QR code

Please cite this article in press komal mushtaq et al, ***Frequency Of Early Complication In Mesh Repair Of Paraumbilical Hernia.,*** *Indo Am. J. P. Sci, 2020; 07(12).*

INTRODUCTION:

Through the cavity walls the presentation of viscous is called hernia. Normally in adult's umbilical hernia are very common which are responsible for 3-8% abdominal hernias. Normally the causes of umbilical hernias are large abdominal tumors, multiple pregnancy, ascites, and obesity. As compared to abdominal hernias in paraumbilical hernias visual rupture, skin ulceration, strangulation, obstruction and irreducibility are very common. Hernia recurrence, paralytic ileus, bowel injury, wound infection, hematoma, and seroma are the potential complication which caused due to umbilical hernia. In all of these complications' infection require more care. That's why after mesh repair proper precautions should be taken to lessen the infection.

The rationale of this study is to highlight main complications occurred in early stages as in this area the available literature is not enough, and this study would be very helpful in early diagnosis and treatment. With this the incidence of wound infection can be minimized which may be responsible for bad scarring and recurrence of wound. By adopting proper measure rate of morbidities can be reduced due to this. This study aimed to analyze the frequency of early complications in mesh repair of paraumbilical hernia. This is a descriptive case series study.

MATERIALS AND METHODS:

This study was conducted in Holy Family Hospital Rawalpindi, where total 170 patients were selected including both males and females having the age between 20 to 50 years. Patients admittedin emergency due to severe conditions were excluded from this study as they may have strangulated or obstructed hernia. Patients having other diseases like diabetes were also excluded. A written consent paper was signed by all the patients. A performa was predefined to get the personal data of selected subjects. To observe any sign f infection or inflammation hernia was examined. Every patient signed a written consent paper. Expert consultant surgeons who had handsome experience in paraumbilical hernia repair pr open mesh done all surgery. Hernia sac was removed in this procdure. Beneath the hernia mesh was placed and mesh was attached with stronger tissue using sutures sewn. Beyond the hernia edges upto 3 to 4cm mesh was extended and for this sutures and polypropylene mesh was used. To look for early complication like hematoma formation, seroma, and wound infection, every patient were followed in post -operative period. According to operational definitions hematoma and seroma develops within 3 days after operation and with 5 to 7 days wound infection occurs. SPSS ver 20 was used for statistical analysis. Percentage and frequency has been calculated for hematoma formation, seroma, wound infection and gender while for BMI and age Mean standard deviation was calculated. To address effect modifiers data has been stratified for BMI, gender and age.

RESULTS:

The selected people belonged to the agr group of 20 to 50 years with mean age of 42.1±6.9 years. While majority of the selected patients i.e. 86.5% or N=147 belonged to the age group of 36 to 50 years. The male to female ratio of selected patients was 1:4 i.e.in selected patients 136 are males and 34 are females. The mean BMI was 30.3±2.8 Kg/m2 ranged from 24.0 Kg/m2 to 34.8 Kg/m2. Among the various complications, one of the most frequent complication was wound infection which was observed in 8.8% i.e. n=15 then seroma in 7.1% i.e. n=12 and hematoma formation in 3.5% i.e. n=6.

When stratified, there was no significant difference in hematoma formation, seroma, wound infection across various subgroups based on BMI, gender, age of patient. Of the total 170 patients, 23 were in age group 20-25yrs, among these only 2% got wound infection and 137 patients were in age group 36-50yrs, among these 137 patients, 13(8.8%) got infection. Which shows no significant effect of age on wound infection?6 patients having BMI between 25-30kg/m2, and out of these 6 pt no one got wound infection, 71 patients having BMI between 25-30 kg/m2and out of these 6(8.5%) got infection, 93 patients had BMI between 30-35 kg/m2 out of which 9(9.7%) got wound infection. Regarding seroma, 1(4.3%) pt in age group 20-35yrs got post-operative seroma and 11(7.5%) pts in age group 36-50yrs got seroma. 2(5.9%) males and 10(7.9%) females got seroma. On basis of BMI, no pt of BMI between 20-25 kg/m2got seroma, where-as 3(4.2%) and 9(9.7%) of patient with BMI 25-30 kg/m2 and 30-35 kg/m2 respectively got seroma.

Table 1. Basic data of this study

Characteristics	Participants n=170
Age (years)	42.1±6.9
• 20-35 years	23 (13.5%)
• 36-50 years	147 (86.5%)
Gender	
• Male	34 (20.0%)
• Female	136 (80.0%)
BMI (Kg/m^2)	30.3±2.8
• 20-25 Kg/m^2	6 (3.5%)
• 25-30 Kg/m^2	71 (41.8%)
• 30-35 Kg/m^2	93 (54.7%)

Table 2. Frequency of Various Complications

Complications	Frequency (n)	%age
Wound Infection	15	8.8
Seroma	12	7.1
Hematoma	6	3.5

DISCUSSION:

Normally the causes of umbilical hernias are large abdominal tumors, multiple pregnancy, ascites, and obesity. As compared to abdominal hernias in paraumbilical hernias visual rupture, skin ulceration, strangulation, obstruction and irreducibility are very common. Hernia recurrence, paralytic ileus, bowel injury, wound infection, hematoma, and seroma are the potential complication which caused due to umbilical hernia. In all of these complications' infection require more care. That's why after mesh repair proper precautions should be taken to lessen the infection. Among the different intricacies, wound disease was the most successive and was seen in 15 (8.8%) patients. An equivalent recurrence of wound contamination has been accounted for by Khan et al. who detailed that 12.5% of patients going through cross section fix of paraumbilical hernia gained wound infection18 . Habib et al. in 2017 (7.5%) and Abdel-Baki et al. in 2007 (9.5%) additionally revealed tantamount recurrence of wound disease following cross section fix of paraumbilical hernia [19,20]. In the current examination, seroma development was seen in 7.1% patients. Afzal et al. in another nearby examination, noticed comparable recurrence of seroma arrangement after network fix of paraumbilical hernia and detailed that 6.3% of patients created seroma in the early postoperative period.

We saw that 3.5% of patients going through cross section fix of paraumbilical hernia created hematoma in the early post-usable period. Our perception is in line with that of Aziz et al. who revealed comparative recurrence of 4.0% for post-usable hematoma arrangement. The current stud has recognized injury contamination and seroma development as expected incessant confusions of network fix of paraumbilical hernia. It is hence prudent that fastidious dismemberment should be received during the medical procedure and dead space should be suitably destroyed to diminish the probability of seroma development. The patient ought to get suitable anti-microbial prophylaxis to diminish the danger of wound disease. The specialist ought to likewise be watchful in the post-employable time frame to ideal recognize these entanglements once they happen as convenient ID also, the board can improve the patient result.

CONCLUSION:

Patients suffering mesh repair of paraumbilical hernia, seroma formation and wound infection were observed in a considerable proportion which warrant

appropriate antibiotic prophylaxis and meticulous surgical dissection and minimize the chances of such kind of complications as well as watchful follow up to timely identify and treat at the time of occurrence.

REFERENCE:

1. Fitzgibbons RJ, Force RA. Clinical practice. Groin hernias in adults. N Eng J Med 2015;372(8): 756-63.
2. Holihan JL, Liang MK. Abdominal Wall Hernias: Emergency Ventral Hernia Repair. Common Problems in Acute Care Surgery. Springer: Cham; 2017.p.391-401.
3. Purushotham G, Revanth K, Aishwarya M. Surgical management of umbilical and paraumbilical hernias. Int Surg J 2017;4(8):2507-11.
4. Birindelli A, Sartelli M, Di Saverio S, Coccolini F, Ansaloni L, van Ramshorst GH, et al. update of the WSES guidelines for emergency repair of complicated abdominal wall hernias. World J Emerg Surg 2017;12(1):37.
5. Kulaçoğlu H. Current options in umbilical hernia repair in adult patients. Turkish Journal of Surgery/Ulusal cerrahi dergisi 2015;31(3):157.
6. Kaufmann R, Halm JA, Eker HH, Klitsie PJ, Nieuwenhuizen J, van Geldere D, et al. Mesh versus suture repair of umbilical hernia in adults: a randomised, double-blind, controlled, multicentre trial. The Lancet 2018;391(10123):860-9.
7. Hajibandeh S, Sreh A, Khan A, Subar D, Jones L. Laparoscopic versus open umbilical or paraumbilical hernia repair: a systematic review and meta-analysis. Hernia 2017;21(6):905-16.
8. Shehryar HA, Shahka MA, Javed MU. Comparison of Sublay versus Onlay Mesh Technique of Ventral Hernia Repair. Pak J Med Health Sci 2018;12(1): 57-9.
9. Janis JE, Khansa I. Evidence-based abdominal wall reconstruction: The maxi-mini approach. Plastic and Reconstructive Surg 2015;136(6):1312-23.
10. Meagher H, Moloney MC, Grace PA. Conservative management of mesh-site infection in hernia repair surgery: a case series. Hernia 2015;19(2):231-7.
11. Jani K, Contractor S. Retrorectus sublay mesh repair using polypropylene mesh: Cost-effective approach for laparoscopic treatment of ventral abdominal wall hernias. J Minimal Access Surg 2019;15(4):287.
12. Kalim M, Khan S, Ali A, Ullah R, Khan M. Para Umbilical Hernias. Prof Med J 2018;25(01):21-5.
13. Sarhan AE, Sherif T, El-Kenany Y. Open preperitoneal mesh repair versus laparoscopic transabdominal preperitoneal repair of groin hernia under spinal anesthesia: results of a prospective randomized multicenter trial. Egypt J Surg 2016;35(2):132-9.
14. Tunio NA. Hernioplasty: Tension free mesh repair versus Mayos repair for umbilical hernias. J Pak Med Assoc 2017;67(1):24-6.
15. Abo-Ryia MH, El-Khadrawy OH, Moussa GI, Saleh AM. Prospective randomized evaluation of open preperitoneal versus preaponeurotic primary elective mesh repair for paraumbilical hernias. Surgery Today 2015;45(4):429-33.
16. Ibrahim M, El Shamaa H, Ads E. Efficacy of combined ultrasound guided anterior and posterior rectus sheath block for postoperative analgesia following umbilical hernia repair: Randomized, controlled trial. Egyptian J Anaesthesia 2016; 32(4):519-26.
17. Kaufmann R, Halm JA, Eker HH, Klitsie PJ Nieuwenhuizen J, van Geldere D, et al. Mesh versus suture repair of umbilical hernia in adults: a randomised, double-blind, controlled, multicentre trial. Lancet 2018;391(10123):860-9.
18. Khan A, Samiullah, Ali M, Saifurehman, Syed A. Mesh versus simple anatomical repair of epigastric and paraumbilical hernias. JSMC 2016;6(1):1-6.
19. Habib FM, Sallam AM, Gertallah LM. Mesh or not in the repair of complicated umbilical hernia in cirrhotic patients with decompensated liver cell failure. Egypt J Surg 2017;36(4):440-5.
20. Appleby PW, Martin TA, Hope WW. Umbilical hernia repair: overview of approaches and review of literature. Surg Clin 2018;98(3):561-76.