

# Surgery for Paraumbilical Hernia at Allama Iqbal Memorial Teaching Hospital, Sialkot - Analysis of 200 patients

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## ABSTRACT

**Aim:** To study the outcome of the patients undergoing surgery for paraumbilical hernias at Allama Iqbal Memorial Teaching hospital, Sialkot.

**Study design:** Prospective study.

**Place & duration of study:** Department of General Surgery, Khawaja Muhammad Safdar Medical College, Sialkot from April 2015 to January 2019.

**Methods:** All patients serially presented in the surgery Department of Allama Iqbal Memorial hospital for surgery for paraumbilical hernia were registered. Male and female patients of all age groups were included. All patients were admitted, complete history taken, examination and medical history including comorbid conditions documented. All patients were operated by open surgical technique. Laparoscopic surgery was not included in this study. The patients were classed in two groups: Group I Onlay Mesh Repair and Group II Sublay Mesh Repair. Only patients presenting for repair for the first time were included. Recurrent or incisional hernias were excluded from the study. Minimum of three months of follow up was must for inclusion in the study.

**Results:** Total number of patients in our study were 419(100%), with the age of 15-79 years having mean age of 42+9 years, in these patients, males were 76 and females were 343 and male to female ratio was 1:5.2, Group I – Onlay Mesh Repair patients were 357 and Group II – Sublay Mesh Repair patients were 62, Obesity was present in 102 and 84 were Diabetics and 34 were hypertensives, 56 patients gave the history of smoking and Asthma was also present in 23 patients.

**Conclusion:** Ventral hernias being a common surgical problem, there is a vast experience to most of surgeons and its surgery is quite safe and associated with few complications.

**Keywords:** Ventral hernias, Onlay, Sublay, Mesh

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## INTRODUCTION

Para umbilical hernias are 6% of all of the anterior abdominal wall hernias. Women are more prone to these hernias than men. They can be congenital, but mostly they are acquired<sup>1</sup>.

The causes of para umbilical hernias are the situations in which anterior abdominal wall becomes weak or thin, like in obese persons in pregnancy, multiparity and cirrhotic liver diseases.

Wasting of abdominal muscles like in poor status of nutrition can also be a cause of these hernias<sup>2</sup>.

The hernia has a sac which protrudes through a defect in the abdominal wall, the defect has a margin which is fibrous. Contents of the sac can be omentum, extraperitoneal fat or bowel. When neck of the sac is narrowed as in larger hernias, chances of complications like irreducibility, obstruction, strangulation and inflammation are increased. These conditions need emergency surgery, otherwise, bowel or omentum can become gangrenous<sup>3,4</sup>. Paraumbilical hernias present with a bulge which is often on one side of the umbilicus, causing umbilicus to become crescent shaped. The bulge itself can be oval shaped or rounded, it becomes prominent when patient coughs.

These hernias can be a cause of pain and GIT symptoms in some patients<sup>5</sup>.

Paraumbilical hernias can be repaired by either open or laparoscopic techniques. In open technique, less than 1cm defect can be repaired by figure of eight sutures or by darning. Defects of more than 2cm are treated by Mayo's repair. Hernial contents are reduced and any involving bowel which has become non-viable is resected. Defect can also be closed by a double breasting method in two layers<sup>6,7</sup>.

Larger than 2 cm diameter of hernia defect needs closure by a Mesh, which can be placed in many planes i.e; within peritoneal cavity, in subcutaneous area, in retromuscular plane or it can also be placed extraperitoneally<sup>8</sup>.

In Onlay mesh technique, about 5cm border of fascial edge is exposed, apposition of anterior rectus sheath is done, and mesh is placed anterior to it. Sublay mesh repair includes placement of mesh above the peritoneum and posterior rectus sheath<sup>9,10</sup>.

Research about paraumbilical hernias has not been done previously in our hospital. In this study, we collected the information of patients having surgery and assessed the development of comorbid conditions in patients operated at Allama Iqbal memorial teaching hospital which is affiliated with Kh. M Safdar Medical College, Sialkot.

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## PATIENTS AND METHODS

All patients serially presented in the surgery Department of Allama Iqbal Memorial hospital for surgery for paraumbilical hernia were registered. Male and female patients of all age groups were included. This research was approved by the Ethical Committee. All patients were admitted, complete history taken, examination and medical history including comorbid conditions documented. All patients were operated by open surgical technique. Laparoscopic surgery was not included in this study. The patients were classed in two groups: Group I Onlay Mesh Repair and Group II Sublay Mesh Repair. Only patients presenting for repair for the first time were included. Recurrent or incisional hernias were excluded from the study. Minimum of three months of follow up was must for inclusion in the study. Data was entered and analysis done by SPSS v 22.

## RESULTS

General statistics are shown in the Table I  
Complications encountered are recorded in Table II

Table I: General Data

Total no of patients in Study	419 (100%)
Age	15 - 79 years (Mean age 42±9 years)
Males	76
Females	343
Male: Female	1 : 5.2
Group I- Onlay Mesh Repair	357
Group II- Sublay Mesh Repair	62
Obesity	102
Diabetics	84
Hypertensive	34
Smokers	56
Asthmatics	23

Table- II Complications

	Group I- 357 (100%)	Group II 76 (100%)
Prolonged Ileus	8 (2.24%)	2 (2.63%)
Wound Infections	7 (1.96%)	1 (1.31%)
Deep/ Mesh Infection	2 (0.56%)	-
Seroma formation	13 (3.64%)	1 (1.31%)
Hematoma	7 (1.96%)	-
Recurrence	3 (0.84%)	1 (1.31%)
Visceral complications	4 (1.12%)	2 (2.63%)

## DISCUSSION

In our study, Prolonged ileus was present in 2.24% in Group I and 2.63% in Group II, while it was 1.50% in the study by Triantos et al<sup>11</sup>. Our data presented the wound infection rate of 1.96% in Group I and 1.31% in Group II, while data of Lutwak et al<sup>12</sup> showed it to be 2%. Deep/Mesh infection occurred in 0.56% of patients in Group I, while the study of de Goede et al<sup>13</sup> reported a rate of 0.23%.

In Study by Tsimoyiannis et al<sup>14</sup>, Seroma formation was present in 2.67% patients, while this complication was 3.64% in Group I and 1.31% in Group II according to our study. We had hematoma formation in 1.96% in Group I patients, while McKay et al<sup>15</sup> had it in only 0.17%. Group I patients had a recurrence rate of 0.84% and Group II had recurrence in 1.31% patients, while recurrence rate was 1.56% in the data of Lau B et al<sup>16</sup>.

The figure of visceral complications was 1.12% in Group I and 2.63% in Group II, while these occurred in 1.81% in the study by Dabbas et al<sup>17</sup>.

## CONCLUSION

Ventral hernias being a common surgical problem, there is a vast experience to most of surgeons and its surgery is quite safe and associated with few complications.

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