

# Incidence, Patterns of Presentation and Management Outcomes of Obstructed Inguinal Hernias presenting to a Tertiary Care Hospital

MUSHAFIA HASSAN<sup>1</sup>, USAMA IQBAL<sup>2</sup>, MUHAMMAD IRFAN FAZAL<sup>3</sup>, ABRAR ASHRAF ALI<sup>4</sup>, AHMAD UZAIR QURESHI<sup>5</sup>, SHAHID FAROOQ<sup>6</sup>

## ABSTRACT

**Aim:** To discover the extent and operative outcomes of obstructed inguinal hernias in our practice

**Methods:** We analyzed all obstructed hernias in inguinal region, presenting with non-reducible swelling, operated on an emergency basis during a 1-year period. (01/01/16 to 31/12/16) A total of 49 patients with Non-Reducible hernia were evaluated.

**Results:** Overall frequency of obstructed inguinal hernia was 19.6% (49 obstructed out of 250 total presented with inguinal swelling). According to per operative finding 13(26.5%) had omentum only and 36(73.5%) had gut loop Pulse omentum. Gut condition was viable in 44(89.8%) patients and gangrenous in 5(10.2%) patients Hospitalization time was significantly longer for the patients who developed gangrenous gut than those who did not. Resection and repair procedure was done in 45 (91.8%) patients and 1(2%) patients were operated using resection and end-to-end anastomosis of gut procedure. After the procedure a total of 39(79.6%) patients were stayed for 1-3 days in hospital and 10 (20.4%) patients for 3 or more days. The mean hospital study was 1.8±0.98 days.

**Conclusion:** Majority of the patients are treated with reduction & primary repair and a small number having gangrenous gut upon exploration are treated by resection and anastomosis or resection and exteriorization.

**Keywords:** Inguinal hernia, obstruction, anastomosis

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## INTRODUCTION

An obstructed abdominal hernia is a type of irreducible hernia that causes obstruction of the gut loops contained in the hernia sac; if the arterial supply of these contents gets compromised resulting in their infarction, the hernia is said to be strangulated.

Abdominal wall hernias comprise a major percentage of the cases presenting to the Surgical Wards in our set up and obstructed/strangulated hernias constitute most of the most of the surgical emergencies. Inguinal hernias are the most common types of abdominal wall hernias and are most common type of hernias to get obstructed due to the narrow neck of hernia sac.

Presentation is mostly with a swelling above and lateral to pubic tubercle, which become irreducible leading to strangulation or incarceration. Long standing hernias can lead to necrosis of scrotal skin due to pressure. Diagnosis is made on clinical examination. Surgical repair is advocated either by open or laparoscopic technique and the outcome are mostly favorable even though the laparoscopic method is not widely available in our setting.

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*Department of Surgery, Mayo Hospital/KEMU Lahore  
Correspondence to Dr. Mushafia Hassan, HO email:  
mushafiahassan@gmail.com Cell: 03334053055*

For our study, we have collected the data of the patients presenting with obstructed inguinal hernias in the Surgical Outpatient/Emergency Dept. of Mayo Hospital, Lahore over a period of one year and analyzed the patterns of presentation, operative findings (hernial contents and their condition), surgical management (reduction or gut resection) and outcomes of the management.

The objective of the study was to determine the incidence of various patterns of presentation (operative findings, gut conditions) and management outcomes (operative procedures, treatment modalities, intra-operative complications and post operative hospital stay) of Obstructed Inguinal Hernias presenting in the Surgical Out Patient Department/ Emergency Dept. of Mayo Hospital, Lahore over a period of one year.

## MATERIAL AND METHODS

This retrospective observational audit study was conducted in the Department of Surgery, Mayo Hospital, Lahore from 01/01/16 to 31/12/16. Data Collection from patient files through a pre devised Performa. Patients presenting to emergency with symptoms of intestinal obstruction/ incarceration will be included in the study. Patients presenting with reducible/irreducible inguinal hernias but not having

any signs and symptoms of intestinal obstruction and thus could be managed with elective surgery will not be included.

## RESULTS

Overall frequency of obstructed inguinal hernia was 19.6% (49 out of 250) during last 1 year in emergency department. The mean age of those cases of obstructed inguinal hernia was  $46.76 \pm 17.89$  years with age range of 74 years (16 as minimum and 90 as maximum age). A total of 6 (12.2%) patients were treated conservatively and 43 (87.8%) non-conservatively. According to per operative finding 13(26.5%) had omentum only and 36(73.5%) had gut loop plus omentum. Gut condition was viable in 44(89.8%) patients and gangrenous in 5 (10.2%) patients. Reduction and repair procedure was done in 45 (91.8%) patients and 1(2.0%) patients were operated using resection and end-to-end anastomosis of gut procedure and laparotomy with exteriorization of the gut had to be done in 3 (6.1 %) patients. After the procedure a total of 39(79.6%) patients were stayed for 1-3 days in hospital and 10 (20.4%) patients for 3 or more days. The mean hospital study was  $1.8 \pm 0.98$  days.

Table 1: Frequency distribution of procedure, findings and hospital outcome

	Frequency	%age
<b>Procedure</b>		
Conservatively treated	6	12.2
Non-conservatively treated	43	87.8
<b>Contents</b>		
Omentum only	13	26.5
Gut loop + Omentum	36	73.5
<b>Gut condition</b>		
Viable	44	89.8
Gangrenous	5	10.2
<b>Operative procedure</b>		
Reduction and repair	45	91.9
Resection and end to end Anastomosis of gut	1	2.0
Laparotomy + Exteriorization of gut	3	6.1
<b>Post-operative stay in hospital (days)</b>		
1-3 days	39	79.6
3 or more days	10	20.4

## DISCUSSION

Previous researches show that Inguinal Hernias are commonest type of abdominal wall hernias predominantly occurring in male population with peak age distribution 19-79 years with mean of 49.7 years. Presenting symptoms are mostly groin pain, which can sometime be severe. Presentation can also be with symptoms of intestinal obstruction.

In a study done at Wesley Guild Hospital, Nigeria

1. 26.4% of abdominal hernia presented with obstruction
2. Omentum was trapped in (47.%)
3. Gangrenous bowel segments were discovered in (13.6%)
4. Scrotal edema was the commonest complication accounting for 21%, while wound infection occurred in 20%

In our study

- Overall frequency of obstructed inguinal hernia was 19.6%
- The mean age of those cases of obstructed inguinal hernia was  $46.76 \pm 17.89$  years.
- Omentum was trapped in (26.5%)
- (73.5%) had gut loop Pulse omentum.
- Gut condition was viable in (89.8%) patients
- Gangrenous bowel segments were found in (10.2%)
- Resection and repair procedure was done in (91.8%) patients
- Resection and end-to-end anastomosis of gut procedure in (2.0%)
- The mean hospital study was  $1.8 \pm 0.98$  days.

## CONCLUSION

Obstructed Inguinal Hernias form a major fraction of the anterior abdominal wall hernias and predominantly is seen in the male population in our set up. Most of the patients need to be treated surgically rather than conservatively, where upon surgical exploration the contents in about one third of the patients are found to contain only omentum in the hernial sac while major proportion has gut loops, which are viable in most. Majority of the patients are treated with reduction & primary repair and a small number having gangrenous gut upon exploration are treated by resection and anastomosis or resection and exteriorization.

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