



## A CLINICAL STUDY AND MANAGEMENT OF ACUTE INTESTINAL OBSTRUCTION

**Dr. D.S. Chakravarthy**

MS Professor, Department Of General Surgery Kurnool Medical College

**Dr.S.Vijaya Shankar**

MS Associate Professor, Department Of General Surgery Kurnool Medical College

**Dr.K.Uday Shankar**

Junior Resident, Department Of General Surgery Kurnool Medical College

**ABSTRACT** **Aims And Objectives:** The current study aims to review the various causes, clinical features and the outcome of surgical procedures in relation to etiological factors in 50 intestinal obstruction patients admitted at Government general hospital, Kurnool July 2020 – July 2022. **Materials And Methods:** This study was done on 50 cases of acute intestinal obstruction that presented to emergency department of government general hospital, Kurnool (July 2020-July 2022). All patients with provisional diagnosis of acute intestinal obstruction were assessed clinically in detail after admission. Investigations done included Hb, Blood counts including TC, DC, ESR, serum electrolytes, X-ray Chest PA view, Plain X-ray abdomen erect film & Ultrasonography abdomen, CECT abdomen. **Results:** The commonest age group affected was 31-40 years. M:F ratio is 2.6:1. In our patients, the main cause of obstruction was obstructed hernia (36%). Adhesions and bands (26%) were the second most common cause of intestinal obstruction followed by sigmoid volvulus (12%), TB abdomen (8%) and malignant obstruction (6%). Surgery was the mainstay of treatment, with herniorrhaphy, adhesiolysis and resection - anastomosis being the most commonly performed procedures. Post-operative complications noted were wound infection (12%), respiratory infection (6%) and prolonged ileus (6%). In the present study of 50 cases, 5 patients (10%) died due to septicemia, leak and MODS. **Conclusion:** The incidence of intestinal obstruction is more common in males, Mode of presentation also differs in different levels of intestinal obstruction, Adhesions accounted for majority of small bowel obstruction (26%), Malignancies are common causes of large bowel obstruction. Early recognition and timely intervention is important to prevent the bowel going for gangrenous changes. Morbidity was due to anastomotic leak, wound infection, chest infection. Prognosis was poor in elderly patients and, in patients with co-morbid conditions, presence of strangulated bowel that required resection & anastomosis and those whose presentation to hospital was late.

## KEYWORDS :

## INTRODUCTION

- Acute intestinal obstruction is one of the commonest surgical emergencies in all age groups.
- It is defined as obstruction in forward propulsion of the contents due to mechanical or neurological causes.
- Success in treatment of patient with acute intestinal obstruction depends largely upon early diagnosis, management and treating the cause of obstruction.

## AIMS AND OBJECTIVES

The current study aims to review the various causes, clinical features and outcome of surgical procedures in relation to etiological factors in 50 acute intestinal obstruction patients admitted at government general hospital, Kurnool July 2020-July 2022.

## MATERIALS AND METHODS

- 50 patients of acute intestinal obstruction presented to opd and emergency department of government general hospital, Kurnool between July 2020-July 2022 were studied.
- All patients with provisional diagnosis of acute intestinal obstruction were assessed clinically in detail after admission.
- Investigations done included Hb, Blood counts including TC, DC, ESR, serum electrolytes, X-ray Chest PA view, Plain X-ray abdomen erect film, Ultrasonography abdomen, contrast enhanced ct abdomen.
- All patients were subjected to surgical intervention with objective to relieve the obstruction.

## Inclusion Criteria:

- Patients of all age groups who attended OPD and emergency department of government general hospital, Kurnool with history and clinical features of acute intestinal obstruction.
- Patients who had hernia with recent onset of irreducibility, pain, constipation and vomitings.
- Intestinal obstruction due to tuberculous etiology were included only after confirmation of histopathological examination of lesion.

## Exclusion Criteria:

- Patients with sub acute intestinal obstruction were excluded from study.

## OBSERVATION AND RESULTS

## Age Distribution

The study was done in all age groups ranging from new born to 85 yrs

AGE	TOTAL CASES
0-10	05
11-20	04
21-30	07
31-40	12
41-50	09
51-60	03
61-70	04
71-80	04
81-90	02
Total	50

## Sex Distribution

Acute intestinal obstruction was commoner in males (72%) than females (28%). Male to female ratio was 2.6:1.

AGE	MALE	FEMALE
0-10	5	0
11-20	1	3
21-30	6	1
31-40	9	3
41-50	7	2
51-60	2	1
61-70	3	1
71-80	2	2
81-90	1	1
TOTAL	36	14

## Mode Of Presentation &amp; Levels Of Obstruction

Small bowel obstructions (41) outnumbered large bowel obstruction (9).

SMALL BOWEL	LARGE BOWEL
41	09

## Etiology

Small Bowel Obstruction

CAUSES	Cases	Percentage
Obstructed inguinal hernia	18	36
Adhesions	13	26

Bands	4	8
TB abdomen	2	4
Intussusception	2	4
Meckles diverticulum	2	4

#### Large Bowel Obstruction

Causes	Cases	Percentage
Sigmoid volvulus	6	12
Neoplasms	3	6

#### Management

##### Small Bowel Obstruction

PROCEDURE	CASES
Hernia repair	10
Resection and hernia repair	08
Adhesiolysis	11
Band release	4
Resection and anastomosis	4
Resection and stoma	4
Total	41

##### Large Bowel Obstruction

PROCEDURE	CASES
Resection and anastomosis	2
colostomy	7

#### Complications

PARTICULARS	NO. OF CASES	PERCENTAGE
Morbidity	12	24
Mortality	5	10

Complications	No. of cases
Wound Dehiscence	3
Chest infection	3
Prolonged ileus	3

#### DISCUSSION

##### Incidence

- In the present series small bowel obstruction contributed to 82% and large bowel obstruction 18%.
- The acute intestinal obstruction occurs in all age groups.
- Maximum incidence was seen between age group of 31–40 yrs (24%).
- In our study the incidence of intestinal obstruction in males was 36 (72%) and that of females was 14 (28%).
- Male to female ratio is 2.6:1.0 (3:1) Fuzan10 and Lee28 reported 2:1 male to female ratio.

##### Etiology & Mode Of Presentation

- In our study the following etiological factors were found,
- Obstructed hernia : 36%
- Adhesions: 26%
- Bands: 8%
- TB abdomen: 04%
- Intussusception : 04%
- Meckel's diverticulum: 04%
- Sigmoid volvulus: 12%
- Malignancy :6%

##### Management

- All cases were operated in this study.
- Adhesiolysis done in 11 cases.
- Resection and anastomosis was done in 14cases ,
- 10 cases of small bowel obstruction(8 obstructed hernia resection and anastomosis with hernia repair done + 2 cases of tubercular stricture of ileum, ileo-transverse anastomosis done)
- 2 Cases of meckels diverticulum.
- 1 case of large bowel (malignancy).
- Release of bands was done in 4 cases.
- Derotation / undoing of volvulus with sigmoidopexy was done in 1 case.
- Only hernia repair done in 10 cases.
- Resection and hernia repair done in 8 cases.
- Colostomy done in 7 cases (2cases of malignancy, 5 sigmoid volvulus)
- Milking of intussusception in 2case.

##### Post Operative Complications

- Wound infection: 6 cases, Chest infection:3 cases, Wound dehiscence:3 cases, Septicemia: 3 cases, Multi organ failure: 1case, Hypothermia:1 case, Deaths:5 cases

#### CONCLUSION

- The occurrence of acute intestinal obstruction is more in small bowel.
- All age groups from newborn to elderly were involved .
- The incidence of intestinal obstruction is more common in males compared to females.
- Intestinal obstruction was found more common in 31-40 years.
- Mode of presentation also differs in different levels of intestinal obstruction, small bowel obstruction mainly present with colicky abdominal pain and vomiting, as compared to large bowel obstruction where distention and constipation were predominant symptoms.
- Obstructed inguinal hernia was the main cause for intestinal obstruction in our study(36%).
- Adhesions accounted for second most common cause of small bowel obstruction (26%).
- Sigmoid volvulus are common causes of large bowel obstruction.
- Tubercular stricture contributed 4% of all cases.
- The clinical examination stressed upon vital signs, per abdominal examination.
- Plain X-ray erect abdomen is the single important diagnostic tool for diagnosing intestinal obstruction and its level of obstruction.
- Early recognition and timely intervention is important to prevent the bowel, going for gangrenous changes.
- Abdomen is literally said as a magic box, any surgeon should be well prepared to take on table proper decision for the found pathology.
- Other causes of acute intestinal obstruction in our series were, volvulus, bands, tubercular stricture, Meckel's diverticulum, intussusceptions and meconium ileus.
- Morbidity was due to , wound infection, chest infection and wound dehiscence, fecal fistula.
- Prognosis was poor in elderly patients and newborns, in patients with co-morbid conditions, presence of strangulated bowel that required resection & anastomosis and those whose presentation to hospital was late.

#### REFERENCES

- Winslet MC.Intestinal obstruction. In: Russel RCG,Williams NS,Bull strode CJK,editors.Bailey & Loves Short practice of Surgery 23 rdedn .2000.Edward Arnold ltd NY.1058-75.
- Jones RS.Intestinal obstruction. In:SabistonDC,Jr.editor. Text book of surgery –The biological basis of modern surgical practice 13th edn. 1986.W.B.Saunders company. 905-13.
- Adesunkanmi AR, Agbakwuru EA. Changing pattern of acute intestinal obstruction in tropical African population. E Afr Med J 1996; 73(11): 727-31
- Chatterjee H, Somasekar SN, Ravishankar N, Madhu CP, Sidesh G, Vasantakumar SB. Adult intussusception. IJS 2000; 62(3): 210- 12.
- Lopez-Kostner F, Hool GR, Lavery IC. Management and causes of acute largebowel obstruction. Surg Clin North Am 1997; 77(6): 1265-90.
- Fuzan M, Kay make E, Harmancioglu O, Astarcioglu K. Principal causes of mechanical bowel obstruction in surgically treated adults in Western Turkey. BJS 1991; 78: 202-03.
- Rai S, Chandra SS, Smile SR. A study of risk strangulation and obstruction ingroin hernias. Aust NZJ Surg1998; 68 (9): 650-54.
- Sarkar PK, Sarkar V. Primary resection and anastomosis associated with maximal rectal stretching (MRS) for treatment of acute sigmoid volvulus. IJS 2000; 62(2): 122-24.
- Bhansali S.K., Desai A.N &Dhabowala, C.B Tuberculous perforation of the small intestine. J.Assoc.phys.India, 16:351-355,1968.