Juni FOR RESERA	Original Research Paper	Surgery		
Thernational	INTESTINAL OBSTRUCTION : ETIOLOGY AND MANAGEMEN	т.		
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KEYWORDS :				

## INTRODUCTION

Acute abdomen is one of the most difficult problems that a general surgeon has to face. Out of the numerous causes of acute abdomen, intestinal obstruction represents one of the most important and common challenge. A better understanding of the pathophysiology of bowel obstruction and the use of isotonic fluid resuscitation, intestinal tube decompression, and antibiotics have greatly reduced the mortality rate for patients with mechanical bowel obstruction Ultimate clinical decisions regarding the management of these patients dictates a thorough history and workup and a heightened awareness of potential complications. Although modern day surgical management continues to focus appropriately on avoiding operative delay whenever surgery is indicated, not every patient is always best served by immediate operation. Certain entities, such as intestinal obstruction secondary to incarcerated abdominal wall hernia, and patients with clinical signs and symptoms suggestive of strangulation do require prompt operative intervention. Other conditions, however, such as postoperative adhesions and neoplastic-associated intestinal obstruction, particularly in patients with numerous previous abdominal procedures, concomitant medical problems, or incomplete or partial obstruction, often justifiably benefit by a trial of nonoperative management. The risk of strangulation with adhesive and neoplastic bowel obstruction is relatively low as compared with incarcerated hernia and volvulus. Close and careful clinical evaluation, in conjunction with laboratory and radiologic studies, will usually dictate the proper course of management in any given case. If any uncertainty exists, prompt operative intervention is indicated

# **AIMS AND OBJECTIVES**

- 1) To study age, sex and other etiological factors regarding intestinalobstruction.
- 2) To compare the causative factors of intestinal obstruction for small and large bowel.
- To determine the criteria for early diagnosis of intestinal obstruction of a strangulating or a non strangulating variety.
   4) To determine the factors affecting morbidity and mortality of intestinal obstruction.
- 5) To establish the importance of Early diagnosis. Timely operation.

### MATERIAL AND METHODS

Sixty patients of intestinal obstruction admitted in a Tertiary Care Hospital, were studied prospectively.

### **Inclusion criteria:**

- 1. Patients of age more than 14 years
- 2. Patients of both small and large bowel obstruction
- 3. Acute, subacute and chronic cases.

### **Exclusion criteria:**

- 1. Patient age < 14 years.
- 2. Pregnancy.

# **METHOD OF COLLECTION OF DATA**

Every patient was examined after taking a detailed history. The history and clinical picture were recorded in a proforma. Preoperative investigations included routine investigations such as hemoglobin, Leukocyte count, and Blood Sugar level and serum electrolytes. Blood grouping and cross matching, electrocardiogram, chest radiograph and diagnostic investigations such as plain x-ray abdomen in erect and supine position were done. In indicated cases Ultrasonography, Computed Tomography of abdomen and pelvis were done to define the:

- 1. Site of obstruction
- 2. Cause of obstruction
- 3. Whether simple or strangulated obstruction depending onclinical and radiological presentation.

This was co-related to the operative findings if the patient was operated. These patients were resuscitated for varying period depending on the condition on arrival. This was done by keeping the patient nil by mouth, nasogastric decompression, intravenous fluids, blood transfusion if required and antibiotics. A close watch was kept on temperature, pulse, Blood pressure, Ryle's Tube aspiration and abdominal girth. Input- output charts were maintained. When the diagnosis of acute intestinal obstruction was certain, and especially in cases of suspected strangulation, operation was undertaken. In cases of adhesive obstruction without strangulation trial with conservative fluids, nil by mouth, nasogastric aspiration and antibiotics was given.

Following criteria were observed for the failure of conservative treatment

- Increase in pain
- Increase in distension.
- Deterioration of vital signs like pulse, blood pressure, respiration, temperature
- Repeat X ray abdomen showing persistent or increased number of air fluid levels
- Leucocytosis, systemic signs of sepsis.

On failure of conservative treatment, surgery was undertaken. In majority of the patients, general anesthesia was administered. Operative procedure varied according to the causative factor. Post operatively, careful monitoring was done with charting the pulse, blood pressure, temperature, input and output volumes, abdominal girth etc. Patients were maintained on intravenous fluids and blood transfusions if required, till bowel sound were established and flatus was passed. Then they were gradually shifted to clear fluids, then liquid diet and later on to full diet. Close watch was kept on possible complications and they were treated immediately after detection. On discharge, a regular follow up was kept for six months.

# RESULTS

 ${\sf Data}\,{\sf was}\,{\sf collected}\,{\sf and}\,{\sf analyzed}.$ 

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TABLE 1: Age Distribution and its relation with Mortality					
AGE (YRS)	No of Pts (%)	No. of deaths			

	NO. OFF (5.(70)	NO. OI GEALIIS
14-20	8 (13.33%)	2 (25%)
21-30	11 (18.33%)	1 (9.09%)
31-40	12 (20%)	2 (16.67%
41-50	8 (13.33%)	0 (0%)
51-60	11 (18.33%)	4 (36.36%)
61-70	7 (11.67%)	1 (14.29%)
>70	3 (5%)	2 (66.67%)
Total	60 (100%)	12 (20%)

#### TABLE 2: Age and cause of obstruction.

AGE	ΤВ	Malignancy	Hernia	Adhesion	Intussus	Volvus	Others	Total
(YRS)					- ception			
14-20	1	2	0	2	0	0	3	8
21-30	7	1	0	2	1	0	0	11
31-40	5	0	4	1	1	0	1	12
41-50	2	1	3	1	1	0	0	8
51-60	1	6	3	0	0	0	1	11
61-70	1	1	2	2	0	1	0	7
>70	0	1	1	0	0	1	0	3

### TABLE 3 : Sex Distribution

Sex	Total No.( % )	Death (%)
Male	33 (55%)	6 (18.18%)
Female	45 (45%)	6 (22.22%)

### TABLE 4: Presenting Symptoms.

SYMPTOMS	No. Of Patients	Percentage
Pain	52	86.67
Vomiting	49	81.67
Distension	51	85
Constipation	41	68.33
Loose Motion	13	21.61
Fever	10	16.67
Inguinal Swelling	7	11.67
Bleeding PR	7	11.67

### Fig: 1 Signs of Intestistional Obstruction



## Fig. 2.: Simple vs. Strangulated Obstruction.



#### **SUMMARY**

Sixty patients of intestinal obstruction were studied. Out of the 60 cases 33 were males and 27 were females giving a ratio of 1.2:1. The commonest age group was between 31 to 40 years (20%). In young adults tuberculosis and malignancy were common. In middle aged adult hernia, tuberculosis and adhesions were common while in older age group malignancy, hernia, volvulus were common causes. Hernia, intussusceptions, volvulus were more common in males while abdominal tuberculosis, malignancy were more common in females Small bowel obstruction was more common than large bowel obstruction in a proportion of 3.3:1. In small intestine, tuberculosis, hernia, adhesions and intussusceptions were common while in large bowel, malignancy

and volvulus were common. The four cardinal symptoms of intestinal obstruction i.e. pain in abdomen (86.67%), distension (85%), vomiting (81.67%) and constipation (68.33%) were the most common symptoms. Most common signs of intestinal obstruction were, distension (83.33%), increased bowel sounds (65%), abdominal tenderness (58.33%) and tachycardia (43.33%). Out of 60 patients, 56 (93.33%) were operated upon and 4 (6.67%) could be managed conservatively. Abdominal tuberculosis causing an obstruction were the most common cause (28.33%) followed by obstructed hernia (21.67%) and malignancy (20%). Strangulation occurred in 9 (15%) patients but with mortality of 55.55%. Incidence of strangulation was high in obstructed hernia and volvulus. Duration of the symptoms before the treatment has profound effect on the morbidity and mortality. Incidence of mortality was highest (28%) in patients presenting after 96 hours of onset of symptoms. Mortality was doubled (35.28%) if the time of surgery after admission was more than 96 hours against patients operated within 24 hours who had mortality of 18.51%. Most common procedure carried out was Resection and anastomosis in 33.93% cases.

### CONCLUSION

- The following criteria were found to be useful in the differentiation between a simple and a strangulated obstruction.
- i) Pain of sudden onset and constant nature
- ii) Early appearance of shock
- iii) Fever
- iv) Guarding and rigidity, Leucocytosis more than 15,000/cmm.
- The following factors influencing the mortality and morbidity were identified.
- I) Older age group (> 60 years)
- ii) Duration of symptoms more than 96 hours.
- iii) Presence of shock at the time of admission
- iv) Presence of strangulation.
- v) Time of surgery after admission more than 96 hours.

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