

Original Research Article

# Analytical study on pattern of intestinal obstruction

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## Abstract

**Background:** Acute intestinal obstruction is an enigma with its versatile presentation and wide spectrum of management options available. It presents a constant challenge to the surgeon both in diagnosis and in judgment as regards the line of management for that specific patient, for those specific parameters and for that specific moment in the course of the disease.

**Materials and methods:** This was a facility based retrospective study involving all patients diagnosed as intestinal obstruction clinically, radiologically, and pathologically. The relevant data shall be collected by using detailed case history/previous surgery, symptoms, signs, investigations like complete hemogram, liver function test, radiological, and intra operative findings.

**Results:** In our setup, there was higher incidence of intestinal obstruction among males (28 – males, 12 – females). As far as age distribution was concerned the age range was 14-72 years and most common occurrence between 30 to 60 years. Most common cause of intestinal obstruction was band/adhesion followed by irreducible hernias (inguinal/ umbilical/ incisional/ epigastric)/ malignancy etc. Commonest symptom in our study was pain followed by vomiting, distension, and constipation. Abdominal tenderness, tachycardia, with hyper dynamic or absent bowel sounds was the commonest signs.

**Conclusion:** Acute intestinal obstruction is one of the most common emergencies requiring surgical intervention. A proper and complete bedside clinical examination by the surgeon is more superior to investigational procedures. In our study, Adhesions /bands were found to be the commonest cause for obstruction.

## Key words

Intestinal obstruction, Tuberculosis, Volvulus.

## **Introduction**

Acute intestinal obstruction is an enigma with its versatile presentation and wide spectrum of management options available. It presents a constant challenge to the surgeon both in diagnosis and in judgment as regards the line of management for that specific patient, for those specific parameters and for that specific moment in the course of the disease [1-5]. Intestinal obstruction is a dynamic condition where the parameters are changing as the clock ticks on. 'Time' means everything in intestinal obstruction and a delay in diagnosis or management increases the mortality [6-10]. With a wide range of conditions known to cause obstruction, the surgeon should be aware of the commonest causes in the geographical region of presentation [11].

## **Aim and objectives**

- To identify the cause of acute intestinal obstruction.
- To discuss the various clinical presentation.
- To discuss the various diagnostic modalities and various modalities of management of acute intestinal obstruction.
- To study the outcome of patients with acute intestinal obstruction.

## **Materials and methods**

The study was carried out in Govt. Stanley Medical College Hospital, Chennai. This was a facility based retrospective\_involving all patients diagnosed as intestinal obstruction clinically, radiologically, and pathologically. The relevant data shall be collected by using detailed case history/ previous surgery, Symptoms, signs, investigations like complete hemogram, liver function test, radiological etc. and intra operative findings with post-operative complications.

## **Results**

Intestinal obstruction though a common surgical presentation had a number of underlying causes

responsible for it in this study consisting of 40 cases requiring operative management presenting at Stanley Hospital, Chennai.

In our setup, there was higher incidence of intestinal obstruction among males (28 – males, 12 – females). As far as age distribution was concerned the age range was 14-72 years and most common occurrence between 30 to 60 years. Most common cause of intestinal obstruction was band/adhesion followed by irreducible hernias (inguinal/ umbilical/ incisional/ epigastric)/ malignancy etc. Commonest symptom in our study was pain followed by vomiting, distension, and constipation. Abdominal tenderness, tachycardia, with hyper dynamic or absent bowel sounds was the commonest signs. In addition to routine investigations, plain abdominal X – ray being the leading investigation in diagnosis and management. Thus in our study commonest post-operative complication encountered was post-operative fever, and wound infection. In our study, mortality percentage was 2%.

## **Discussion**

In the study of acute intestinal obstruction which was carried out in the Government Medical Stanley College and Hospital, 40 cases of acute intestinal obstruction were studied based on clinical evaluation and radiographic evidence. All the patients' case sheets and the relevant details were catalogued in the master chart for comparison and for drawing statistical inferences.

### **Age and sex incidence**

As far as age distribution was concerned the age range was 14 – 72 years and most common occurrence between 30 to 60 years.

### **Clinical symptomatology**

Abdominal pain was the most common presenting symptom (100%) followed by vomiting (96%) and distention of abdomen (94%). The most common sign was tachycardia (96%), tenderness which was present in (96%) of the cases, followed by guarding (84%) and rigidity which was present in 82% of patients.

### **Disease spectrum**

Of the 40 cases the commonest cause of acute intestinal obstruction was adhesions/bands (14 cases). Hernias were present in 10 cases, and were the second commonest cause.

### **Investigational aids**

Plain X-Ray abdomen was taken for all the 40 cases of intestinal obstruction. The most common finding in the X-Ray was multiple fluid levels (>3), dilatation of bowel loops proximal to intestinal obstruction was seen in some cases; one case had coffee bean appearance. X-Rays were inconclusive in some cases. Ultrasound abdomen was performed, it revealed dilated bowel loops, free fluid and in majority of the patients the results were inconclusive. The ultrasound had little role to play in the diagnosis of intestinal obstruction.

### **Surgical Procedure adopted**

Adhesiolysis/ band release was the most common surgical procedure performed accounting for 14 cases followed by hernia repair 10 cases. Resection and anastomosis was done in 8 cases, colostomy in 7 cases, ileostomy in 6 cases and other procedures were performed in the remaining patients.

### **The surgical outcome**

Majority of patients had an uneventful recovery. One patient died in the postoperative period.

### **Conclusion**

The study of acute intestinal obstruction was aimed at identifying the etiological factors, mode of presentation, surgical procedures employed with relevant investigational procedures. Acute intestinal obstruction is one of the most common emergencies requiring surgical intervention. A proper and complete bedside clinical examination by the surgeon is more superior to investigational procedures.

In our study, Adhesions /bands were found to be the commonest cause for obstruction. A delay in diagnosis could be fatal. Adhering to the basic principles of preoperative preparation like nasogastric suctioning, correcting dehydration

and electrolyte imbalances can significantly lower the morbidity and mortality. Surgical intervention remains the cornerstone of treatment. With timely management, most patients have an excellent prognosis.

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