



**ACUTE MECHANICAL BOWEL OBSTRUCTION: CLINICAL PROFILE AND MANAGEMENT**

**Rajkamal Kanojiya, Shubham Singh, Vinod Saini and Ashna Jaggi\***

Department of General Surgery, Mahatma Gandhi Medical College and Hospital, Jaipur

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**ABSTRACT**

**Aim** - The study was to assess the causes of acute intestinal obstruction, clinical presentation and outcome for both conservative and operative management in acute intestinal obstruction.

**Method** - This is a prospective observational study of 60 adult patients admitted with acute mechanical bowel obstruction from February 2021 to February 2022.

**Result** – The result of present study showed that mean age group of 40-60 years. Incidence in males was more compared to females. Pain in abdomen was found in 57 (95%), vomiting in 40 (66%), distension of abdomen in 38 (63%) and constipation in 54 (90%) as patient's chief complaint. Commonest cause for obstruction was adhesions followed by obstructed inguinal hernia.

**Conclusions** - From the study it can be concluded that conservative management can be tried in patients with previous history of abdominal operation and intestinal tuberculosis. Acute intestinal obstruction was more common in male than female. Investigations such as X ray abdomen in standing position and USG helps in ascertaining the site of intestinal obstruction.

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**INTRODUCTION**

Acute intestinal inhibition is one of the commonest surgical extremities in all age groups that accounts for 20 all admissions in surgical practice. The clinical Picture varies from Slight discomfort, abdominal distension, vomiting and constipation to the state of sepsis or hypovolemic shock or both demanding an Immediate intervention which all depends on age of the patient, comorbidity, nutritive and hydration status, position of obstruction, the presence of contaminant in the peritoneal cavity. Hence early opinion, prompt resuscitation and appropriate control is required for uneventful recovery and reduction in the mortality rate.

Intestinal obstruction is caused by Multiple underlying conditions which are difficult to define preoperatively. There are numerous etiology for acute intestinal obstruction, more common causes like adhesion, hernia, malignancy to uncommon condition like intussusception.3 Basic investigation x ray and USG are earliest study, CT scan is recommended only if there's doubt high and negative radiography.

Management of uncomplicated obstructions includes fluid resuscitation with correction of metabolic disturbances, intestinal decompression, and bowel rest. Surgeon who are treating case with acute intestinal obstruction must consider the threat of surgery with the consequence of inappropriate conservative Intervention.

Present study is to know the current status of the acute intestinal obstruction with respect to etiology, clinical presentations, imaging investigations, management and consequences for better understanding of the disease and to find out fitting management.

**METHODS**

The present study was carried out in a tertiary care academic medical center from February 2021 to February 2022. All cases above the age of 18 years, attending surgery outpatient department, emergency department and getting Admitted with of acute pain in abdomen were included in the study. Cases were chosen using the below mentioned inclusion and exclusion criteria.

**Inclusion criteria**

All the cases presenting with features which suggestive of acute Intestinal obstruction i.e. acute pain in abdomen, distension, vomiting and constipation, X-ray abdomen standing position ( Flat plate abdomen) showing multiple air fluid level/ dilated bowel loops, coming to surgery outpatient department or emergency department and getting admitted in surgery wards, age more than 18 years and less than 70 years

**Exclusion criteria**

Sub-acute intestinal obstruction ( uninterrupted passage of flatus/ faeces beyond 6-12 hours after onset of symptoms). Cases diagnosed with acute intestinal obstruction but not willing for admission or any management or cases withco-

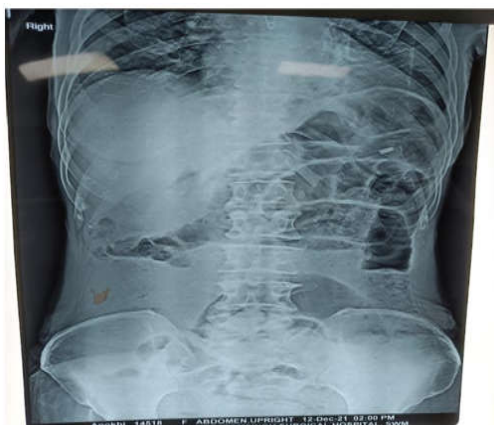
\*Corresponding author: **Ashna Jaggi**

Department of General Surgery, Mahatma Gandhi Medical College and Hospital, Jaipur

morbid conditions are barred from the study. Study was conducted using following heads like history taking, physical examination, blood investigations, imaging study, management.

After admission of patient detail history was taken. Chief complaints of case with onset, duration, and progress was noted. Physical examination was done under headlines of inspection, palpation, percussion and auscultation. Temperature, pulse, respiratory rate, blood pressure, blood sugar level, IV fluid input and urine output monitoring and abdominal circumference charting was done. Blood investigations done. In imaging study, x-ray of abdomen in standing position was taken in every case.

Usg and x-ray flat plate abdomen (standing position) was done in all 60 cases. Management of acute intestinal obstruction was decided based on condition of case and cause of obstruction. After admission of case, primary treatment like Intravenous fluid, Ryles Tube insertion, antibiotics, antiemetic and analgesics was given and case was watched precisely with TPR, BP charting, urine output and abdominal circumference monitoring.



Those cases who showed reduction in abdominal circumference and betterment in general condition were observed for coming 24-72 hours. Cases who responded well were decided to manage conservatively. In conservative management, cases were exposed to repeated x-ray abdomen in standing position in view of resolution of obstruction, along Strict Vitals monitoring, Input- output monitoring and Abdominal circumference charting.

Those cases who didn't respond to conservative management (obstruction not relieved), were decided to manage surgically.

Cases, those started deteriorating on conservative management were posted for surgery straightway. Cases those were hemodynamically unstable were also posted for surgery after acceptable resuscitation. Case with high threat for perforation, bowel ischemia, volvulus treated surgically straightway after resuscitation. Surgeries like exploratory laparotomy with adhesiolysis, band release, resection and anastomosis were performed in varied conditions accordingly. Post operatively cases were watched precisely for any complications like surgical site infection, fistula formation, Respiratory tract infection etc.

## RESULT

During the study period of 1 year, 60 adult patients with acute mechanical bowel obstruction were admitted and composed our study group. Mean age group of the patients were in the 40-60 years. The majority of the patients presented with small bowel obstruction.

Regarding clinical presentation of the patients, pain abdomen along with non-passage of flatus and/or feaces was the common complaint and Abdominal distension was the most common clinical presentation.

Out of the 60 patients, 26 patients (43%) were diagnosed with having adhesions (with majority having underwent previous abdominal surgeries [80%]), 9 patients(15%) were diagnosed with carcinomas, 8 patients (13%) with inflammatory conditions and 6 patients (10%) diagnosed with obstructed hernia.

Diagnosis	Number of cases	Percentage (%)
Adhesions	26	43
Carcinoma	9	15
Inflammatory conditions	8	13
Obstructed hernia	6	10
Others	11	29

Out of the 60 cases, 45 patient (75%) patients underwent surgical intervention, and 15 patient (25%) were managed conservatively. Out of the 45 patients, 5 were initially given the trial for conservative management but underwent surgical intervention after patient condition deteriorated.

Management	Number of Cases	Percentage (%)
Operative	45	75
Conservative	15	25

Out of the 15 patients who were managed conservatively, 13 had history of previous abdominal surgeries.

Out of the 60 cases, On the basis of imaging investigations X ray abdomen (standing position view), USG findings, CECT and operative findings, 51 cases(85%) were of small bowel obstruction and rest of large bowel obstruction.

Bowel involvement	Number of Cases	Percentage (%)
Small bowel	51	85
Large bowel	9	15

## CONCLUSION

From the result of present longitudinal study it can be concluded that conservative management can be tried in cases with previous history of abdominal operation and intestinal tuberculosis. Beforehand determination and prompt intervention associated with good prediction or result and any holdback in judgment associated with poor results. Acute intestinal obstruction is seen more generally in males than women.

Adhesion of bowel is one of the most common cause for acute intestinal obstruction followed by obstructed inguinal hernia. Pain in abdomen and distension is most common presenting character followed by retching and constipation. X ray abdomen in standing position and USG helps in ascertaining the point of intestinal obstruction and also helps to distinguish mechanical cause of obstruction from non-mechanical cause of obstruction which ultimately helps to decide the need of surgical intervention.

Small bowel obstructions are more common than large bowel obstruction

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