



A CLINICAL STUDY ON ACUTE INTESTINAL OBSTRUCTION

General Surgery

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ABSTRACT

Aims and Objectives: To study the incidence and various etiologies of intestinal obstruction. To study various modes of presentations, the importance of early diagnosis, and management. **Methods:** This study was a prospective observational study conducted on 30 patients with acute intestinal obstruction who were hospitalised in the Department of General Surgery, Narayana medical college and hospital, from November 2022 to June 2023 are included in the study. **Results:** Out of 30 cases, 16 were due to small bowel obstruction, and 14 were due to large bowel obstruction. Here small bowel was more frequently involved than the large bowel. The most common age group involved is between 55 to 65 years of age (15 patients). Out of 30 cases with acute intestinal obstruction, 18 cases are males, and 12 cases are females. Out of 30 cases, the most common cause of acute intestinal obstruction was found to be obstructed inguinal hernia, which accounted for 10 cases. The second most common cause was found to be adhesions which accounted for 8 cases. Most of the cases presented with abdominal pain, 26 cases, followed by vomiting, 23 cases, abdominal distension, 24 cases, and constipation, 15 cases. The most common radiological finding was multiple air-fluid levels seen in plain x-ray abdomen erect view. This finding was seen in 25 patients, followed by dilated bowel loops seen in 26 patients and bent inner tube appearance in 3 patients. The most common surgical procedure was hernia reduction and repair, which included inguinal, femoral, incisional, and paraumbilical hernia repairs. The next common procedure was adhesiolysis, followed by resection and anastomosis, and colostomy. Most of the cases recovered without any complications, with 22 patients. Infection was the most common morbidity and was seen in 8 patients. Mortality was 4% and was commonly seen in patients with strangulation and increased age of 3 deaths, 2 died due to sepsis, and the remaining 1 due to aspiration. **Conclusion:** This study on acute intestinal obstruction was aimed at studying age, sex distribution, various etiologies, clinical presentations, treatment, and outcomes of acute intestinal obstruction. Obstructed hernias were the most common etiological factor in our study, followed by adhesions. Initial management of patients with acute intestinal obstruction should focus on aggressive fluid replacement, decompression of obstructed bowel, and prevention of aspiration. Surgery remains the cornerstone of treatment. Early diagnosis and timely intervention are associated with an excellent prognosis. Delayed diagnosis leading to strangulation and increased age are associated with poor outcomes.

KEYWORDS

Intestinal obstruction, inguinal, femoral, incisional, resection, anastomosis and colostomy.

INTRODUCTION:

Intestinal obstruction is one of the common acute abdominal emergencies in surgical practice. Early recognition and prompt intervention can prevent irreversible ischemia and thereby decreasing mortality and long-term morbidity. It may be classified as dynamic and adynamic obstruction. Dynamic obstruction is one of the most serious and frequently encountered emergencies presenting as acute abdomen. The most common causes of intestinal obstruction are postoperative adhesions and hernias, which cause extrinsic compression of the intestine.

Less common are tumours and strictures of the bowel, which cause intrinsic block of the intestine. The present study is conducted with the objectives of finding out the frequency of various etiological factors of intestinal obstruction and evaluating morbidity and mortality in adults presenting with intestinal obstruction.

Aims And Objectives:

To study the incidence and various etiologies of intestinal obstruction. To study various modes of presentations, the importance of early diagnosis, and management.

MATERIALS AND METHODS:

30 patients were included in this prospective study over a period of 8 months who were admitted with Acute intestinal obstruction is based on clinical, biochemical and radiological features in the Department of General Surgery at Narayana Medical College and Hospital, Nellore, served as the clinical material. The study was conducted (over an 8-month period) from November 2022 to June 2023.

Sample size: 30 cases

Inclusion criteria: All patients presenting to the emergency department with features of intestinal obstruction and treated surgically. Patients in the age group of 15 to 85 years. Patients who are hemodynamically stable and with attendants who are capable of providing proper and informed consent.

Exclusion criteria: Patients who are managed conservatively without surgical intervention. Patients with subacute intestinal obstruction. Patients of pediatric age group.

RESULTS:

Total of 30 patients, most common age group involved is between 55 to 65 years of age (15 patients).

Table 1: Showing number of patients in different age groups

AGE	FREQUENCY	PERCENTAGE
15-25	1	3%
26-35	2	7%
36-45	5	16%
46-55	7	24%
56-65	9	30%
66-75	4	14%
76-85	2	16%

Table 2: Showing sex distribution among

SEX	FREQUENCY	PERCENTAGE
Male	20	66
Female	10	34

Table 3: Showing showing etiology

ETIOLOGY	FREQUENCY	PERCENT
Obstructed Inguinal Hernia	6	20%
Adhesions	3	10%
Ileocecal Tuberculosis	1	4%
Umbilical/Para umbilical Hernias	3	10%
Incisional Hernias	3	10%
Femoral Hernias	1	4%
Intussusception	1	4%
Ascending and Descending Colon	2	6%
Sigmoid colon growth	2	6%
Rectum or anal canal growth	2	6%
SMA Syndrome	2	6%

Internal Hernia	1	4%
Sigmoid volvulus	3	10%

Table 4: Showing presentation of the patients

PRESENTATION	FREQUENCY	PERCENT
Abdominal pain	45	90%
Vomitings	34	68%
Constipation	30	60%
Abdominal distension	32	64%

Table 5: Showing radiological features

X-RAY FINDINGS	FREQUENCY	PERCENT
Multiple air fluid levels	45	90%
Dilated bowel loops	44	88%
Bent inner tube appearance	3	6%

Table 6: Showing various surgical approaches

SURGICAL APPROACH	FREQUENCY	PERCENT
Hernia Repair	10	34%
Adhesiolysis	8	26%
Resection and anastomosis	6	20%
Ostomy	6	20%

Table 7: Showing various outcomes

OUTCOMES	FREQUENCY	PERCENT
Uneventful recovery	19	64%
Morbidity	9	30%
Mortality	2	6%

DISCUSSION:

The majority of the individuals fall into age group of 55-65 years, comprising 30% of the total study population. There is also gradual decrease among older age group. It outlines the age in structured manner that more prevalence is in middle aged to older group.

The male predominance of 66%, while the females are upto 34% among the study.

The most common etiologies are obstructed inguinal hernia, umbilical and para umbilical hernias, incisional hernias, sigmoid volvulus in upto 10-20% cases. Other causes include upto 4-6% cases with the etiology adhesions, ileocecal tuberculosis, femoral hernias, intussusception and intestinal growths.

Among the clinical presentation, abdominal pain is the most prevalent symptom in 45 patients making it 90% of the cases. Followed by vomitings, constipation, abdominal distension with the percentages 68%, 60% and 64% respectively.

In the radiological findings, the multiple air fluid levels take up the 90% among the whole cases followed by dilated bowel loops and bent inner tube appearances.

The various surgical approaches for the acute obstruction is by treating the hernias, adhesion releases, resection – anastomosis and ostomy placements.

64% of the total participants had uneventful recovery with 30% morbidity and 6% mortality.

CONCLUSION:

Bowel obstruction continues to be one of the most common abdominal problems faced by general surgeons. Irrespective of the cause, it remains a major cause of morbidity and mortality. Success in the treatment of intestinal obstruction depends largely upon early diagnosis, skillful management and treating the pathological effects of the obstruction just as much as the cause itself. Early recognition and aggressive treatment are crucial in preventing irreversible ischemia and transmural necrosis and thereby in decreasing mortality and long-term morbidity.

The evaluation of patients with suspected bowel obstruction endeavors not only to confirm the diagnosis but also to determine the need for and timing of surgery.

Certain severity indicators and scoring systems can help to optimize this timing of surgery and prevent mortality. This study tries to use a severity scoring system to help identify the ideal time to intervene in a

case of intestinal obstruction. Most of the severity indicators have been found to be useful. Despite multiple recent advances in diagnostic imaging and marked advances in our treatment armamentarium, intestinal obstruction will continue to occur.

Hence, our search for such severity markers is necessary to prevent delay in operative intervention and thus prevent mortality and improve outcome of patients.

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