

A Clinical Profile of Acute Intestinal Obstruction Cases at Tertiary Care Hospital

Pradeepkumar J.^a, Kailas C.T.^b, Vijaykumar G.^c, Suresh U. Kadli^d, R.L. Chandrasekhar^a

^aAssistant Professor, Dept. of Surgery, Basaveshwara Medical College, Chitradurga, Karnataka, India. ^bAssistant Professor ^dProfessor, Dept. of Surgery, JJM Medical College, Davangere, Karnataka, India. ^cAssociate Professor, Dept. of Surgery, Al-Hazar Medical College, Thodupuzha, Kerala, India.

Abstract

Introduction: Mortality and morbidity are dependent on early recognition and correct diagnosis of obstruction. If untreated, strangulated obstruction causes death in 100% of patients. If surgery is performed within 36 hours, the mortality decreases to 8%. The mortality rate is 25% if surgery is postponed beyond 36 hours in these patients. *Methodology:* A minimum of 50 consecutive cases presenting with acute intestinal obstruction in hospital was selected for the study. This was a prospective study of 50 cases presenting with symptoms and signs suggestive of acute intestinal obstruction. A detailed structured Proforma was used to collect this information. All data was entered on master chart for analysis. *Results:* The commonest presenting symptom was abdominal pain (100%) followed by vomiting (92%), distention of abdomen (84%) and absolute constipation (60%). *Conclusion:* The incidence of intestinal obstruction is more common in males compared to females. Small bowel obstruction was more common than large bowel obstruction.

Keywords: Small Bowel Obstruction; Abdominal Pain; Distention of Abdomen.

Introduction

Intestinal obstruction is defined as any hindrance to the passage of intestinal contents. This obstruction

can involve only the small intestine (small bowel obstruction), the large intestine (large bowel obstruction) or via systemic alterations, involving both the small and large intestine (generalized ileus) [1].

Bowel obstruction remains one of the most common intra-abdominal problems faced by general surgeons in their practice. Whether caused by adhesions, hernia and neoplasm or related to biochemical disturbances, intestinal obstruction of either small or large bowel continues to be a major cause of morbidity and mortality. Its early recognition and aggressive treatment in patients of all ages including neonates can prevent irreversible ischemia and transmural necrosis, thereby decreasing mortality and long term morbidity. Despite many recent advances in our diagnostic and therapeutic armamentarium, intestinal obstruction will continue to occur [1].

Mortality and morbidity are dependent on early recognition and correct diagnosis of obstruction. If untreated, strangulated obstruction causes death in 100% of patients. If surgery is performed within 36 hours, the mortality decreases to 8%. The mortality rate is 25% if surgery is postponed beyond 36 hours in these patients. Patients with a bowel obstruction still represent some of the most difficult and vexing problems that surgeons face with regard to the correct diagnosis, the optimal timing of therapy and the appropriate treatment. Ultimate clinical decisions regarding the management of these patients dictate a thorough history and workup and a heightened awareness of potential complications [2].

The purpose of this study was to find out the frequency of the conditions leading to acute small bowel and large bowel obstruction in the given setting. This will highlight the commonest causes of

Corresponding Author: Kailas C.T., Assistant Professor, Dept. of Surgery, JJM Medical College, Davangere, Karnataka 577004, India.

E-mail: durgappavims@gmail.com

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intestinal obstruction in the geographical location of the study which will suggest measures for prevention and treatment of the condition.

Methodology

A clinical study of acute intestinal obstruction was selected because in routine practice every surgeon has to come across this surgical emergency and treatment would largely depend on early diagnosis and skilful management.

A minimum of 50 consecutive cases presenting with acute intestinal obstruction in hospital was selected for the study. This was a prospective study of 50 cases presenting with symptoms and signs suggestive of acute intestinal obstruction. A detailed structured Proforma was used to collect this information. All data was entered on master chart for analysis.

Inclusion Criteria

- Patients admitted with history of pain in abdomen, abdominal distention, vomiting and constipation with X-Ray and USG abdomen showing evidence of intestinal obstruction.

Exclusion Criteria

- All cases of sub acute intestinal obstruction.
- Patient with acute intestinal obstruction who are unfit for general anesthesia.

Results

The study was done in all age groups ranging from newborn to 85yrs. In our series, the maximum incidence was in the age group of 41-50yrs. The average age was 36years.

The occurrence of acute intestinal obstruction was common in male (64%) in comparison with female

Table 1: Age distribution

Age in Years	Total Cases	Percentage
≤10	7	14
11-20	4	8
21-30	9	18
31-40	8	16
41-50	11	22
51-60	7	14
>60	4	8

Table 2: Sex distribution

Sex	Number of cases	Percentage
Male	32	64
Female	18	36

Table 3: Level of obstruction

Level of obstruction	Number of cases	Percentage
Small bowel	42	84
Large bowel	8	16

Table 4: Presenting symptoms

Symptoms	Number of patients (n=50)	Percentage
Pain abdomen	50	100
Vomiting	46	92
Distention of abdomen	42	84
Obstipation	30	60

(36%). There were 32 male & 18 female with male to female ratio 1.78:1 (2:1).

There were more cases of small bowel obstruction 84 % (42) when compared to large bowel obstruction 16 % (8).

The commonest presenting symptom was abdominal pain (100%) followed by vomiting (92%), distention of abdomen (84%) and absolute constipation (60%)

In this study, Adhesive obstruction (56%) was the commonest cause of acute intestinal obstruction, followed by Obstructed Hernia (18%), Malignancy

Table 5: Etiology of intestinal obstruction

Etiology of Intestinal Obstruction	Number of Patients (n=50)	Percentage
Adhesion and bands	28	56
Hernia	9	18
Malignancy	3	6
Volvulus	2	4
T.B stricture	3	6
Intussusceptions	3	6
Mesenteric Ischemia	1	2
Non specific Stricture	1	2

(6%), Volvulus (4%), Intussusceptions (6%), TB stricture (6%), Mesenteric ischemia (2%) and Non specific inflammatory stricture (2%).

Discussion

Though intestinal obstruction occurs in all age groups, here the youngest patient was 9 months and oldest patient was 85 years. In this study 70% belongs to 21-60 years age group, previous study by Shakeeb, who noticed age distribution from birth to 85 years with an average of 50.7 years. A study by Gill Eggleston [4] has reported 17% of cases in the age group of 50-54 years and 60% of the cases of intestinal obstruction occurring the age group of 30-60 years. These studies almost correlate with the present study.

However, a study reported by Harban Singh and C. S. Ramachandran [6] says that the maximum number of cases occurs in the age group of 21-40 years, of these the etiological factors were obstructed hernia. The explanation which I would like to give in presently the etiological shift is towards adhesions and malignancy, which are more common in middle age and elderly population and also due to awareness; people are seeking treatment easily for hernia which is contributed to decrease in hernia related obstruction.

In present study, there are 32 male and 18 females. Male and female are in 1.78: 1 ratio. The male preponderance is consistent with series reported from other part of the world. Fuzan [7] and Lee [8] reported 2:1 male to female ratio. Budharaja [9] study a ratio of 4:1 between male and female.

The most common etiological factor in the present study is adhesion which included postoperative, nonspecific and congenital bands. In the present

series 56% of the cases of obstruction were due to adhesion and bands, 46% were due to post operative adhesions, 10% congenital bands. McIveret al found that 80% of adhesions and 21% are due to congenital causes, Perry et al, found that 79% were post operative adhesions, 18% inflammatory and 28% were congenital.

On review of the earlier Indian studies 10% of intestinal obstruction were related to adhesion and more recent studies in 1982 reports 23%. The rise in the incidence of adhesions related obstructions are attributed to increased number of abdominal pelvic surgeries. In the Western studies the adhesion related obstruction range from 40-60%. Developing countries like Virginia also reported 40% of the obstructions related to adhesions.

In our study, the commonest presenting symptom was abdominal pain (100%) followed by vomiting (92%), distention of abdomen (84%) and absolute constipation (60%).

Conclusion

- All age groups from newborn to elderly were involved. Depending upon the age, the etiology differs.
- Intestinal obstruction is more common in the age group of 30-60 years than in younger age group. Large bowel obstruction was more common in patients above 40 years than in younger group.

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