

CLINICAL STUDY OF ACUTE SMALL INTESTINAL OBSTRUCTION IN ADULTS

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Abstract

Background: A combination of hernia, tumours, adhesions and metabolic issues brings illness. Postoperative adhesion formation is a common cause of bowel obstruction. Most people reported experiencing abdominal pain, nausea, vomiting, and distention. Adhesions and bands account for forty percent of all cases of intestinal obstruction. Effective management of acute intestinal blockage calls for speedy diagnosis, careful therapy, and consideration of both the aetiology and clinical outcomes of the condition. Large intestine obstruction was less common than small bowel obstruction. There is still a significant mortality rate associated with acute intestinal obstruction. Strangulation-related small intestine obstruction may be effectively treated with rapid diagnosis and surgical surgery. **Materials and Methods:** Prospective data were obtained from patients with acute intestinal blockage at Dr Hedgewar Rugnalaya's surgical Aurangabad unit. All of our patients first presented with abdominal pain or distention as their primary complaint. **Result:** In our data set, there are 1.70 men for every female. These individuals are mostly vegetarian or open to exploring vegetarianism. However, intestinal obstruction remains the most common surgical emergency. Previous investigations have characterised colicky stomach pain as a sign of dynamic intestinal obstruction; our patients had this symptom with others. **Conclusion:** It was discovered that the most common causes of intestinal blockage were adhesions and hernias. Study of the causes of intestinal obstruction indicated that adhesions (30%) were the second most common cause.

INTRODUCTION

A timely and precise diagnosis is essential for effectively treating intestinal obstruction, a potentially fatal condition. Patient examination for suspected intestinal blockage aims to establish the need and timing of surgical intervention. A severity grading system is used in this investigation to determine when it is most appropriate to treat intestinal blockage. The incidence of small bowel blockage was higher than that of the large intestine obstruction.^[1] The intestinal blockage was most often caused by adhesions and bands (40%).^[2] The hernia, tumour, adhesions, or metabolic problems cause the illness. Successful treatment of acute intestinal blockage requires prompt diagnosis, expert care, and attention to both the underlying aetiology and the clinical consequences of the obstruction.^[3] The purpose of this research was to examine the mortality and morbidity rates associated with acute intestinal

blockage as well as its occurrence and potential causes. The study also looked at how this condition may manifest and how quickly a diagnosis could be made. Negative results are linked to factors such as age and the possibility of death from strangling due to a delay in detection.^[4] The key to effective treatment of small intestinal blockage due to strangling is a prompt diagnosis and surgical intervention.^[5] After being admitted, patients with suspected intestinal blockage had a clinical evaluation. The pathological consequences of the backup must be treated together with the underlying cause for the therapy of acute intestinal obstruction to be successful. Adhesions that form after surgery are a frequent contributor to intestinal blockage. Mortality from acute bowel blockage remains high.^[6] One of the most frequent abdominal crises is a blockage of the intestines. In particular, if it develops into intestinal ischemia, it is linked to a high risk of fatality and severe disability.^[7]

Abdominal discomfort was the most often reported symptom, followed by nausea, vomiting, distension, and constipation.^[8] Pain in the groyne lump, sudden onset of pain, irreducible swelling, and no cough impulse were the most notable characteristics.^[9] Acute intestinal blockage may be diagnosed with the use of an erect abdominal X-ray.^[10] Conventional medical practice has relied on straightforward abdominal radiographs to diagnose minor intestinal obstruction. This study aims to evaluate the role of ancillary tests like USG and CT SCAN in establishing a definitive diagnosis.

MATERIALS AND METHODS

Adults hospitalised at our facility with a diagnosis of intestinal obstruction and meeting the inclusion criteria were recruited to participate (male or female, age 20 or older). In Aurangabad, three or four cases of severe intestinal obstruction are admitted to Dr Hedgewar Rugnalaya per month, according to data from the preceding three years.

With this knowledge, 50 patients with suspected intestinal blockages who had been admitted to the surgical ward at Dr Hedgewar Rugnalaya in Aurangabad were treated.

Data were collected prospectively from patients at Dr Hedgewar Rugnalaya's surgical Aurangabad unit diagnosed with acute intestinal obstruction.

Inclusion Criteria

Patients at Dr. Hedgewar rugnalaya in Aurangabad have been diagnosed with acute intestinal obstruction.

To everyone above the age of twenty
Participation in the study should be voluntary.

Exclusion Criteria

Ineligible candidates include those with acute intestinal obstruction who are also unable to undergo general anaesthesia due to other medical conditions. The Younger Generation (those under the age of twenty).

Reluctance to take part in the study.

Detailed notes will be taken on the patient's condition, their signs and symptoms and the outcomes of the physical exam. If it is determined that more investigation or imaging (such as a CT scan of the abdomen) is required, this will be done and recorded.

Preoperative diagnosis of acute intestinal obstruction is performed utilising clinical, radiological, and biochemical criteria. The prognosis and the patient's present condition will guide the therapy.

The patient's history, physical examination, laboratory tests, imaging investigations, and postoperative results will all be entered into a database.

The healing process will continue to be monitored after treatment has ended. Any problems will be identified and resolved as quickly as feasible. A patient will be followed up in the outpatient service

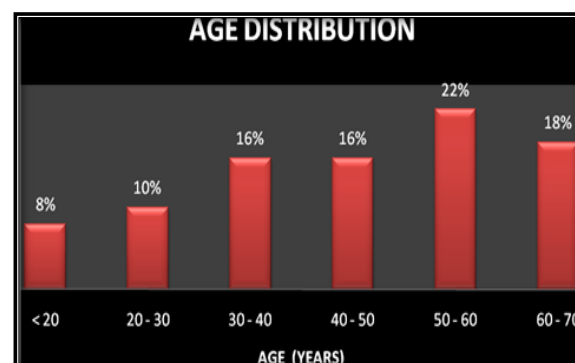
for at least one month after they are released to ensure no new problems have arisen. To start, all patients with adhesive intestinal obstruction were treated conservatively. After 48 to 72 hours of conservative therapy, a laparotomy was performed if the blockage had not resolved.

Findings and conclusions were analysed using the X2 (chi-square) test. Tables and figures will be used to effectively convey both quantitative and qualitative data. All analyses were performed using SPSS, the Statistical Package for the Social Sciences, version 20. Chi-square and z-tests were used to do a statistical analysis of the data. Graphs and tables were created in Excel and Word, and a p-value of 0.05 will be used to denote statistical significance.

RESULTS

Table 1: Distribution of patients according to age groups.

Age Group	Frequency	Percent
Age (Years)		
< 20	4	8.0
20 - 30	5	10.0
30 - 40	8	16.0
40 - 50	8	16.0
50 - 60	11	22.0
60 - 70	9	18.0
> 70	5	10.0
Total	50	100.0



Twenty-two percent of patients in our current perspective research were between 50 and 60 when they presented with an intestinal blockage. Eighteen percent of patients were in the second-most-common age group of 60-70.

Sex Distribution

Sex incidence	Frequency	Percent
Sex		
Female	19	38.0
Male	31	62.0
Total	50	100.0

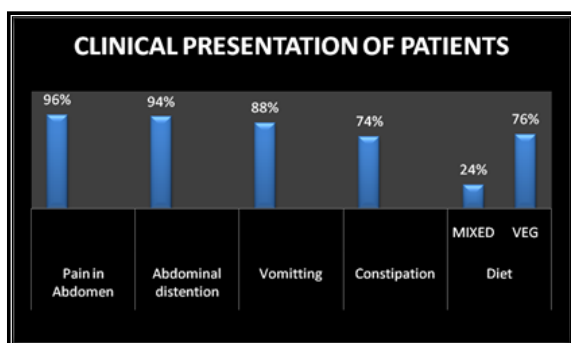
We found that out of 50 patients in our current perspective research, 31 were male, and 19 were female. There were more men than women in our sample population.

Most participants in this prospective trial reported experiencing stomach discomfort (96%), distention (94%), vomiting (88%), and constipation (74%). Thus, the most prevalent symptoms experienced by

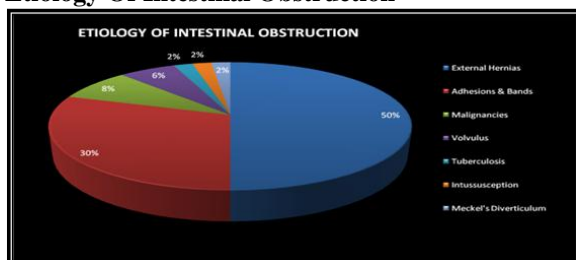
our patients at first presentation were abdominal discomfort and distension. Most of these people are vegetarians or at least interested in trying it out.

Table 2: Causes of intestinal obstruction in adults

Clinical condition	Number of cases	Percentage
Postoperative adhesions	20	40
Obstructed hernia	15	30
Volvulus	2	4
TB abdomen	2	4
Malignancy	7	14
Intussusception	3	6
Mesenteric ischaemia	1	2
Total	50	100

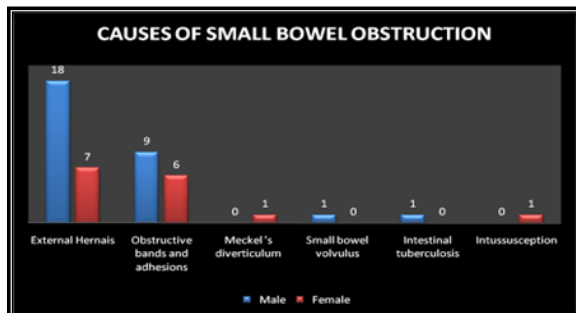


Etiology Of Intestinal Obstruction



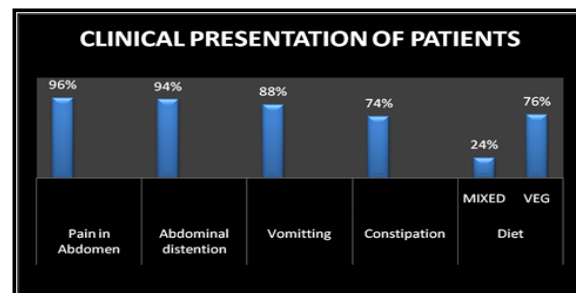
It is clear from the above table that external hernias, followed by adhesions and bands, and finally, malignancies, are the most prevalent causes of intestinal obstruction in our research.

Small Intestinal Obstruction



According to the data above, the intestinal blockage is most often brought on by external hernias in both sexes, followed by bands and adhesions.

Clinical Presentation of Patients



Most participants in this prospective trial reported experiencing stomach discomfort (96%), distention (94%), vomiting (88%), and constipation (74%). Thus, the most prevalent symptoms experienced by our patients at first presentation were abdominal discomfort and distension. Most of these people are vegetarians or at least interested in trying it out.

DISCUSSION

The majority of surgical emergencies still involve intestinal blockage. Fifty of these surgical patients were chosen at random for this investigation.



Figure 1: Causing Intestinal Obstruction



Figure 2: Volvulus of sigmoid colon

Age Incidence

The age range of participants in this current prospective research ranged from 18 to 78. Patients' ages ranged from 30 to 60 in this research, with 22%

falling in the 51-60 age bracket. Researchers Souvik Adhikari et al. (2008) found that between the ages of 30 and 60, the incidence of intestinal blockage increases to 52%. Parallels can be seen between this research and the current one. Gill. SS et al. found that whereas 42% of instances of intestinal blockage occurred in those aged 30–60, 16% of those cases happened in people aged 51–60.^[11,12]

Compared to previous studies, the mean patient age in our current prospective research is quite high, at 49.52 years.

Sex Incidence

A total of 31 men and 19 females participated in this research. There are 1.70 males for every female. Our findings are consistent with those of prior research by Adesunkamini AR et al., which found a male-to-female ratio of 1.7:1. Hadi A et al. research shows a 2:1 female-to-male balance.^[13]

Small Bowel Obstruction

In our analysis, 88% of cases included small intestine blockage. Studies by Hadi A et al., Malik AM et al., Ullah S et al., and Markogiannakis H et al. report incidence rates of 75.27 per cent, 85 percent, 33.33 percent, and 76 percent, respectively. Our research found a similar incidence of small bowel obstruction as the one by Malik AM et al. However, this is greater than the results of previous research have shown. Our study's limited sample size might be to blame.^[14-17]

Our patients with dynamic intestinal obstruction all presented with the same symptoms, including colicky stomach discomfort, similar to those described in previous studies (Jahangir et al., 2003).

In our current prospective investigation, external hernias (inguinal, femoral, umbilical, incisional, and one instance of spiglian) were the most prevalent cause of intestinal obstruction (50%). Adhesions (30%) were the second most prevalent cause of an intestinal blockage. According to 2002 research by Sinha S et al., adhesions (44% of cases) and hernias (22% of cases) were the most prevalent causes of intestinal blockage.



Figure 3: Obstructed Inguinal Hernia

Studies by Markogiannakis et al. (2002), De la Garza- Villaseñor et al. (2000), and Lawal et al. (2009) all cite adhesions as the leading cause of intestinal blockage (1994). Mehmood et al. (2009)

and Naseer Baloch et al. (2009) both listed tuberculosis as the leading cause (2005).

We found that 30% of patients had problems after surgery. Compared to previous research, ours is on the high side, although this may be due to the relatively small size of our sample.

CONCLUSION

The patients at Dr Hedgewar Rugnalaya's surgical facility in Aurangabad who had been diagnosed with acute intestinal blockage provided consent for collecting their data, which was done prospectively. Hospitalised adults who had been diagnosed with intestinal blockage and who met the inclusion criteria were sought out and recruited to take part in the study (male or female, age 20 or older). Participants in this present prospective study varied in age from 18 years old to 78 years old. In this study, the ages of the patients ranged anywhere from 30 to 60, with 22% falling in the category of 51-60 years old. The risk of developing intestinal obstruction grows to a staggering 52% between the ages of 30 and 60. To a certain extent, there are some similarities between this study and the one that is now being conducted. It was discovered that the most common causes of intestinal blockage were adhesions and hernias. The survey conducted by Hadi A et al. reveals a female-to-male ratio that is 2:1. After surgery, thirty percent of patients had some issue, according to our findings.

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