Original Research Article

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A study of forty eight patients with ilecoceacal mass presenting as intestinal obstruction requires surgical intervention and their outcome

Himanshu Gupta*, Sumikesh Anand

Department of Surgical Gastroenterology, Health World Hospital, Durgapur, West Bengal, India

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*Correspondence:

Dr. Himanshu Gupta,

E-mail: drhimanshuguptacs@gmail.com

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ABSTRACT

Background: Intestinal obstruction is defined as obstruction of the passage of the intestine for its contents. Successful conservative treatment may leave adhesions that could cause recurrence; on the other hand, surgery may be the source of new adhesions like any other abdominal surgery. Hence, the present study was undertaken for assessing the 48 patients with ilecoceacal mass presenting as intestinal obstruction requires surgical intervention and their outcome.

Methods: Of a total of 48 patients with ilecoceacal masses who presented with intestinal obstruction and underwent surgical intervention for the same. Surgical management outcome was classified as "favorable" or "unfavorable" outcome according to the retrospective secondary data extracted from their medical records. Unfavorable outcome was considered if the patient died or has one or more postoperative complications. Favorable outcome was considered if the patient was discharged alive and does not have any history of postoperative complications.

Results: Abdominal pain, abdominal distension, vomiting and failure to pass faeces were the prominent presenting symptoms among intestinal obstruction patients. Favourable outcome was seen in 76 percent of the patients while unfavourable outcome was seen in 24 percent of the patients. Mortality occurred in 6 patients. Prolonged ileus was found to be present in 1 patient. Failure to wean from ventilator for more than 48 hours was seen in 2 patients.

Conclusions: Surgical management had high efficacy of more than 75 percent in managing patients with intestinal obstructions. With precise technique and adequate care, complication rate can be reduced.

Keywords: Ileus, Intestinal obstruction, Abdominal distension

INTRODUCTION

Intestinal obstruction (IO) is defined as obstruction of the passage of the intestine for its contents. It is potentially risky surgical emergency associated with high morbidity and mortality. Emergency operation being defined as those types of surgeries that should be performed by necessity within 24 hours of a patient's admission, or within 24 hours of the development of a specific complication. The research community in both developed and developing countries has investigated this condition.¹⁻³

Abdominal adhesions represent the most common cause of intestinal obstruction and are responsible for 60% to 75% of small bowel obstructions (SBOs). Previous surgery is the most important factor predisposing the development of adhesions, with a reported incidence of >90% following laparotomy.^{4,5}

In conservative management, regular reassessment is mandatory for early recognition of signs of bowel ischemia that would require a surgical operation. Patients with clinical degradation or with a CT scan evoking strangulated bowel obstruction need urgent surgery. In a significant proportion of patient's therapeutic options are valid; the choice of the treatment depends mainly on the clinician's assessment, and therefore it represents a common clinical challenge. On the one hand, successful conservative treatment may leave adhesions that could cause recurrence; on the other hand, surgery may be the source of new adhesions like any other abdominal surgery. Hence; the present study was undertaken for assessing the 48 patients with ilecoceacal mass presenting as intestinal obstruction requires surgical intervention and their outcome.

METHODS

The present retrospective case series included assessment of data records from April 2016 to March 2020 of a total of 48 patients with ilecoceacal masses who presented with intestinal obstruction and underwent surgical intervention for the same. The study was conducted in health world hospital, Durgapur, West Bengal. Ethical approval was obtained from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol. Complete clinical and demographic details of all the patients were obtained from the record files. Only those patients were included in the present case series that underwent surgical intervention for the same. Surgical management outcome was classified as 'favourable' or 'unfavourable' outcome according to the retrospective secondary data extracted from their medical records. Unfavourable outcome was considered if the patient died or has one or more postoperative complications. Favourable outcome was considered if the patient was discharged alive and does not have any history of postoperative complications. All the results were recorded in microsoft excel sheet and were analysed by SPSS software.

RESULTS

In the present case series, data records of a total of 48 patients were analysed. Mean age of the patients was found to be 32.8 years. 42 percent of the patients belonged to the age group of 20 to 35 years. 27 percent of the patients belonged to the age group of 36 to 50 years. 64.5 percent of the patients were males while remaining were females. 58 percent of the patients had rural residence while the remaining had urban residence. Abdominal pain, abdominal distension, vomiting and failure to pass faeces were the prominent presenting symptoms among intestinal obstruction patients.

In the present study, favourable outcome was seen in 76 percent of the patients while unfavourable outcome was seen in 24 percent of the patients. In the present study, mortality occurred in 6 patients. Prolonged ileus was found to be present in 1 patient. Failure to wean from ventilator for more than 48 hours was seen in 2 patients. Wound infection was seen in 1 patient and systemic sepsis was seen in 2 patients.

Table 1: Demographic data of patients.

Parameter		Number of patients	Percentage
Age group (years)	Less than 20	6	12.5
	20 to 35	20	42
	36 to 50	13	27
	More than 50	9	19
Gender	Males	31	64.5
	Females	17	35.5
Residence	Rural	28	58
	Urban	20	42

Table 2: Pre-operative parameters of intestinal obstruction.

Presenting symptom	Number of patients	Percentage
Abdominal pain	45	90
Abdominal distension	41	82
Vomiting	43	86
Constipation	6	12
Failure to pass faeces	40	80
Diarrhoea	4	8
Fever	2	4

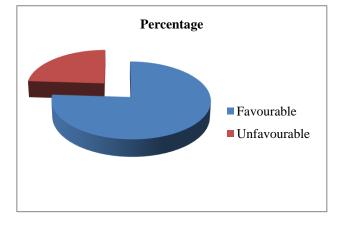


Figure 1: Surgical outcome.

Table 3: Details of patients with unfavourable outcome.

Unfavourable outcome	Number of patients	Percentage
Death	6	50
Prolonged ileus	1	8.33
Failure to wean from ventilator for more than 48 hours	2	16.67
Wound infection	1	8.33
Systemic sepsis	2	16.67
Total	12	100

DISCUSSION

IO is a potentially risky surgical emergency associated with high morbidity and mortality rates in both developed and developing world. It also causes significant surgical side effects in hospital admissions and adversely affects the life of millions of people, cutting across all age groups, with considerable direct and indirect economic impacts on the healthcare system and the affected patients. The incidence of IO is recognized to be high in India, Iran, Afghanistan, and certain African countries including Ethiopia. It has been the leading cause of acute abdominal disorders in Africa.⁶⁻⁹ In 1947, Krook reported follow-up of 309 patients operated on for mechanical small-bowel obstruction (SBO). In Krook's words, the results of these repealed operations must be regarded as anything but encouraging every fresh intervention gives a result inferior to the preceding one. Small bowel obstruction continues to be a major health problem. It accounts for nearly 20% of all surgical admissions for acute abdominal conditions. Mortality associated with SBO has ranged from 5% to 15%, and there have been an estimated 9000 deaths annually.8-10 Hence; the present study was undertaken for assessing the 48 patients with ilecoceacal mass presenting as intestinal obstruction requires surgical intervention and their outcome.

In the present case series, data records of a total of 48 patients were analysed. Mean age of the patients was found to be 32.8 years. Abdominal pain, abdominal distension, vomiting and failure to pass faeces were the prominent presenting symptoms among intestinal obstruction patients. Favourable outcome was seen in 76 percent of the patients while unfavourable outcome was seen in 24 percent of the patients. Margenthaler et al constructed risk indices predicting adverse outcomes following surgery for small bowel obstruction (SBO). The VA national surgical quality improvement program contains prospectively collected data on more than 1 million patients. Patients undergoing adhesiolysis only or small bowel resection for SBO from 1991 to 2002 were selected. Independent variables included 68 presurgical and 12 intraoperative risk factors; dependent variables were 21 adverse outcomes including death. Of the 2002 patients, 1650 underwent adhesiolysis only and 352 underwent small bowel resection. Thirty-seven percent undergoing adhesiolysis only and 47% undergoing small bowel resection had more than 1 complication (p<0.001). The overall 30 days mortality was 7.7% and did not differ significantly between the groups. Odds of death were highest for dirty or infected wounds. ASA class 4 or 5. age >80 years, and dyspnea at rest. Morbidity ranged from 22%, among patients with 0 to 7 risk points, to 62% for those with >19 risk points. Mortality ranged from 2% among patients with 0 to 12 risk points to 28% for those with >31 risk points. Morbidity and mortality after surgery for SBO in VA hospitals are comparable with those in other large series. The morbidity rate, but not the mortality rate, is significantly higher in patients requiring

small bowel resection compared with those requiring adhesiolysis only. 11

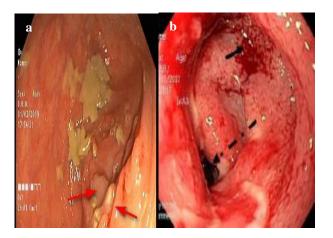


Figure 2 (a and b): Colonoscopic photograph depicting mass lesion as arrow.



Figure 3: Diagnostic laparoscopy showing multiple deposits in intra-abdominal region especially in peritoneum and falciform ligament.

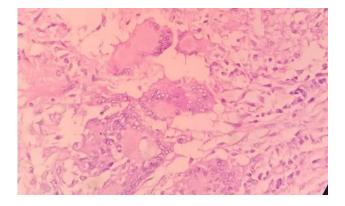


Figure 4: Granuloma in high power in resected bowel tissue.

In the present study, mortality occurred in 6 patients. Prolonged ileus was found to be present in 1 patient. Failure to wean from ventilator for more than 48 hours was seen in 2 patients. Wound infection was seen in 1

patient and systemic sepsis was seen in 2 patients. Meier et al compared the outcomes of patients managed either by conservative treatment or surgical operation for an episode of SBO. The occurrence of recurrent hospitalization, surgery, SBO symptoms at home, and mortality was determined. Among 221 patients admitted with SBO, 136 underwent a surgical procedure (surgical were managed conservatively group) and 85 (conservative group). Baseline characteristics were similar between treatment groups. The median follow-up time (interquartile range) was 4.7 (3.7-5.8) years. Nineteen patients 14.0% of the surgical group were hospitalized for recurrent SBO versus 25 (29.4%) of the conservative group hazard ratio (HR), 0.5; 95% CI, 0.3-0.9.

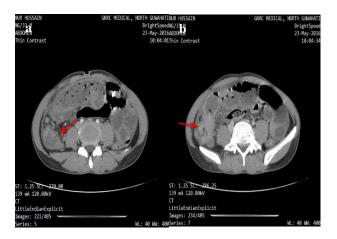


Figure 5 (a and b): CT scan image of ileoceacal mass (indicated by arrow) along with dilated air and fluid filled bowel loops with multiple lymphadenopathy with ascitis with distal collapse bowel suggesting acute intestinal obstruction.

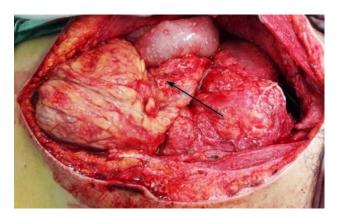


Figure 6: NTRA operative photograph showing multiple tiny nodules all over in abdomen (small intestine, large intestine, omentum, peritonium).

The need for a surgical management of a new SBO episode was similar between the two groups, ten patients 7.4% in the surgical group and six patients 7.1% in the conservative group (HR, 1.1; 95 % CI, 0.4-3.1). Five years mortality from the date of hospital discharge was

not significantly different between the two groups (age and sex adjusted HR, 1.1; 95 % CI, 0.6-2.1). A follow-up evaluation was obtained for 130 patients. Among them, 24 patients 34.8% of the surgical group and 35 patients 57.4% of the conservative group had recurrent SBO symptoms (odds ratio, 0.4; 95% CI, 0.2-0.8). The recurrence of SBO symptoms and new hospitalizations were significantly lower after surgical management of SBO compared with conservative treatment. 12

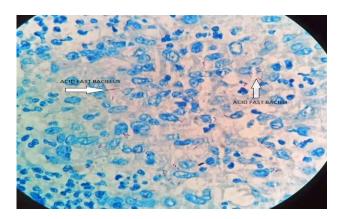


Figure 7: Microscopic finding of Ziehl–Neelsen stain showing multiple acid-fast bacilli.

CONCLUSION

From the above results, the authors conclude that surgical management had high efficacy of more than 75 percent in managing patients with intestinal obstructions. With precise technique and adequate care, complication rate can be reduced. Limitation of the present study is small sample size, further studies with large sample size should be conducted.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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