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ACUTE INTESTINAL OBSTRUCTION IN ADULT - AN ANALYTICAL STUDY

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ABSTRACT
Introduction: Acute Intestinal Obstruction is the main surgical emergency problem which a general surgeon has to face place every day. The rapid onset and progress of the clinical feature and with which the morbidity endangers the patients due to so many practical factors. Based on this aim of our study is to identify the cause of acute intestinal obstruction, also mortality and morbidity in the analysed cases. **Material and Methodology:** This study is done in a tertiary care teaching hospital for period of two years. Immediately after admission, resuscitation was carried out personal particulars were recorded and detailed history was obtained. Thorough clinical examination was done. The above facts were recorded in a Proforma prepared for this study. Patients with acute Intestinal Obstruction in children below 12 yrs were excluded. **Results and Discussion:** The obstructed external hernias tops the list and stands first among the commonest cause of acute intestinal obstruction in adults. This is followed by adhesions and bands, colonic growth, sigmoid volvulus, tuberculous abdomen and intussusceptions contribute the rest in descending order. Out of 75 cases operated 6 (8%) patients died in the early post-operative period. Based on the results obtained acute intestinal obstruction is a real emergency and recognition of clinical status of obstruction at the shortest time interval and early intervention will be very essential because it minimises morbidity and mortality with a good prognosis.

KEYWORDS: intestinal obstruction, causes, prognosis.

INTRODUCTION
Acute Intestinal Obstruction is the main surgical emergency problem which a general surgeon has to face place every day irrespective of day and night. It is quite an exciting experience to examine, investigate, diagnose, explore and look into the abdominal cavity where it would reveal the puzzling conditions. A surgeon adds this experience to his knowledge everyday from each and every case.

Acute intestinal obstruction can result from a variety of causes, and there is a tendency to concentrate on the features of intestinal obstruction itself.[1] Success in the treatment of Acute intestinal obstruction depends largely upon early diagnosis, skillful management, and the appreciation of the importance of treating the pathologic effects of the obstruction just as much as the cause itself.[2]

The abdomen is said to be a magic box and so long as its lid remains unopened heaven alone knows what lies within it. But every attempt should be made to arrive at a provisional diagnosis before embarking on surgery. The rapid onset and progress of the clinical feature and the spread with which the morbidity set in endangers the patients inspite of recent advances still this condition holds a major share of mortality due to so many practical factors which provoked to study and analyse this interesting subject.[3]

Since life to death is an one way traffic, it is no harm to open an acute abdomen in doubt rather than to wait and worry later for our act. The failure in the initial attempt is not a short coming and at the same time the initial success in not a winning pole. Both are experience and both are catalysts for the future knowledge of a young and energetic surgeon. This study is undertaken because early diagnosis and early interference is of immense value in preventing mortality in case of acute intestinal obstruction. Based on this aim of our study is to analyse the incidence of acute intestinal obstruction is adults admitted in Coimbatore Medical College and Hospital for a period of two years. Also to identify the cause of acute intestinal obstruction, to identify the factors modifying the prognosis of the patient., to study about mortality and morbidity rate in the analysed cases and to

study the clinical parameters useful in deciding the need for surgical intervention.

MATERIAL AND METHODOLOGY

This study is done in a tertiary care teaching hospital fot period of two years when 234 cases were admitted with the provisional diagnosis of Acute Intestinal Obstruction. However the analytical and critical study was carried out only on the 75 cases which were operated upon. Immediately after admission, resuscitation was carried out personal particulars were recorded and detailed history was obtained. Thorough clinical examination was done. All routine and relevant special investigations when available were carried out. After confirmation of diagnosis, patient were subjected to emergency surgery as warranted.

When ever possible the histopathological examination of the specimen was carried out, to confirm the clinical diagnosis. Postoperative course was closely observed until the first follow up visit. The above facts were recorded in a Proforma prepared for this study. The following cases were excluded from this study, acute Intestinal Obstruction in children below 12 yrs. Intestinal Obstruction treated conservatively.

RESULTS

During the study period, the total number of patients with Acute Intestinal Obstruction who under went surgery was seventy five.

Table 1: Etiological Factors.

SL.NO	DIAGNOSIS	TOTAL	PERCENTAGE (%)
1.	External Hernias Ingunial Femoral	40 35 5	53%
2.	Adhesions and Bands post operative Idiopathic	21 20 1	28%
3.	Colonic growth	6	8%
4.	Sigmoid Volvulus	4	5%
5.	Abdominal tuberculosis	2	3%
6.	Intussusception	2	3%
	Total	**75**	**100%**

A hernia is a protrusion of a viscus or part of a viscus through an abnormal opening in the wall of its cavity. The obstructed hernia is a irreducible hernia containing intestine which is obstructed from without or within, but there is no interference to the blood supply to the bowel.

The obstructed external hernia is the most common cause of intestinal obstruction in our study. With total cases around 40, the symptoms colicky abdomen pain, vomiting and tenderness over the hernial site are less severe and the onset more gradual than in the cases of strangulation. In our study right side(n=25) is more commonly affected than the left(n=10).

During surgery we evaluated the per-operative findings where mostly bowel condition was viable, and obstruction was commonly seen at level of internal ring. Small bowel was commonly involved. Resection, Anastomosis and bassini's herniorrhaphy was done commonly. Similarly in case of femoral hernia exploration, Reduction and repair (low approach) – Lock wood or Mcevadys high approach was done.[4]

In our study 21 cases were due to adhesions and bands (28%). In this series it was found more in males 15 cases and post operatives cases (20 cases), 4 cases presented with recurrent attacks of intestinal obstruction and previously treated conservatively. Partial obstruction treated conservatively with resuscitation and tube decompression in 60-80%. Lapratomy and release of adhesions done in most of cases.

In our study two cases of intussusception was reported. The two cases (3%) presented with initial intermittent colicky abdominal pain, treated privately for dysentery. The female patients had recurrent obstruction history and treated conservatively previously is a case of peutz jeghers syndrome.

Abdominal tuberculosis was seen in two cases with involvement of ileum and ileocaecal region. The patients were presenting with a dull aching pain abdomen over right iliac fossa, vomiting, abdomen distension alteration in the bowel habits, progressive loss of weight and one case had associated pulmonary tuberculosis with generalised lymphadenopathy. For both cases biopsy was taken from the involved area and HPE report came as tuberculous lesion.[5] Anti-tuberculous treatment was started for both cases in the post operative period.

In our series 6 cases (8%) admitted with features of Acute intestinal obstruction had stenosing type of colonic growth. Acute intestinal obstruction is the presenting symptom of colon carcinoma in 20% of cases. All patients presented with constipation followed by abdominal pain and abdominal distension. No patients had history of malena or bleeding per rectum. In all patients the lesion was above the level of mid rectum. So per rectal examination didn't reveal any findings.

In our study there were 4 cases (5%) of sigmoid volvulus. Male predominate was seen and maximum cases were seen in 7th decade of life.

DISCUSSION

General surgeons are more often bound to face the emergency of Acute intestinal obstruction in most of the duty days. So the analytic study was focused to acute intestinal obstruction in adults. Out of 234 cases admitted with provisional diagnosis of acute intestinal obstruction, 75 cases who underwent surgical management were taken up for analytical study.

The obstructed external hernias tops the list and stands first among the commonest cause of acute intestinal obstruction in adults. This is followed by adhesions and bands, colonic growth, sigmoid volvulus, tuberculous abdomen and intussusceptions contribute the rest in descending order.

The male female ratio of the present series is 4.7: 1 showing the predominance of male. This is probably due to the higher incidence of inguinal hernias, adhesion and volvulus in men than in women.

The maximum no. of cases were seen in this series between 31 – 60 yrs. The age more than 60 years are more prone for complications. Most cases presented with pain abdomen, vomiting followed by distension and few with constipation. Most cases of small bowel obstruction can be diagnosed with the combination of clinical features and radiographic findings. Previous surgery is main cause for the obstruction due to bands and adhesions. 20 cases were operated previously.

In this study patients admitted with late presentation had higher mortality and developed more complications in the post-operative period. There is definite relationship between the duration of obstruction and successful surgery. Sir, H. OGILIVIE stated "In acute abdominal emergencies difference between the best and the worst surgery is infinitely less than between the early and the late surgery and the great scarifies of all of them in the sacrifice of time".

This shows 52% were operated in the 6-12 hrs period and 62.7% underwent surgery in 12 hrs. 65 out of 75 patients underwent surgery in the first 24 hrs of admission.[5] There is a direct correlation between the length of time that a patient has obstruction and the probability of strangulation occurring, early diagnosis and early surgery are the key for successful management of strangulated obstruction of the intestine.[6] A delay in operation for small bowel obstruction as shown increased mortality and mobility over operation immediately after fluid resuscitation.[7]

Out of 75 cases operated 6 (8%) patients died in the early post-operative period. Mortality can be decreased in early presentation with adequate pre-operative resuscitation and early surgery.

Out of 75 cases operated, the most common complication is wound infection (Morbidity is 3.3%). Morbidity can be reduced to very minimum with good aseptic precaution and pre-operative antibiotics.[8] In this study cases admitted with late presentation in old age with severe dehydration, uremia, toxemia and also associated disease like diabetics mellitus, ischemic heart disease contributed to the poor prognosis. The cases admitted with early presentation had good prognosis with surgery.

CONCLUSION

The thorough understanding of the anatomy and physiology of abdomen are essential to properly generate a differential diagnosis to formulate a treatment plan. While recent advances in technology can be extremely helpful in certain situation, they cannot replace a surgeons clinical judgement based upon a good history, physical examination and radiograph of abdomen.

The recent advances in surgery, the improvement in the techniques, aseptic and antiseptic measures, the rapid advances in anaesthesiology, better understanding of the fluid and electrolyte management, nasogastric tube decompression, antibiotics, and the basic and specific investigations made the patient safer for modern surgery and greatly reduce the mortality rate.

Based on the results obtained acute intestinal obstruction is a real emergency and recognition of clinical status of obstruction at the shortest time interval and early intervention will be very essential because it minimises morbidity and mortality with a good prognosis.

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