TUBERCULOSIS : A COMMON CAUSE OF INTESTINAL OBSTRUCTION

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ABSTRACT : *Twenty one (44.7%) cases of intestinal tuberculosis constitute the commonest cause of intestinal obstruction amongst the total 47 patients of the condition treated in Surgical Unit II of Civil Hospital, Karachi between 1995 and 1997. Other causes of obstruction were hernia – 15(31.9%), postoperative adhesions – 3(6.4%), malignancy – 3(6.4%), volvulus – 2(4.3%), Crohn's disease – 1(2.1%) and miscellaneous conditions – 2(4.3%). Surgical intervention was required in 35(74.5%) cases while 12(25.5%) responded to conservative treatment. Mean hospital stay was 11 days with 19.2% morbidity and 4.3% mortality.*

KEY WORDS : *Intestinal obstruction, Intestinal tuberculosis, Epidemiology.*

INTRODUCTION

Obstruction of small and large bowel continues to be a major surgical problem with significant morbidity and mortality. Causes of intestinal obstruction vary from country to country. Patients with intestinal obstruction are often seriously ill and require frequent assessment, monitoring of vital signs and clinical progress to determine the need for surgical intervention. The aim of this study was to review the incidence, aetiology, morbidity and mortality of cases of intestinal obstruction treated in our unit.

PATIENTS & METHODS

All patients with established intestinal obstruction were admitted through casualty and outpatient department between 1995 and 1997 in Surgical Unit II of Civil Hospital, Karachi. The diagnosis was established on the presence of clinical features (vomiting, abdominal pain, distension, constipation) and demonstration of dilated loops of small bowel, gaseous distension of large bowel, and air fluid levels on roentgenographic examination of the abdomen.

All pts. received resuscitative treatment as follows:

- Isotonic electrolyte solutions with potassium supplements.
- Nasogastric tube inserted to decompress the dilated bowel.
- Hypovolemic pts. received colloidal solutions.
- Urinary catheter passed to monitor output.

Signs for strangulated bowel (continuous pain, tachycardia, fever and leucocytosis) were closely looked for and immediate surgical intervention carried out when positive.

RESULTS

Among the 47 cases studied intestinal obstruction occurred more commonly in males 25 (53.2%) than females 22 (46.8%). Commonest age group involved was between 21-30 years (Table 1). Abdominal tuberculosis was the commonest cause of intestinal obstruction seen in our series (Table 2). Out of 21 cases 18 were females and 3 males; their ages ranged between 20-40 years. Family history of tuberculosis was present in 65% of these cases. Anorexia and

Table 1. Age Distribution (n=47)

Age Group in Years	No.	%
10-20	10	21.3
21-30	16	34.0
31-40	8	17.0
41-50	5	10.6
51-60	4	8.5
61-70	2	4.3
71-80	2	4.3

Table 2. Cause of Intestinal Obstruction (n=47)

Cause	No.	%
Intestinal Tuberculosis	21	44.6
Hernia	15	31.9
Postoperative Adhesions	3	6.4
Malignancy	3	6.4
Volvulus	2	4.3
Crohn's disease	1	2.1
Miscellaneous	2	4.3

Table 3. Patterns of Tuberculosis (n=21)

Pattern	No.
Ileal stricutre	12
Hypertrophic Ileocaecal tuberculosis	3
Miliary tuberculosis	2
Tuberculous mesenteric lymphadenitis	2
Omental tuberculosis	1
Adhesion to tuberculous genital organs	1

weight loss was present in all patients. Most of these patients were anaemic and undernourished. Pattern of tuberculosis observed on operation/contrast radiography is show in Table 3. Of these 21 cases, 6 responded to conservative treatment while 15 required surgery including right hemicolectomy with ileotransverse anastomosis in 3 patients, resection of diseased bowel in 6, strictureplasty in 4 and simple release of adhesions in 2 patients. External hernia was the 2nd commonest cause of intestinal obstruction. Amongst the 15 cases seen, 12 were due to inguinal hernia (all males) and 3 due to paraumbilical hernia (all females). Reduction and repair of the obstructed hernia was performed in all cases; bowel resection was necessary in 2 cases with gangrenous bowel. Postoperative adhesions and malignancy ranked 3rd in the causes; carcinoma of hepatic flexure in one and sigmoid colon in two patients was responsible for obstruction.

Postoperative complications were seen in 9(19.2%) cases. Wound infection occurred in 5 patients, all of whom had undergone bowel resection. Other complications were chest infection in three, wound dehiscence in two and bowel fistula in one patient.

Mortality rate in this series was 4.3%(2 cases). One patient died during resuscitation due to septicemia, other died one week after surgery due to multiple organ failure.

DISCUSSION

Intestinal obstruction is a common surgical disorder. It can occur at any age and account for approximately 20% of all acute surgical emergencies. In the beginning of this century, external hernia was the commonest cause of intestinal obstruction in USA. Presently 64-79% of intestinal obstruction is due to postoperative adhesions. This shift is due to increasing number of elective abdominal surgeries. McEntee et al[1] in their series of 236 cases found postoperative adhesions (32%) as the commonest cause of intestinal obstruction followed by carcinoma (26%) and strangulated hernia (25%).

Asbun and associates[2] in a retrospective study of 80 patients showed that adhesions accounted for 73% of cases and malignancy for 13%. Appendectomy, colorectal and pelvic procedures were those most frequently responsible for adhesion formation.

Mohammad et al[3] found postoperative adhesions (45%) as the commonest cause of intestinal obstruction in their review of 84 cases over a period of 10 years, other causes being hernia 20%, pseudo-obstruction 9.5%, intussusception 7%, malignant obstruction 4.8%, inflammatory obstruction 3.6% and volvulus 3.6%.

In our study abdominal tuberculosis was the commonest cause of intestinal obstruction followed by external hernia and adhesions. This pattern is different from that of the developed countries where postoperative adhesions are the commonest. General public and doctors think that intestinal tuberculosis is a rare disease in the western world which has led to delay in diagnosis, as when it occurs it is often mistaken for Crohn's disease. There have been many reports in literature over the last decade describing the disease in UK and other developed countries.

Fanucci and others[4] reported intestinal tuberculosis as observed between 1983 and 1988. The cases were discussed in the light of epidemiological data emerging from review of recent medical literature. The danger is that the disease which is endemic in Asian and African regions may spread again in the western world fostered by intensifying migration of people. Kawakami et al[5] reported 12 cases (male 8, female 4) of tuberculous infection of gastrointestinal tract diagnosed histopathologically during January 1980 to December 1991 in Tokyo National Chest Hospital. Malignancy was responsibe for 44.7% cases

Table 4. Causes of Intestinal Obstruction in Different Series

Causes	Sufian & Matsumoto[6] USA 1975 (n=147)	Chiedozi, et al[7] Nigeria 1980 (n=269)	Savage[8] UK 1961 (n=161)	This Series Pakistan (n=47)
Adhesions	37.41	12.64	36.65	6.4
Hernia	25.17	76.58	4.97	31.9
Inflammatory	2.04	—	5.59	46.7
Tumours	21.10	0.37	29.81	6.4
Volvulus	4.08	10.41	5.59	4.3
Diverticulosis	4.08	—	—	—
Others	6.12	—	17.39	4.3

All figures are in percentages.

of large bowel obstruction in the study of Sufian & Matsumoto[6] which Chiedozi[7] reported it as 3.5% and Savage[8] 75.4% as compared to our figure of 6.4% (Table 4). The mortality in our series was 4.3%, which is higher than that reported by Mohammad and others (3.5%)[3].This is probably due to late presentation in our setup.

CONCLUSIONS

- Abdominal tuberculosis is the commonest cause of small bowel obstruction.
- Incidence of GIT tuberculosis is increasing in the developed countries due to HIV infection and migration of Asian population.
- Case finding is poor due to mixup with Crohn's disease.
- Delay in admission and surgery increases morbidity.
- Clinical examination and plain X-ray abdomen are still best for diagnosis of intestinal obstruction.
- Conservative therapy is recommended initially for obstruction due to adhesions.
- Early detection and surgical intervention for strangulation.

To control this deadly disease we suggest :

- Health Education and public awareness regarding tuberculosis.
- Early detection of the disease.
- Provision of effective chemotherapy.

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