Intestinal Obstruction

A 5-year Retrospective analysis in 2nd March Hospital, Sebha

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Summary:
95 cases of intestinal obstruction were studied retrospectively over a period of 5 years. Obstruction due to hernia account for 43% of the cases. Adhesions account for 32% of cases secondary to appendicectomy, trauma and pelvic surgery. Strangulation account for 7% of cases. Conservative treatment was successful in 23% of cases, most of them due to adhesions. Mean hospital stay was 7.4 days. Morbidity was 5.2% Mortality was 5.2%.

Introduction:
Improvement in fluid and electrolyte management had led to decline in the mortality rate in intestinal obstruction, but still considerable morbidity and mortality exist which makes early recognition, prevention, and early treatment of strangulation of critical importance. However controversy persist in those cases with non-strangulating intestinal obstruction regarding the indication for surgical versus conservative management and more specifically in what constitutes the responsible delay in the timing of operative intervention. Some authors advocate early surgery for small intestinal obstruction, and consider a trial of tube decompression only to be a source of delay in surgical treatment which result in higher mortality and morbidity rate along with longer hospital delay. Others report a high rate of successful tube decompression.

Materials and Methods:
Medical records of patients treated at 2nd March Hospital in Sebha from 1995-2000 with intestinal obstruction were reviewed. Readmission occurred in 2 cases.

Results:

Etiology
- 59 cases 62% occurred in male
- 36 cases 38% occurred in female
- 41 cases 43% due to hernia

The types of hernia were 28 inguinal, right inguinal were 18 and left inguinal hernia were 10
- Umbilical 5
- Incisional 1
- Paraumbilical 6
- Epigastric 1

Adhesions accounted for 32 cases 33%

Tumours 8 cases
- Intussusception 3 cases

Volvulus 8 cases (4 of them were due to small intestine.
- 3 cases in the sigmoid and 1 case of caecal volvulus.

Hirschsprungs disease 1 case

Mesenteric vascular occlusion in 2 cases

Large bowel obstruction occurred in 13 cases 14% (8 cases due to carcinoma, 4 cases of volvulus and case of hirschsprugs disease.

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Symptoms and Physical findings:
The commonest symptom was vomiting, which was recorded in most cases of obstruction. And characteristic abdominal pain was a more constant symptom in adhesion than hernia. Constipation was recorded in only 4 cases of hernia and was a main symptom in adhesion; also distension was recorded only in 3 cases of hernia and was also more common in adhesion, volvulus and ca. colon.

Treatment:
Surgical treatment was done in all but one case of hernia and was umbilical while operation was done in only 10 cases of adhesion and 22 cases were treated conservatively. Bowel resection was done in 4 cases of hernia, one of them died and all were paraumbilical, while none of the cases of adhesion treated surgically ended by resection. Surgery performed in all cases of volvulus and 3 of them ended by resection. Only half the cases of tumours underwent surgical treatment; the rest were transferred to other hospitals on request; also the case of hirschsprung’s was transferred. Three cases of intussusception underwent surgery without resection, and one case of mesenteric vascular occlusion was operated and resection performed. The overall number of cases treated surgically were 66 cases (69.5%).

Hospital stay:
Mean hospital stay was 7.4 days for cases of adhesional intestinal obstruction; the mean hospital stay for patients treated by conservative way was 4.5 days and for cases treated surgically it was 10 days.

Complications:
Complications accounted for 5.2% and ranged between wound infection 4 cases, intestinal fistula 2 cases and intestinal obstruction due to technical error 1 case.

Discussion:
Still hernia is the most common cause of intestinal obstruction as mentioned in many reports from developing countries.9,10 On the other hand in the developed countries obstructed hernia is declining in the list of the causes of intestinal obstruction and adhesions becoming the 1st of obstruction.11 Carcinoma is the major cause of large bowel obstruction followed by volvulus which is the same percentage in other series.11 Appendectomy, colorectal carcinoma and other pelvic procedures are the most important causes of intestinal adhesions. Some authors suggest that suture size rather than tissue reactivity is the paramount factor in the induction of adhesions.12 Others suggest that suture tension is more important than suture material and suggest avoiding peritoneal closure altogether.13 Considering clinical features our series is in general agreement with other reports9 and vomiting is the most constant clinical feature.

Morbidity and Mortality:
Morbidity occurred in 5.2% of cases the most frequent complication being wound infection. Mortality was 52% and occurred in 5 cases which is low compared with other series. Bizer et al, reported a mortality of 6.7% and Shannon (1968) showed a mortality rate of 10%.

In our study no case of intestinal obstruction due to adhesion died whether treated by surgically or conservatively, and since 22 cases were treated by conservative treatment compared with 10 cases by surgical treatment, enough time may be allowed to patients of intestinal obstruction due to adhesions to correct their fluid and electrolyte imbalance and to decompress the bowel and observe the response of the patient. This time may be prolonged to 48 hours safely and to extend this period if there are no signs of peritoneal irritation, no fever, and no raised WBC. In the series of Wolfson et al, long tube decompression was successful in the avoidance of surgical procedures in 2/3 of patients with intestinal obstruction due to adhesions. Bizer in a report of 405 patients recommends an observation period of 48-72 hours using conservative management for mechanical obstruction thought to be secondary to adhesions, when there are no signs of strangulation.

Brolin in a series of a partial small intestinal obstruction reported 88% successful management with tube decompression. In our
series successful management by conservative way occurred in 22 cases of the 32 cases of intestinal obstruction thought to be secondary to adhesions and this forms 68% of cases which is not much different from other series. On the other hand surgical treatment as early as the general condition of the patient permits and certainly within the first 6 hours of admission is advocated for patients with irreducible external hernia causing obstruction and for patients with signs of peritoneal inflammation and suspected strangulated bowel.

Conclusion:

1. Conservative management was successful in 68% of patients with intestinal obstruction secondary to adhesions.
2. Conservative measures are strongly recommended for recurrent episodes of bowel obstruction due to adhesions.
3. Mortality was nil in all cases of intestinal obstruction secondary to adhesions whether treated by conservatively or by operation.
4. In cases of hernia all the cases ended by resection were secondary to paraumbilical hernia.
5. Only one case of intestinal obstruction was secondary to incisional hernia.

References:

7. Wolfson PG, Bower GG, Gerlent IM, Kriel I, A
11. Wagensteen OH. Intestinal obstruction.