

**Causes And Management Of Intestinal Obstruction In
Babylon Governorate Hospitals/Iraq**
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SUMMARY:

Aretrospective review of 284 cases of intestinal obstruction admitted to the hella general teaching hospital (Babylon) over a period of 5 years from (1/1/1998 to 31/8/2002) was carried out. The main causes of obstructive were post- operative adhesions 105 patients (40%) . hernia 87(30.6%) pseudo- obstruction 8 (2.8%) intussusception 18 (6.33%) malignant obstruction 67 (23.6%) inflammatory obstruction 4(1.41%)volvulus 3 (1.05%) and others 4(1.41%) surgical intervention was necessary in 245 patients (86.25%) while 78 patients (27.5%) responded to conservative trestment . post- operative complications occurred in 43 patients (15.2%) the main complications were wound infection chest infection prolonged ileus and intestinal fistulae the mortality was 7(2.5%) the pattern of small bowel obstruction in Babylon similar to that in the west while large bowel obstruction is not uncommon.

المخلص:

دراسة تراجمية شملت 284 حالة من حالات انسداد الأمعاء تم ادخالها الى مستشفى الحلة التعليمي العام (محافظة بابل) خلال فترة سنوات 2002/1/1 كانت الالتصاقات بعد العملية من الاسباب الرئيسية وتشمل 105 مريضا (40%) فتق 87 مريضا (30.6%) اشباه الانسداد 8 حالة (2.8%) تداخل الأمعاء حالة (6.33%) انسداد التهابي 4 حالات (1.41%) التهاب الأمعاء حالة (1.05%) والبقية هم 78 مريض (27.5%) استجابوا للعلاج التحفظي مضاعفات بعد العملية حدثت في 34 مريضا (15.2%) وكانت المضاعفات الرئيسية هي التهاب الجرح التهابات الصدر شلل الأمعاء الطويل وناسور الأمعاء حدثت الوفاة لسبع حالات فقط (2.5%) ان اسلوب انسداد الأمعاء الدقيقة في بابل مشابه في الغرب للأسلوب في الغرب وبقي انسداد الأمعاء الغليظة من الحوادث الغير نادره .

INTRODUCTION:

Intestinal obstruction is a common surgical emergency. The causes of mechanical bowel obstruction vary in different countries various reports have indicated that the in different countries and various reports have indicated that the incidence for each cause may have changed over the years . the aim of this study was to review the incidence morbidity and mortality of intestion obstruction in Babylon governorate/iraq.

PATIENTS AND METHODS:

The records of all patients admitted to the general teaching hospital with a diagnosis of intestinal obstruction between 1998 and 2002 were reviewed. The clinical notes of nurses junior and doctors (including operative findings) and the radiologists' evaluation of radiographic examinations were recorded. A retrospective analysis of the data obtained from clinical notes, laboratory results, radiology reports and operation notes was carried out.

RESULTS:

SEX AND AGE DISTRIBUTION:

Intestinal obstruction occurred more commonly in men (64%) than women (35%). Bowel obstruction was most prevalent in adults between 20 and 60 years of age (57%) and less common over 60 years of age (27%) and under 10 years (15%).

Causes :

The causes of obstruction in this study are shown in (table 1.) as in most other studies the previous operation in cases of obstruction due to adhesions was found to be appendicectomy in 137 (48.5%) of patients. Adhesions followed laparotomy in 57 (20%) in 13 (4.5%) gynaecological operations in 3% and hernia repairs in 28 (10%).

DISCUSSION:

Intestinal obstruction is a common disease in Babylon governorate compared with developed western countries. ¹⁻⁴ post-operative adhesions have long been the most common cause of small bowel obstruction in western and developed countries. This has also been the case in this part of the middle east with an incidence of 40% while obstructed external hernia is still the main cause of obstruction in other parts of the middle east. ^{5,6} although colorectal cancer is one of the main causes of intestinal obstruction in western countries. ^{4,7} Volvulus is rare in this study and this is probably related to dietary factors.

A comparative analysis of the causes of intestinal obstruction in different countries ¹⁰⁻¹² shows that Babylon has an aetiological pattern for small bowel obstruction similar to that shown in developed countries (table 3). Recurrent obstruction due to adhesions occurred in only 9 patients. This is less common than in other studies. ¹⁻² surgical intervention for adhesion obstruction does not seem to increase the rate of future obstruction. ^{1,2,8} As in most other studies the majority of adhesive obstruction followed previous appendicectomy (48.5%). There was a relatively high morbidity in this series (15.1%) the more serious complications were associated with cases in which bowel resection was necessary and with malignant obstruction. The delay of surgery however was the most significant factor in the causation of post-operative complications (table 2).

It has been suggested that the period of conservative management for obstruction due to adhesions should not exceed 24h unless there is clear clinical and radiological evidence that the obstruction is resolving. ⁹ This is supported by the results of this study.

The mortality rate in this study was relatively low (2.5%). This may be related to the

Low incidence of malignancy and associated conditions and the fact that the patients were relatively young .

Table 1. causes of intestinal obstruction in 284 patients

	No	(%)
Adhesion	105	37.0
Obstructed hernia	87	30.6
Pseudo- obstruction	8	2.8
Intussusception	18	6.33
Malignancy	67	23.6
Inflammatory obstruction	4	1.41
Volvulus	3	1.05
Others	4	1.41

Management:

The episode of obstruction settled on conservation management in 39 patients (13.7%) of these 25 patients were admitted with obstruction due to adhesions (245) patients had surgery within the first 48h. but there was a delay in surgery between 2 and 10 days in 49 cases . adhesiolysis or division of a band was carried out in 173 patients 16 patients requiring resection of gangrenous segments reduction and repair of obstructed hernia was performed in 85 patients and bowel resection was necessary on 13 occasions other procedures included reduction of intussusception or volvulus bowel resection for malignant small or large bowel obstruction and one negative laparotomies in cases of pseudo-obstruction.

Morbidity:

Post- operative complications occurred in 89 patients (31.3%). Most of these patients had more than one complication .(table 2). Significant wound infection disease requiring treatment with antibiotics occurred in 24 patients prolonged ileus for a period exceeding 3 days occurred in 16 cases the majority being in those patients who were found to have strangulated bowel at operation . there were 17 cases of chest infection and as with prolonged ileus the majority of these patients had undergone bowel resections other complications were : small bowel fistula in 4 patients abdominal wound dehiscence in 5 patients settling on conservative management in 7 cases and one stress ulceration causing two episodes of haematemesis which also settled conservatively .

The main complications therefore were wound and chest infections these occurred in- patients who had delayed operative intervention for longer than 24h.(29 patients) and in- patients with malignant disease. Ischaemic obstruction due to adhesions required resection in 29 out of 245 . all were operated upon after a delay of at least 24h. as none of these patients had clear evidence of strangulation obstruction on admission it may be concluded that the intestine underwent irreversible ischaemic changes during the period of conservation management .

Table 2. the morbidity related to the delay in surgery in 14 patients

Complication	No	Bowel resection	Strangulate on	malignancy	Systemic disease	Operative delay
1-Wound infection	29	2	1	1	2	2h-9 days
2- prolonged ileus	16	4	1	-	1	7h-9 days
3-pulmonaru complications	17	3	1	2	1	14h-6 days
4-wound dehescence	5	-	-	1	1	4h-10 days
5-bowel fistula	4	2	-	2	1	6h-9 days
6- peritonitis	7	1	-	-	-	9 days
7-stress ulcer	1	-	-	-	-	3 days

Mortality:

The mortality rate in this series was 7 patients (2.5%). There was only one death immediately post- operatively due to myocardial infarction . Another patient died without operative intervention . He was admitted with septicaemia pneumonia and acute renal failue.Tow Days later he developed abdominal distention and abdominal radiographs showed massive distension of small and large bowel. This was diagnosed as pseudo- obstruction and the patient was treated conservatively with colonoscopic decompression but died of multiorgan failure 1 week after admission .² 3 patients died 2 weeks post- operatively from disseminated malignancy and 2 patients for sever species.

TABLE3- comparative analysis of the causes of intestinal obstruction in different series

	Sufian and Maysumotousa (n=147)1975		Chiedozi et al Nigeria 1980 (n=269)		Savage Uq 1961 (n=161)		Nassar (n=166) Uq 1982		Al- qatib Iraq 98-01 (n=284)	
	NO	%	NO	%	NO	%	NO	%	NO	%
SBO TOTAL	109	74.2	240	89.2	133	81.2	104	64.6	98	34.5
adhesions	55	50.5	34	14.2	59	65.7	79	59.4	103	36.2
hernia	34	31.2	206	85.8	8	7.7	39	29.3	37	13.0
neoplasma	14	12.8	-	-	5	4.8	4	3.0	22	7.7
inflammatory	3	2.7	-	-	9	8.6	-	-	3	1.05
other	3	2.7	-	-	23	22.0	11	8.3	8	2.8
Lbo total	38	25.8	29	10.8	57	35.4	33	19.8	16	5.6
Tumours	17	44.7	1	3.5	43	75.4	15	45.5	22	7.7
volvulus	6	15.8	28	96.5	9	15.8	5	15.2	3	1.05
diverticulosis	6	15.8	-	-	-	-	4	12.0	1	0.35
other	6	15.8	-	-	5	8.8	6	18.2	11	3.8

CONCLUSION :

Intestinal obstruction is a relatively common disease in Babylon . this may be related to the number of operation carried out as laparotomy and obstructed hernia . the relative frequency of the causes of obstruction in Babylon is similar to that seen in developed . the observed increased incidence of obstruction due to adhesions due to the improved provision of health care resulting in an increase in the number of abdominal operations . despite repeated pleas for early surgical intervention in acute intestinal obstruction this condition is still associated with significant morbidity . the advice given here is not to wait for conservative management more than 48h to decrease the complications rate.

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