

## Etiology of Patients with Large Gut Obstruction

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### ABSTRACT

**Objective:** In this study our main goal is to evaluate etiology of the patients with large gut obstruction.

**Method:** This prospective study was done in total 50 patients possessing the symptoms and signs of suspected large bowel obstruction irrespective of age and gender at different surgical units of Shaheed Ziaur Rahman Medical college Hospital, Bogra from May 2009 to April 2010.

**Results:** During the result, 46 patients (92%) come with constipation and 43 patients come with abdominal distension, 27 patients (54%) with absent bowel sound, some had abdominal pain (62%) and nausea & vomiting (58%), 5 patients (10%) complaint per rectal bleeding. Out of 50 patients plain x-ray abdomen in erect posture including both domes of diaphragm and digital rectal examination done in all patients and found positive in 43 cases (86%) and 3 cases (6%) respectively, on USG whole abdomen 7 patients (33.33%) found positive result, in rectoscopy out of 26 patients 5 patients (19.23%) found positive result.

**Conclusion:** From our result, we can conclude that, large gut

obstruction is fairly common surgical emergency in developing countries, where volvulus is the commonest pattern of presentation, followed by colonic carcinoma.

**Keywords:** Acute Abdomen, Intestinal Obstruction, Abdominal Emergency.

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### INTRODUCTION

Intestinal obstruction is one of the commonest causes of acute abdomen and abdominal emergency that is encounter in surgical practice. Large bowel obstruction is an emergency condition that requires early Identification and intervention. The large bowel obstruction is age dependent and increase with age.<sup>1-3</sup> Large bowel obstruction is mechanical or functional obstruction of large Intestine, preventing normal transit of product of digestion.

The distribution of disease world-wide seems to be related to industrialization and socioeconomic standard. There is a high incidence of malignant in industrialized countries including Western Europe, Scandinavia and North America, where in the developing world like Sub-Sahara, Africa, Asia, South America, the incidence appears to be lower.<sup>4,5</sup>

There is some registration system in developed countries which help in further planning in management protocol. Etiological factors vary from country to country, race to race and age to age and treatment depends upon on it.<sup>6</sup>

### OBJECTIVE

To evaluate etiology of the patients with large gut obstruction.

### METHODOLOGY

**Type of Study:** Prospective study

**Place of Study:** Different surgical units of Shaheed Ziaur Rahman Medical college Hospital, Bogra.

**Study Period:** May 2009 to April 2010.

**Study Population:** Total 50 patients possessing the symptoms and signs of suspected large bowel obstruction irrespective of age and gender were included in this study.

**Sampling Technique:** Random sampling

**Exclusion Criteria:** Patients with history of trauma and paralytic ileus.

**Method:** The diagnosis was made on clinical findings and radiological reports. In history, attentions were paid to the age and gender of the patient, duration and sequence of appearance of the

symptoms, history of previous operation, dietary history and bowel habit. On general examination each patient was evaluated specially for state of dehydration and vital signs. During examination of the abdomen attention was paid to the location of tender lump and degree of abdominal distention, visible peristalsis, abdominal tenderness, muscle guard and rigidity and presence or absence of bowel sound or increased bowel sound. In all cases examinations of the hernial orifices and per rectal digital examination were done.

**Statistical Analysis:** Data was collated and appropriate statistical analysis was done using computer-based SPSS (Statistical program for scientific study) package

**Table 1: Age distribution of the patients**

Age	n	%
10-20 years	1	2
21-30	4	8
31-40	10	20
41-50	12	24
51-60	14	28
61-70	7	14
>70	2	4

**Table 2: Gender distribution of the patients**

Gender	n	%
Male	31	62%
Female	19	38%

**Table 3: Clinical features of the patients**

Clinical features	n	%
Constipation	46	92
Abdominal distension	43	86
Abdominal pain	31	62
Nausea and vomiting	29	58
Loss of appetite	11	22
Per rectal bleeding	5	10
Dehydration	21	42
Hypotension	20	40
Absent bowel sound	27	54
Tenderness	7	14
Per rectal bleeding	5	10

**Table 4: Diagnosis investigation of the patients**

Investigations	n	Positive result	%
Plain x-ray abdomen	50	43	86
Ultra-sonogram of whole abdomen	21	7	33.33
Proctoscopy	26	5	19.23
Barium enema	3	2	66.66
Colonoscopy	5	2	40

**Table 5: Causes of large gut obstruction in this study**

Causes	n	%
Volvulus	23	46
Neoplasm	18	36
Fecal impaction	4	8
Tuberculosis	2	4
Pseudo obstruction	1	2
Intussusception	1	2
Bands and a adhesions	1	2

**Table 6: Distribution of cases according to site of lesion**

Cases	Sites	n	%	
Volvulus	Sigmoid	20	86.96	
	Cecum	3	13.04	
	Neoplasm	Rectum	5	27.77
		Recto sigmoid	4	22.22
		Sigmoid colon	2	11.11
Fecal impaction	Cecum	2	11.11	
	Ascending colon	1	5.55	
	Descending colon	2	11.11	
	Anus	1	5.55	
	Neoplasm	1	5.55	
Tuberculosis	Rectum	3	75	
	Sigmoid colon	1	25	
Pseudo obstruction	Cecum	1	50	
	Rectum	1	50	
Intussusception	Cecum	1	-	
	Sigmoid colon	1	-	
Bands and adhesions	Cecum	1	-	
	Colon	1	-	

**RESULTS**

In table-1 shows age distribution of the patients where maximum numbers of patients were in the age group 51-60 years (28%) followed by 41-50 years (24%).

In table-2 shows gender distribution of the patients whereout of 50 patients 31 (62%) were male and 19 (38%) were female.

In table-3 shows clinical features of the patients where 46 patients (92%) come with constipation and 43 patients come with abdominal distension, 27 patients (54%) with absent bowel sound, some had abdominal pain (62%) and nausea & vomiting (58%), 5 patients (10%) complaint per rectal bleeding.

In table-4 shows diagnosis investigation of the patients whereout of 50 patients plain x-ray abdomen in erect posture including both domes of diaphragm and digital rectal examination done in all patients and found positive in 43 cases (86%) and 3 cases (6%) respectively, on USG whole abdomen 7 patients (33.33%) found positive result, in proctoscopy out of 26 patients 5 patients (19.23%) found positive result.

In table-5 shows causes of large gut obstruction where various cases of large bowel obstruction highest incidence was due to volvulus (46%). Next common cause was neoplasm (36%) and third most common cause was fecal Impaction (8%).

In table-6 shows distribution of cases according to site of lesion (n=50). Out of 23 cases of volvulus, 20 cases (86.96%) were sigmoid volvulus, among the cases of neoplasm, rectal neoplasm were more common (27.77%), fecal impaction were most common in rectum (75.00%).

## DISCUSSION

The age of the patients ranged from 14-79 years. Among them maximum patients (28.00%) were in between 51-60 years and followed by 41-50 years (24.00%). It was shown that large bowel obstruction is more common in older age group. Volvulus is the common cause of large gut obstruction in developing country, where it occurs in all age groups. In western society it is particularly a condition of the elderly. Elderly patient who are bed ridden or mentally ill has predisposition to volvulus due irregular evacuation of bowel.<sup>6</sup>

Out of 50 patients 31 (62%) were male and 19 (38%) were female. Male female ratio was 1.63:1, which shows slightly male preponderance as compared to other studies.<sup>7</sup> This may be due to more awareness of male patients. Carcinoma of the colon, particularly the right colon, is more common in women, and carcinoma of rectum is more common in men.

The symptomology was not different from other studies, the predominant symptoms and signs were dependent on etiological factors.<sup>8</sup> Detailed clinical features of the cases were studied. Constipation and abdominal distension were present in majority of cases 92% and 86% respectively, pain and vomiting were late presentation.<sup>9-13</sup> Dehydration and hypotension were more marked in vomiting patient and in late cases.

In this study the most common cause of large gut obstruction was volvulus (46% followed by malignancy (36%), fecal impaction (8%), colonic tuberculosis, bands and adhesions (2%) and intussusception (2%). As compared to other studies malignancy was the leading causes of large gut obstruction but in this study, Volvulus was the commonest cause.<sup>13-15</sup> But in an Indian study it is shown that volvulus was the more common cause of large bowel obstruction.<sup>11</sup> Another study shown that volvulus is the most common causes of intestinal obstruction in Africa and where the incidence is 10 times higher than in Europe or North America due to maximum patients from rural community, low economic condition and their staple food was rice and vegetables, a bulky diet.<sup>16</sup>

## CONCLUSION

From our result, we can conclude that, large gut obstruction is fairly common surgical emergency in developing countries, where volvulus is the commonest pattern of presentation, followed by colonic carcinoma.

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