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Original Research Article.

Assessment of Clinical and Etiologic Profile of Patients with Jejunal and Ileal Perforation

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ABSTRACT

Background: Small bowel perforation is commonly encountered in surgical practice. The different modes of presentation of cases may be misleading in the diagnosis of its origin. Hence, the present study was undertaken for assessing the clinical and etiologic profile of patients with Jejunal and Ileal perforation.

Materials & Methods: A total of 50 patients were enrolled and admitted to Department of General Surgery, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh (India). Complete demographic and clinical details of all the patients were obtained. Screening of all the patients was done and past medical and clinical history of all the patients was obtained. Only those patients were enrolled which had confirmed diagnosis of Jejunal and Ileal perforation. Absence or decreased bowel sounds were also recorded. The routine investigations were carried out and white cell counts noted. An erect abdomen X-ray was done for all patients to particularly look for presence of gas under diaphragm.

Results: The mean age of presentation in jejunal and ileal perforation is almost same at around 32yrs and 37 years respectively. Pain abdomen was the presenting symptom in almost all cases under study, followed by vomiting (76%), fever (46 %) and distension of abdomen (44%). Constipation occurred in 50% of cases. In the present study majority of cases had guarding and rigidity at presentation (84%). Bowel sounds were absent in 72% cases, there was obliteration of liver dullness (in 42% and per rectal tenderness in 12%.

Conclusion: In small bowel perforations males are affected almost 3 times more than females. Age groups between 20 and 40 are most commonly involved. Pain abdomen is the most common presenting symptom followed by vomiting, fever, abdominal distension and constipation.

Key words: Jejunal, Ileal.

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INTRODUCTION

Small bowel perforation is commonly encountered in surgical practice. The different modes of presentation of cases may be misleading in the diagnosis of its origin. It is necessary to know the current surgical procedures for different perforations to manage such a case. An effort has been made here, to know the different modes of presentation, diagnosis and management of perforation.[1-3]

Ileal perforation is a serious complication of a variety of diseases. In developed countries these perforations are reported to be mostly because of foreign bodies, radiotherapy, Crohn's disease, drugs, malignancies and congenital malformations. Due to rarity of typhoid fever and tuberculosis, perforations due to these diseases are seldom encountered in these countries. So much so, that the incidence is reported to be one case of perforation per hospital per year. On the other hand, in the underdeveloped tropical countries small bowel perforation due to these causes is quite a commonly encountered surgical emergency.[4-6] Hence; the present study was undertaken for assessing the clinical and etiologic profile of patients with Jejunal and Ileal perforation.

MATERIALS & METHODS

The present study was conducted with the aim of assessing the clinical and etiologic profile of patients with Jejunal and Ileal perforation. A total of 50 patients were enrolled and admitted to Department of General Surgery, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh (India). Complete demographic and clinical details of all the patients were obtained. Screening of all the patients was done and past medical and clinical history of all the patients was obtained. Only those patients were enrolled which had confirmed diagnosis of Jejunal and Ileal

perforation. Absence or decreased bowel sounds were also recorded. The routine investigations were carried out and white cell counts noted. An erect abdomen X-ray was done for all patients to particularly look for presence of gas under diaphragm. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software.

RESULTS

The maximum numbers of cases were in the productive age group of 20-50yrs, accounting for 50 percent. A major part of the study group were males (76%) whereas females accounted for 24% of cases. The mean age of presentation in jejunal and ileal perforation is almost same at around 32yrs and 37 years respectively. Pain abdomen was the presenting symptom in almost all cases under study, followed by vomiting (76%), fever (46 %) and distension of abdomen (44%). Constipation occurred in 50% of cases. In the present study majority of cases had guarding and rigidity at presentation (84%). Bowel sounds were absent in 72% cases, there was obliteration of liver dullness (in 42% and per rectal tenderness in 12%.

Table 1: Distribution on basis of age and gender

Age in years	MALE (n=38)		FEMALE (n=12)		TOTAL (n=50)	
	NO.	%	NO.	%	NO.	%
12-20	6	12.00	2	4.00	8	16.00
21-30	9	18.00	3	6.00	12	24.00
31-40	11	22.00	3	6.00	13	26.00
41-50	4	8.00	2	4.00	5	10.00
>50	8	16.00	2	4.00	11	22.00
Total	38	76.00	12	24.00	50	100.00

Table 2: Mean age at perforation in different parts of small bowel.

Part of small bowel	No.	Age		
		Range	Mean	Std. Deviation
Jejunum (n=10)	10	13-67	32.7778	17.78889
Ileum (n=40)	40	13-65	37.325	14.81231

Table 3: Distribution of cases based on presenting symptoms.

Presenting Symptom	Number	%
Pain	48	96.00
Vomiting	38	76.00
Distension	22	44.00
Constipation	25	50.00
Fever	23	46.00

Table 4: Distribution of cases based on physical examination.

Sl.no.	Physical Examination	Number	%
1.	Guarding and Rigidity	42	84.0
2.	Rebound Tenderness	42	84.0
3	Distension	33	66.0
4	Obliteration of Liver dullness	21	42.0
5	Absent/Diminished bowel sounds	36	72.0
6	Per rectal Tenderness	6	12.0

DISCUSSION

The diagnosis of injury is based on clinical findings, X ray and abdominal paracentesis. X ray might reveal free gas under the diaphragm; four quadrant needle aspiration was positive in 21 of 24 cases of small bowel perforation reported by Kaul. Diagnostic peritoneal lavage may reveal blood or bile. Marshal-Orloff recommended debridement and closure for small bowel perforations while recommending resection-anastomosis for large wounds or multiple perforations in a segment of bowel. Mortality should be less than 5% in the absence of injury to other organs or systems.[10- 13]

In the present study, the maximum numbers of cases were in the productive age group of 20-50yrs, accounting for 50 percent. A major part of the study group were males (76%) whereas females accounted for 24% of cases. The mean age of presentation in jejunal and ileal perforation is almost same at around 32yrs and

37 years respectively. Pain abdomen was the presenting symptom in almost all cases under study, followed by vomiting (76%), fever (46 %) and distension of abdomen (44%). Mechanical causes are the one of the commonest causes of bowel perforation in the western world. These were responsible for 18 out of 76 cases of small bowel perforation as reported by Chaikof. The breakup of causes was adhesions in 12 patients, hernia in 4 and obstructive carcinomas in 2 patients. Dixon et al in their series of 54 patients reported 13 cases due to mechanical causes – adhesions in 8, colonic cancer on 2, gall stones in 2 and small bowel volvulus in one patient.[14,15] Glinsky in their study found Pneumonia, septicaemia and hepatorenal failure as the major causes of mortality in tubercular perforations Enterocutaneous fistula was seen in one case (12.5% of tubercular perforation). Pneumonia with pleural effusion was seen in one case (12.5%) of tubercular perforation.[16]

In the present study, constipation occurred in 50% of cases. In the present study majority of cases had guarding and rigidity at presentation (84%). Bowel sounds were absent in 72% cases, there was obliteration of liver dullness (in 42% and per rectal tenderness in 12%. Sahil Singla et al highlighted the spectrum of perforation peritonitis as encountered in a tertiary care centre in Haryana. It was observational prospective study of 100 cases of perforation peritonitis treated in the department of surgery. The maximum number of patients in the present study were in age group of 21-30 years (26%) with a mean age was 31 years. Male female ratio was 8.09:1. The most common etiology of perforation peritonitis was peptic ulcer disease (41%) followed by enteric fever (15%) and tuberculosis (13%). The most common site of perforation in this series was gastroduodenal (43%) followed by terminal ileum (30%). Mortality rate was 5% and significantly high in patients coming to the hospital after 24 hours. Early recognition of symptoms and referral is particularly important in reducing mortality and morbidity.[17]

CONCLUSION

In small bowel perforations males are affected almost 3 times more than females. Age groups between 20 and 40 are most involved. Pain abdomen is the most common presenting symptom followed by vomiting, fever, abdominal distension, and constipation.

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