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A Clinical Study on Various Surgical Management of Ileal Perforation

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ABSTRACT

Ileal perforation is seen mostly in tropical countries, the commonest cause being typhoid fever. In western countries the causes are malignancy, trauma and mechanical aetiology. Better antibiotics, aggressive surgery better preoperative and postoperative care contributed to the improvement in patient outcome in the present days. But still cases of ileal perforation cause a significant morbidity and mortality that persists despite the significant changes in health care over the years. Aim of the study was to identify the Incidence, aetiology, mode of presentation, management and outcome in ileal perforations. This was a Prospective observational study done in at KIMS, Amalapuram and a Tertiary Care Hospital in the Department of General Surgery over a period of two years. Typhoid fever and traumatic aetiology were the most common cause of Ileal perforation, followed by TB. Male gender and reproductive age group were commonly affected. Mortality in ileal perforations, especially typhoid was high and traumatic perforations have a good outcome. The type of surgical procedure did not influence outcome, either morbidity or mortality. Lag period significantly influenced outcome. Morbidity was significantly influenced by age, nutrition status, presentation and lag period.

INTRODUCTION

Ileal perforation is a common problem seen in tropical countries, the commonest cause being typhoid fever. In western countries the causes are malignancy, trauma and mechanical aetiology, in the order of frequency[1-3]. Over the years a definite changing trend has been observed in ileal perforations both in terms of causes, treatment and prognosis. Better antibiotics, aggressive surgery and the elimination of conservative treatment, better preoperative and postoperative care have all significantly contributed to the improvement in patient outcome[4]. But still cases of ileal perforation cause a significant morbidity and mortality that persists despite the significant changes in health care over the years.

Aim of the study: To study the Incidence, Etiology, clinical presentation and management and outcomes of patients with ileal perforation.

MATERIALS AND METHODS

This was a Prospective observational study done in at KIMS, Amalapuram and a tertiary care center in the Department of General Surgery over a period of two years.

Inclusion Criteria: Patients above 14 years presenting undergoing surgery for pain abdomen or trauma and who were found to have ileal perforation in the intra operative period were selected.

Exclusion Criteria: Patients other than Ileal perforations were excluded.

History, clinical examination, investigations, operative findings, post-operative complications were recorded. In non-traumatic perforations Widal test, Tests for TB were done. The amount and type of peritoneal contamination, number, site and size of perforations and procedure employed were noted. The choice of procedure was based on laparotomy findings. The procedures done were simple primary closure, resection and anastomosis, end ileostomy and loop ileostomy, ileotransverse anastomosis.

RESULTS AND DISCUSSIONS

There were around 159 cases of acute abdomen opened in the emergency and 17 of them had Ileal perforation accounting for around 10.69% of the cases. The causes of perforation can be Typhoid Perforation[5-6] Trauma[7-8]. Tuberculosis[9-11] Malignancy[12] Inflammatory Bowel Disease[13] Non-Specific Perforation[1-15]. Radiation can lead to perforation due to impairment of blood flow and mucosal inflammation[16]. The commonest cause of ileal perforation in the series was Typhoid accounting for 35.29% followed by Trauma in 29.43%, Tuberculosis in 23.52% and malignancy in 11.76%. Typhoid fever

Table 1: Age distribution

Age in years	No of cases	Percentages
20-30	5	29.41
31-40	3	17.64
41-50	4	23.54
>50	5	29.41
Total	17	100

Table 2: Sex distribution

Sex	No of cases	Percentages
Male	10	58.82
Female	7	41.18
Total	17	100

Table 3: Diagnosis

Diagnosis	No of cases	Percentages
Typhoid	6	35.29
Trauma	5	29.43
Tuberculosis	4	23.52
Non specific	2	11.76
Total	17	100

Table 4: Symptoms and signs

Symptoms and Signs	No of cases	Percentages
Abdomen pain, Tenderness, Guarding, Distension	17	100
Fever	7	41.17
Shock	7	41.17

Table 5: Procedure performed

Procedure	No of cases	Percentages
Primary closure	5	29.43
Resection and anastamosis	3	17.64
Ileostomy	7	41.17
Ileo transverse anastamosis	2	11.76

Table 6: Post operative complications

Complications	No of cases	Percentages
Wound infection	5	29.41
Dehiscence	3	17.65
Fecal fistula	1	5.88
Mortality	2	11.76

accounted for 56.6% of cases of ileal perforation in the series by Karmakar[1]. Mechanical causes and malignancy were the common causes of small bowel perforation in the western world. Mechanical causes and lymphomas accounted for 40.7% of perforations in the series by Dixon[2] Malignancy was the commonest cause in the series by Orringer[3]. There were no cases of typhoid perforations in either series[2-3]. 8.25% of ileal perforations in Karmakar study[1]. The rising rate of road traffic accidents and civil violence has contributed to this increased incidence of traumatic perforations. There was a male preponderance with the male: female ratio in this study being 1.4:1. This preponderance was seen in typhoid, non-specific and traumatic perforations. Typhoid perforations as reported by Eggleston occurred in the second and third decades of life[17]. All patients had features suggestive of peritonitis. Patients with typhoid perforation had fever, abdominal pain and vomiting. Examination revealed tenderness, guarding, distension and intraperitoneal free fluid[7]. patients were in shock on admission. Eggleston reported that most patients had fever, malaise and sudden increase in abdominal pain in typhoid perforation. Examination revealed signs of

toxaemia and acute abdomen[18]. Gibney and Gulati reported pneumonia, cholecystitis, gastrointestinal bleed, osteomyelitis and intestinal perforation in patients with typhoid perforation[19-20]. Perforation was commonly seen to occur in the second week following onset of illness. Keenan reported that 88% of patients perforated in the second week[10]. Lizzaralde reported that 54.2% of patients perforated in the second week.24 In this series the perforation was around second week of fever. Widal was reported positive in 30% of patients with typhoid perforation by Kaul and in 46.1% of patients by Santillana[11]. In the management of typhoid perforation some authors advocated conservative management[21-22]. Presently there is no such controversy in the treatment of typhoid perforation with the current recommendation being surgical management[12]. The various methods in use are simple closure, resection and anastomosis, ileotransverse anastomosis and ileostomy. In this study patients underwent simple closure, resection anastomosis. No patients were treated by conservative measures, wedge resection. Orloff recommended debridement and closure in patients of traumatic perforation where the injury was small and resection anastomosis in patients with large wounds or multiple perforations[23]. The overall complication rate for all patients in this series was 64.7%. Typhoid perforations and delayed traumatic perforation are associated with a high morbidity rate. The common complications were wound infection, wound dehiscence, faecal fistula and respiratory complication which compare with published reports. Faecal fistula was seen in 5.88 % of patients. In patients of traumatic perforations outcome in primarily influenced by injury to other organs. The mortality in this series was 11.76%.

CONCLUSION

The Type of Surgical Procedure did not Influence Outcome, Either Morbidity was Significantly Infulenced by Age **,** Nutrution Status, Presenation and Lag Period

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