

A PROSPECTIVE STUDY ON MANAGEMENT OF TYPHOIDAL ILEAL PERFORATION BY ILEOSTOMY

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Abstract

Background: Ileal perforations are a common place of occurrence in emergency operation rooms around India. They are also significant contributors to mortality in our country. They are very distressing for patients because of the high morbidity of a laparotomy and in certain cases a stoma if its necessity is felt by the operating surgeon. The nature of the disease itself predisposes to a number of complications including wound infections, faecal fistulas and complications associated with a stoma. **Objective:** To determine the role of ileostomy in the management of ileal perforations caused due to typhoid disease **Materials and Methods:** A total of 55 cases of ileal perforation, diagnosed per-operatively, were prospectively studied during the period January 2019 to December 2019 in Patna Medical College and Hospital, Patna. Cases were treated according to standard resuscitation protocols and underwent repair of the ileal perforation by primary closure and with a proximal diversion ileostomy. Cases were followed up for a period of six months and immediate and late complications and outcomes were noted. **Results:** Out of 55 patients that underwent primary repair with double layer closure along with diversion ileostomy 15 patients developed surgical site infections and 4 patients developed fecal fistulae. **Conclusion:** We conclude that exteriorizing perforation bearing ileum as loop ileostomy is not a very safe procedure as chances of second perforation in the vicinity of primary perforation in highly inflamed terminal ileum is quite high leading to faecal peritonitis and very high mortality. We suggest freshening of edges, double layered closure of perforation with diverting ileostomy approximately 15-20cm proximal to the perforation in relatively normal looking ileum as a safer procedure for typhoid enteric perforation presenting late.

INTRODUCTION

An ileal perforation is a very common cause of significant discomfort for both the patient and the treating surgeon in operating rooms around the world. This is one disease where the morbidity and mortality has remained high inspite of advances in surgical techniques.^[1] This is reflected in the fact that there have been numerous modalities suggested for the management of ileal perforations ranging from conservative management suggested by Huckstep, to simple closure of the perforation, placement of an omental patch, segmental or wedge resection with anastomosis. The studied procedures also include a diversion in some studies in the form of a diversion ileostomy or an ileotransverse bypass.^[2,3]

Typhoid enteric perforation is a common acute abdominal emergency in our hospital. Most of

our patients come from rural areas and reach the hospital with an average delay of 2-3 days after onset of acute illness. There is a very high mortality associated with these cases. A diversion loop ileostomy is found to be especially useful in tough operating situations like matted bowel loops, grossly unhealthy bowel or multiple perforations. Faecal diversion also enables early resumption of oral feeds which can hasten the recovery of the patient.^[4,5]

The aim of the present study was to evaluate the role of ileostomy in cases of enteric typhoidal perforation presenting late.

MATERIALS AND METHODS

Patients diagnosed of enteric perforations admitted in surgical emergency were studied during the period January 2019 to December 2019 in Patna

Medical College and Hospital, Patna. Patients were clinically examined and an erect x-ray abdomen was done. Patients were resuscitated aggressively with intravenous access and fluids. Nasogastric tube was placed. Foley's catheterisation was done to monitor urine output. Routine investigations like complete blood counts, blood sugar, electrolytes, blood urea, serum creatinine and viral markers were performed. After proper resuscitation, patient was shifted to the operating theatre where laprotomy was performed. The decision to perform a diversion stoma was taken on the basis of various factors like number of ileal perforations, location of the perforations, status of the small bowel, extent of faecal contamination and patient's overall general condition. After proper peritoneal lavage, abdominal drains given. Post-operatively, all patients were given broad spectrum antibiotics and basic supportive measures. Patients were followed up from admission to discharge and for a minimum period of six months. Complications were studied and Patients with stomas underwent reversal under appropriate anaesthesia.

RESULTS

55 patients which were admitted with typhoid perforation presenting late, were divided into two groups. Group A had 28 patients and group B had 27 patients. All the patients in group A had laparotomy and exteriorization of the perforation as loop ileostomy. In group B, all the patients had laparotomy and the edges of the perforation freshened and the perforation closure in two layers was performed using vicryl suture. Exteriorization of the proximal healthy looking ileum as diverting loop ileostomy was routinely performed in all cases. In group A, where exteriorization was done as primary procedure, 4 cases subsequently developed faecal fistulae and 4 developed wound site infections. In group B, where the perforation was closed in two layers and loop ileostomy was performed from proximal healthy ileum, none developed faecal fistulae and 7 developed wound site infections which was managed by antiseptic dressings.

DISCUSSION

Typhoid is quite common in our part of the country, primarily because of poor public sanitation and uncontrolled waste disposal system. Typhoid is a severe febrile illness caused primarily by salmonella typhi.^[6] The most lethal complications of typhoid fever are ileal perforation and intestinal bleeding both arising from necrosis of Peyer's patches in the terminal ileum. Typhoid ulcers can occur anywhere from stomach to rectum but terminal ileum is mostly involved due to increased number of Peyer's patches in the terminal ileum.

Typhoid fever may occur at any age. The highest incidence of this disease occurs in 5 to 19 years of age. After the age of 20 years, the incidence falls, probably due to immunity from clinical or sub-clinical infections.

Perhaps safest and easiest way of managing typhoid ileal perforation is exteriorizing the perforation as loop ileostomy.^[7] Other methods are primary closure of perforation, wedge excision or segmental resection and anastomosis. Primary closure is done only when patient presents early and bowel is healthy looking. Sepsis and bowel oedema make suturing hazardous so primary closure is to be avoided in patients presenting late.

In our experience, instead of exteriorizing the perforation as loop ileostomy, either resection of highly inflamed or multiple perforations bearing segment of ileum and exteriorizing both ends as ileostomy and mucus fistula, or double layered closure of perforation combined with ileostomy of relatively less inflamed ileum is a safer option in typhoid enteric perforation presenting late.

CONCLUSION

We conclude that exteriorizing perforation bearing ileum as loop ileostomy is not a very safe procedure as chances of second perforation in the vicinity of primary perforation in highly inflamed terminal ileum is quite high leading to faecal peritonitis and very high mortality. We suggest freshening of edges, double layered closure of perforation with diverting ileostomy approximately 15-20cm proximal to the perforation in relatively normal looking ileum as a safer procedure for typhoid enteric perforation presenting late.

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