



## A STUDY ON EARLY COMPLICATIONS FOLLOWING ILEOSTOMY IN EMERGENCY LAPAROTOMY FOR ILEAL PERFORATION IN OUR DEPARTMENT

**Dr. Kumar Ratnesh**

Associate professor, Department of Surgery, Jawaharlal Nehru Medical College, Bhagalpur, Bihar 812001

**Dr. Pradip Kumar Bazaz\***

Assistant professor, Department of Surgery, Jawaharlal Nehru Medical College, Bhagalpur, Bihar 812001 \*Corresponding Author

### ABSTRACT

**Background:** Intestinal perforation is one of the most common surgical emergency we encounter in our emergency department. Intestinal perforation is defined as loss of continuity of the bowel wall that can have devastating complications on health. Early diagnosis of peritonitis and early repair of perforation either with ileostomy or primary closure of defect plays an important role in outcome. Prompt early recognition and treatment of complications following ileostomy is also very important in such cases. In this study we look out for the early complications following ileostomy.

**Materials and Methods:** The study was done in General Surgery department, Jawaharlal Nehru Medical College, Bhagalpur from May 2019 to February 2020. In this study, 50 cases were taken who had undergone Emergency laparotomy following Ileal perforation with ileostomy in our department.

**Results:** In this study there were total 50 patients. Total number of males and females are 39 and 11. The incidence in males was greater than females. Average age group of presentation was 30 +/- 2 years of age. Typhoid perforation is the most common case of ileal perforation in almost 31 patients (widal test) followed by tuberculosis in 5 patients followed by non-specific perforation in 14 patients. Fever was the most common symptom in 35 patients. 22 out of 50 patients were having co-morbidities like Diabetes, hypertension. Radiologically gas under diaphragm was seen in 37 patients. 5 patients were malnourished. 41 patients presented to emergency in the first week of disease. Wound infection and skin excoriation were the most common complications seen.

**Conclusion-** Ileal perforation is more common in India. Early surgery and adequate resuscitation are the important factors for successful management of patients with ileal perforation. There is an increasing trend of performing stoma nowadays in emergency situations although being bothersome, ileostomy is still a live saving procedure.

**KEYWORDS :** Ileal perforation, Typhoid, Ileostomy, Skin excoriation, Stoma prolapse

### INTRODUCTION-

Intestinal perforation is one of the most common surgical emergency faced by surgeons and the most common cause of peritonitis. Intestinal perforation can be at many places in GIT like gastric, duodenum, jejunal, ileum, colon. Various causes of non traumatic ileal perforation include bacterial infections (salmonella, yersinia, and tuberculosis), viral infections (cytomegalovirus, human immunodeficiency virus), fungal infection (histoplasma), parasitic infections (A. lumbricoides, E.vermicularis, and E.histolytica), and others (Wagener's granulomatous and drugs (Nonsteroidal anti inflammatory drugs, e.g., aspirin, paracetamol, mefenamic acid, Ibuprofen, etc.). In a significant number of cases the cause of perforation is not known and it is called non specific ileal perforation. The perforation causes gram-negative aerobic and anaerobic infection leading to peritonitis. In this study we are studying on ileal perforation and typhoid fever happens to the most common cause of ileal perforation. It has high number of morbidity and mortality in our country due to delayed presentation. Ileal perforation is due to many causes, the most common being Enteric fever, Tuberculosis. Trauma continues to be the most frequent reason for high morbidity and mortality. A diagnosis of Crohns disease is associated with higher morbidity after stoma creation. Preoperative resuscitation, antibiotic therapy and total parental nutrition reduced mortality from 28.5% to 10%.<sup>3</sup> In typhoid fever, hemorrhage and perforation occur in terminal ileum secondary to necrosis of peyers patches at 2-3 weeks after onset of disease. Perforation of ileum causes abdominal pain, tenderness, signs of peritonitis, abdominal distention. There are many modalities of management of these ileal perforation, , simple closure are done by freshening of the edges and closure, wedge resection and closure, resection- anastomosis, ileo transverse colostomy and ileostomy. Temporary defunctioning loop ileostomy in cases of ileal perforation plays an important role in reducing the incidence of complications like faecal fistula.

The aim of this study is to study about the common complications of stoma formation in the early post operative period and to take necessary precautions to avoid such complications in the later surgeries.

### MATERIALS AND METHODS:

The study was done in General Surgery department, Jawaharlal Nehru Medical College, Bhagalpur from May 2019 to February 2020. In this study, 50 cases were taken who had undergone Emergency laparotomy following Ileal perforation with ileostomy in our department. All the

patients with age group of 15-65 years were included, pre-operative investigations were done along with widal test. Patients who were diagnosed to have ileal perforation in emergency laparotomy for peritonitis were undergone ileostomy and they were observed for early complications following ileostomy in postoperative period. Outcomes were analyzed.

**Inclusion criteria:** Age group 15-65years, both genders. All patients who were admitted on emergency department and diagnosed to have ileal perforation.

**Exclusion criteria:** Patients having perforations involving gastric, duodenum, jejunum.

The diagnosis was made on clinical findings supported by investigations like plain X-Ray abdomen erect posture. Confirmation was made on the operation table only. All ileal perforations who underwent ileostomy were observed for early postoperative complications.

### RESULTS-

In this study there were total 50 patients. Total number of males and females are 39 and 11. The incidence in males was greater than females. Average age group of presentation was 30 +/- 2 years of age.

Typhoid perforation is the most common case of ileal perforation in almost 31 patients (widal test) followed by tuberculosis in 5 patients followed by non-specific perforation in 14 patients. Common presenting complaints were

No	Signs/Symptoms	Number of patients
1	Fever	35
2	Abdominal Pain	33
3	Vomiting	27
4	Constipation	26
5	Abdominal tenderness	28
6	Abdominal Distension	21

Fever was the most common symptom in 35 patients 22 out of 50 patients were having co-morbidities like Diabetes, hypertension.

Radiologically gas under diaphragm was seen in 37 patients. 5 patients were malnourished.

41 patients presented to emergency in the first week of disease.

Early postoperative complications seen in the patient were

No	Complication	Number of patients
1	Wound infection	19
2	Respiratory complications	07
3	Skin excoriation	18
4	Faecal fistula	04
5	Ileostomy diarrhea	11
6	Stoma prolapse	06
7	Weight loss	10
8	Electrolyte imbalance	13
9	High output	09

#### DISCUSSION-

Ileal perforation has been seen as a common problem in tropical countries. Ileal perforation is an acute surgical emergency in developing countries. Perforation causes peritonitis. Peritonitis due to perforation in the hollow viscera is commonly encountered in surgical practice. Peritonitis is caused by introduction of infection into the sterile peritoneum through perforation of the bowel. Temporary ileostomy is the surgical procedure frequently performed for ileal perforation to give rest to the part of the bowel and decrease the risk of intraabdominal sepsis. Delayed presentation, marked sepsis, and poor nutritional status were the common factors in these patients with perforation peritonitis. Typhoid ileal perforation will still be the most common and severe in tropical countries like India. The mortality and morbidity does not depend on the surgical technique but on the general condition of the patients, the virulence of salmonella and the duration of disease. The age incidence is more in second decade. The perforation is common in 2nd and 3rd decade as evidenced by other studies. In our study males were more than females, this agrees with other studies. This study also highlights the life-saving role of salvage ileostomy for postoperative intestinal leakage in cases of primary repair of perforation. Fever and abdominal pain were found to be the important complaints the patients present with which relates with other studies done. Pneumoperitoneum in X ray abdomen was seen in 37 patients in our study, a higher incidence of gas under diaphragm with range from 75-82% is reported in some studies. Wound infection and skin excoriation were the most common early complication found which resembles with other studies.

#### CONCLUSION-

Ileal perforation is more common in India. Early surgery and adequate resuscitation are the important factors for successful management of patients with ileal perforation. Ileostomy has less number complications as compared with other surgical measures. Ileostomy gives time for healing and improvement of patient condition. There is an increasing trend of performing stoma nowadays in emergency situations although being bothersome, ileostomy is still a life saving procedure.

#### Acknowledgements:

The authors would like to thank MS General Surgery Postgraduates and staff nurses of vascular surgery department- Mrs. G. Latha, Mrs. K. Kasthuri, Mrs. V. S. Parama kalyani, Mrs. M. Thangam of Coimbatore medical college hospital for their excellent patient care and support.

#### REFERENCES-

- 1- A.H.Rathore, I.A.Khan, and W.Saghir, "Prognostic indices of typhoid perforation," *Annals of Tropical Medicine and Parasitology*, vol.81, no.3, pp. 283-289, 1987.
- 2- Mittal S, Singh H, Mungathe A, Singh G, Garg A, Sharma J. A comparative study between the outcome of primary repair versus loop ileostomy in ileal perforation. *Surg Res Pract*. 2014 Mar 27;2014
- 3- Srihari G, Sudheer D. Study of prognostic factors and outcomes in ileal perforations. *J Evid Based Med Healthc*. 2016;3(90):4911-7
- 4- Koume J, Kouadio L, Turquin HT. Typhoid ileal perforation: surgical experience of 64 cases. *Acta Chir Belg*. 2004;104:445-7
- 5- Koume J, Kouadio L, Turquin HT. Typhoid ileal perforation: surgical experience of 64 cases. *Acta Chir Belg*. 2004;104:445
- 6- Leenen LP, Kuypers JH. Some factors influencing the outcome of stoma surgery. *Dis Colon Rectum*. 1989;32:500-4.
- 7- Leong AP, Londono-Schimmer EE, Phillips RK. Life table analysis of stoma complications following ileostomy. *Br J Surg*. 1994;81:727-9.
- 8- Carlsen E, Bergan A. Technical aspect and complications of end ileostomies. *World J Surg*. 1995;19:632-6.
- 9- Arumugam PL, Bevan L, McDonald L, et al. A prospective audit of stomas-analysis of risk factors and complications and their management. *Colorectal Dis* 2003;5:49-52.
- 10- Robertson I, Leung E, Hughes D, et al. Prospective analysis of stoma related complications. *Colorectal Dis* 2005;7:279-285.
- 11- Andivox T, Bail J, Chio F, et al. Complications of colostomies- follow up study of 500 colostomized patients. *Ann Chir* 1996;50:252-257.
- 12- Hallbook O, Matthiessen P, Leinskold T, et al. Safety of temporary loop ileostomy. *Colorectal Dis* 2002;4:361-364.