Original Resear	Volume-8 Issue-12 December-2018 PRINT ISSN No 2249-555X Surgery ILEOSTOMY: A LIFE SAVING PROCEDURE IN PERFORATION PERITONITIS IN MORIBUND PATIENTS
Dr. Ritika Garg	PG II, General surgery, Teerthanker Mahavir University, Moradabad
Dr. S C Sharma*	Associate professor, General Surgery, Teerthanker Mahavir University, Moradabad *Corresponding Author
Dr. Pallavi Ahluwalia	Professor, Anaesthesia, Teerthanker Mahavir University, Moradabad
(ABSTRACT) INTRO in the p complications, it provides as an	DUCTION - Ileostomy is an integral part of pelvic pouch surgeries when patients are unfit for definitive surgery resence of severe morbid conditions. Though a second operation is required to close the stoma with potential a excellent option for temporary fecal diversion. The aim of this prospective study was to assess the safety and

morbidity of creating an ileostomy in a series of high risk patients requiring temporary fecal diversion. **METHODS-** A prospective analysis was performed of all patients (n=56) needing ileostomy at TeerthankerMahaveer Hospital between January 2016 and December 2016. Only moribund patients requiring fecal diversion as an immediate lifesaving procedure were included in this study. All patients underwent an exploratory laparotomy. The conventional site for ileostomy was chosen. A tension free ileostomy was made using the terminal ileum. After closure of the laparotomy wound, the ileostomy was matured. Ileostomy bag was fitted at the conclusion of surgery. After suture removal, patients were discharged on oral diet and ileostomy care advice chart. On every fortnight follow up, following parameters were noted: anastomotic leak, retraction and skin excoriation. All ileostomies were closed after a mean of 12 weeks.

RESULTS - A total of 56 (n=56) ileostomies were created for temporary fecal diversion. The outcome (dependent) variables were rate of survival and postoperative complications. The independent variables were indication of surgery, duration between admission and surgery.

Out of the 47 who survived, stoma closure was done in 44 and permanent stoma was left for 3. Survival rate was 83.9%. Indication for surgery in 64% cases was ileal perforation due to Koch's abdomen. 33.9% patients were operated on day 2 of admission.

CONCLUSION - In moribund patients requiring fecal diversion, ileostomy has proven to be a lifesaving procedure by saving the operating time with a limited infrastructure. Ileostomy in such patients also enables healing of the primary pathology, thus improving the overall survival.

KEYWORDS:

INTRODUCTION

18

Ileostomy is a surgically made opening in the abdominal wall. It is an integral part of pelvic pouch surgeries when patients are unfit for definitive in presence of severe morbid conditions. Thougha second operation is required to close the stoma with potential complications, it provides an excellent option fortemporary fecal diversion and to save life.Perforation peritonitis is frequently encountered surgical emergency in tropical countries like India, most commonly affecting males in early life span as compared to west (33) wheremean age is between 45-60yrs.Majority of these patients present late with well established peritonitis, more often fecal contamination, and varying degree of septicemia. Typhoid is most common cause of this dreaded complication, while tuberculosis, trauma, mesenteric gangreneand non-specific enteritis follow close suit⁽³⁴⁾ and these acute abdominal cases often require ileostomyas life saving measure where a definitive and long surgery is not possible because of very low condition of these patients, however in western countries indications of ileostomy are altogether different and include inflammatory bowel disease, Familial Adenomatosis Polyposis, Colorectal Carcinoma, pelvic sepsis, trauma, diverticulosis, fistula, radiation enteritis, and paraplegia

The standard source control measure for secondary peritonitis due to hollow viscus perforation include primary closure, resection anastomosis of gut or diverting stoma depending on site and number of perforation ,severity of peritonitis and general condition of patient.Ileostomy serves the purpose of diversion, decompression and exteriorizationand thus it has proved to be life saving in moribund patients especially presenting late.

Though it is a life saving procedure in moribund patients but is not free from significant number of complications like electrolyte imbalance, nutrional depletion, skin excoriation, bleeding, prolapse, retraction, ischemia, wound infection, parastomal herniation, fistula formation, and more so psychological problems leading to behavioral changes like depression, economic loss and quality of life.

Present study was conducted to evaluate the role in moribund patients of peritonitisin a very poor general condition, septiceamia as lleostomy. MATERIALAND METHODS

A prospective analysis was performed in patients admitted in emergency section of Teerthankar Mahaveer Medical College Moradabad, In the department of surgery, a tertiary care hospital in western Uttar Pradesh on 112 patients as cases of peritonitis in moribund condition at the time of admission, like patients presenting more than 24 hrs after pain, haemodynamically unstable, requiring resuscitation preoperatively, severe enteritis, multiple perforations, firearm injuries, massive or moderate gangrene of bowel, carcinoma of large bowel including rectum and anal canal. We did not include those patients whose general condition was satisfactory and a primary definitive procedure was possible. All patients underwent exploratory laparotomy.Observations were noted for, site and number of perforations, other pathologies, like gangrene, malignancy, adhesions, and state of peritoneal contamination. Conventional ileostomy site was chosen, and tension free ileostomy was made using terminal ileum. After of laparotomy wound was closed, ileostomy bag was fitted at conclusion of surgery. After suture removal, patients were discharged on oral diet and a proper counseling especially for the care of stoma. Fortnight follow up was done and parameters like anastomotic leak, retraction, and skin excoriation were noted and taken care of.All ileostomies were closed after a mean period of 12 weeks.

DISCUSSION

An intestinal stoma is an opening in the anterior abdominal wall made surgically in elective as well as in emergency surgery.Littre of Paris was the first to make an abdominal colostomy in 1710 for a baby of imperforate Anus1^{9,23} and it was only ostomy which dropped mortality rate from 60% to 30% in World war 1st to World war 2^{nd(20)}Between 1893 to 1913 ileostomy was suggested for treating small bowel obstruction,peritonitis due to ruptured appendix and appendicular abscess³⁰,shock, marked blood loss,significant fecal contamination, associated injuries. Time elapsed till reporting to hospital and multiplicities of injuries are important factors,favoring stoma formation and then primary repair Menon⁽²¹⁾

Fecal diversion remains an effective option to treat a variety of gastrointestinal and abdominal conditions¹² besides other causes of peritonitis.Ileal perforation is common surgical emergency in Indian subcontinent and Tropical countries and it is reported to constitute the

fifth common cause of abdominal emergencies due high incidence of fever and tuberculosis in these regions and despite modern antibiotics and antitubercular treatment these diseases have high mortality if not treated 16,17

Onset of symptoms and reporting to tertiary hospital, become the strongest prognostic factors as early presentation holds a good prognosis but unfortunatelypatients coming late because unexplained reasons, present with septicemia⁸. Different operative procedures have been advocated from time to time like primary repair of perforation ^{1,2} repairing perforation with ileotransverse ansnatamosis³, primary ileostomy^{12,13} single layer repair with omental patch¹⁴, resection end anastomosis¹⁵

In our study along with repair if possible, in moribund patients, did only ileostomy and results were gratifying and were lives saving.Minimal surgery was done of original pathology,like resection of gangrenous segment, closure of perforation, along with peritoneal toileting and putting a drain tube, definitive surgery was left to a later stage when patient was stable, thus we could save 88 lives out of 112 patients, mortality being only 10%. Mitaal et al, observed higher morbidity but no mortality.

It has been generally claimed in literature that mortality and morbidity are significantly associated with general state of patient and duration of illness rather than surgical technique and thus necessitates aggressive preoperative resuscitation²⁵ and we consider that just ileostomy and postponing the definitive procedure or going for minimal surgery can be the life saver and becomes a resuscitative surgery.

Primary ileostomy proved to be most successful procedure in our study in terms of overallmortality, a finding strongly supported by a number of similar Indian and western studies^{1,2,19,24} but in contrast to the observation of Shah A.A.et.al. Who find resection anastomosis to be the best option especially in typhoid perforation, a technique favored by Mehetal.24

This is, however, a consensus that late presentation, delay in surgery, multiple perforations, septicemia ,degree of fecal contamination of peritoneum, old age, chronic liver diseases, chronic renal failure, determine morbidity and mortality associated with this problem.

	Age	Number of patients	Percentage
1	<20 YRS	19	16.96
2	21—30 yrs	24	21.43
3	31—40 yrs	31	27.68
4	41—50 yrs	23	20.54
5	51 and above	15	13.39

RESULT:



S No	Diagnosis	Number of patients	Percentage
1	Typhoid perforation	31	27.68
2	Tubercular perforation	35	31.25
3	Bowel gangrene	14	12.50
4	Trauma	9	8.04
5	Carcinoma and Crohn's	8	7.14
	disease		
6	Fistula	3	2.68
7	Large bowel perforation	7	6.25
8	Iatrogenic	5	4.46



Post operative complications:



CONCLUSION

In moribund patients ileostomy, has proven to be the life saving procedure,by saving operation time with limited infrastructure. Ileostomy in such patients also enables healing of primary pathology, thus improving overall survival.

REFERENCES

- Bhansali, S.K., 1967. Gastrointestinal perforation: a study of 50 patients. J. R. Coll. Bratsani, S.K., 1907. Gastronics and performance. A set of the participation of the participation of the performance of the participation of the performance of th of Tropical Medicine and Parasitology, vol. 81, no. 3, pp. 283
- 2.
- S. K. Bhansali, "Gastrointestinal perforations. A clinical study of 96 cases," Journal of Postgraduate Medicine, vol. 13, no. 1, pp. 1–12, 1967.
 P. B. Prasad, D. K. Choudhury, and O. Prakash, "Typhoid perforation treated by closure and proximal side-to-side ileo-transverse colostomy," Journal of the Indian Medical Associations vol. 65, no. 11, no. 200, 1075 3.
- B. K. Kaul, "Operative management of typhoid perforation in children," International Surgery, vol. 60, no. 11, pp. 297–299, 1975. 4.
- K. P. Singh, K. Singh, and J. S. Kohli, "Choice of surgical procedure in typhoid perforation: experience in 42 cases," Journal of the Indian Medical Association, vol. 89, 5. no. 9, pp. 255-256, 1991.
- P. G. Purohit, "Surgical treatment of typhoid perforation. Experience of 1976 Sangli 6. epidemic," Indian Journal of Surgery, vol. 40, no. 5, pp. 227–238, 1978.C. G. Athie, C. B. Guizar, A. V. Alcantara, G. H. Alcaraz, and E. J. Montalvo, "Twenty-
- 7. five years of experience in the surgical treatment of perforation of the ileum caused by Salmonella typhi at the General Hospital of Mexico City, Mexico," Surgery, vol. 123, no. 6, pp. 632-636, 1998.
- nuo. o, pp. 052–050, 1996.
 A. M. Malik, A. A. Laghari, Q. Mallah et al., "Different surgical options and ileostomy in typhoid perforation," World Journal of Medical Sciences, vol. 1, pp. 112–116, 2006.
 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.
 S. K. Bhansali, "Gastrointestinal perforations. A clinical study of 96 cases," Journal of Restructure Medicine Value 12, and 14, no. 14, pp. 121–106. 8 9
- 10. Postgraduate Medicine, vol. 13, no. 1, pp. 1–12, 1967. P. B. Prasad, D. K. Choudhury, and O. Prakash, "Typhoid perforation treated by closure
- 11. and proximal side-to-side ileo-transverse colostomy," Journal of the Indian Medical Association, vol. 65, no. 11, pp. 297–299, 1975.
- 12.
- Association, vol. 65, no. 11, pp. 297–299, 1975. B. K. Kaul, "Operative management of typhoid perforation in children," International Surgery, vol. 60, no. 8, pp. 407–410, 1975. K. P. Singh, K. Singh, and J. S. Kohli, "Choice of surgical procedure in typhoid perforation: experience in 42 cases," Journal of the Indian Medical Association, vol. 89, no. 9, pp. 255–256, 1991. 13.
- P. G. Purohit, "Surgical treatment of typhoid perforation. Experience of 1976 Sangli epidemic," Indian Journal of Surgery, vol. 40, no. 5, pp. 227–238, 1978. 14
- C. G. Athie, C. B. Guizar, A. V. Alcantara, G. H. Alcaraz, and E. J. Montalvo, "Twenty-five years of experience in the surgical treatment of perforation of the ileum caused by 15 Salmonella typhi at the General Hospital of Mexico City, Mexico," Surgery, vol. 123, no. 6
- S. Siddiqui, "Epidemiologic patterns and control strategies in typhoid fever," Journal of the Pakistan Medical Association, vol. 41, no. 6, pp. 143–146, 1991.
 D. K. Pal, "Evaluation of best surgical procedures in typhoid perforation—an 16.
- 17. experience of 60 cases," Tropical Doctor, vol. 28, no. 1, pp. 16–18, 1998 E. J. Montalvo, "Twenty-five years of experience in the surgical treatment of perforation
- 18. of the ileum caused by Salmonella typhi at the General Hospital of Mexico City, Mexico," Surgery, vol. 123, no. 6, pp. 632–636, 1998. Khalid AM, Irshad W. Surgical history of intestinal obstruction. Specialist 1991; 8 (1):
- 19. 55-60 3
- Bugis SP, Blair NP, Letwin ER. Management of blunt and penetrating colon injuries. Am 20. J Surg 1992; 163: 547-50.
- Memon AS, Memon JM, Malik A, Soomro AG, Pattern of acute intestinal obstruction. 21. Pakistan Journal of Surgery 1995; 11:91-3
- Abbas MA, Tejirian T. Laparoscopic stoma formation. JSLS 2008; 12: 159-161 Khalid,S. and A. Irfanet al., 2000. Outcome ofileostomyin cases of typhoid perforation
- presentingafter 48 hours. J. Rawal Med. Coll., 4: 17-19.

19

- Volume-8 | Issue-12 | December-2018 | PRINT ISSN No 2249-555X
- 24. Meh, E.A. and P. Dogo, 1997. Comparision of threefortyphoid enteric perforation, a technique favored by operations for typhoid perforation, BJS., 84: 558.
- 25. Haider, W., A. Majid, A. Khanum and A. Bhutta, O.S.Olayinka, A.O. Adronmu and O.O. Haider, W., A. Majid, A. Khanum and A. Bhutta, O.S.Olayinka, A.O. Adronmu and O.O. Ogundoyin,2002. The prognostic factors in typhoid ileal perforation in a ruralperforation. Pak. Post Grad. Med. J., 13: 4-8 Shah, A.A., K.A. Wani and B.S. Wazir, 1999. The ideal treatment of the typhoid enteric perforation-Resection anastomosis. Int. Surg., 84: 35-38.
- 26.
- World Journal of Medical Sciences 1 (2): 112-116, 2006 perforation in a ruralperforation.© IDOSI Publications, 2006Corresponding Author:Dr. ArshadM. 27. Malik, Assistant Professor of Surgery, Liaquat University of Medical and HealthSciences, Jamshoro, Pakistan.
- Hussain T., Alam S. N., Salim M. Outcome of ileostomy in cases of small bowel perforation. Pakistan Journal of Surgery. 2005;21:65–71 Ashraf I., Muammad G., Noon R. S., Ashraf M., Haider H., Abid K. J. To compare the 28.
- 29 outcome of ileostomy versus primary repair in enteric perforation. Pakistan Journal of Medical and Health Sciences. 2010;4(4):523-52
- 30. Schackelford RT, Zuidema GD. Operative techniques. In: Surgery of the alimentary Tract. 2nd ed. Philadelphia: WB Saunders 1978; 3: 191-288. 5. Memon AS, Memon JM, Malik A, Soomro AG, Pattern of acute intestinal obstruction. Pakistan Journal of Surgery 1995; 11: 91-3World J Emerg Surg. 2006 Sep 5;1:26 Spectrum of perforation peritonitis in India--review of 504 consecutive cases.
- 31. 32
- 33.
- 34.
- Spectrum of perforation peritonitis in India-review of 504 consecutive cases. Jhobta RS1, Attri AK, Kaushik R, Sharma R, Jhobta A Suanes C, Salvesan H, Espehang B. A multifactorial analysis of factors related to lethality after treatment of perforated gastrduodenal ulcer. Ann Surg. 1989;209:418–23. Hussain T., Alam S. N., Salim M. Outcome of ileostomy in cases of small bowel perforation. Pakistan Journal of Surgery. 2005;21:65–71 Bashir M., Nadeem T.,Iqbal J., Rashid A. Ileostomy in typhoid perforation. Annals of King Edward Medical College. 2003; 9:221–225 35.