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Research Article

**STUDY TO KNOW THE OUTCOME OF ENTERIC
PERFORATION AFTER PRIMARY REPAIR*****Dr. Hafiz Muhammad Wasim, *Dr. Maliha Tul Zahra, *Dr. Beenish Nasim*****House Surgeon at Mayo Hospital, Lahore****Abstract:****Objective:** To evaluate the outcome of primary repair in enteric perforation.**Study Design:** A Randomized control study.**Location and Duration:** In the Surgical Department Unit II of Services Hospital, Lahore for one year period from August 2016 to August 2017.**Methods:** To evaluate a single enteric perforation after diagnosis between 18 and 60 years of age and clinically diagnosed with peritonitis.**Results:** This study showed that the male to female ratio is 1.5: 1, ie 60 male and 40 female. The maximum number of patients was found in the third decade of life (58%) and 20% in the fourth decade. Among the various complications, the most common infections were infection in 23% of the wound, followed by 14% of the fecal fistula, and others with leakage and septicemia. Mortality rate was 6% in this study.**Conclusion:** Primary repair is the preferred treatment for enteric perforation. Early repair of perforation is the best procedure because of cost-effectiveness and lower complication rates compared to other procedures.**Key words:** Enteric perforation, primary repair.**Corresponding author:*****Dr. Hafiz Muhammad Wasim, ******House Surgeon at Mayo Hospital,
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INTRODUCTION:

Intestinal perforation is the most terrible complication of enteric fever, which causes widespread peritonitis in developing countries. Enteric fever is a severe fever caused by Salmonella Typhi and affects 13 to 17 million people each year and kills around 600,000 internationally. Perforation is usually common in terminal ileum 2 and 3 years. Early surgery is the best treatment option to prevent the source of additional fecal contamination of the peritoneal cavity. A wide variety of surgical techniques have been tried and none are satisfactory in terms of morbidity and mortality. Primary repair should be performed in patients with a short history of symptoms and with minimal preoperative fecal contamination of the peritoneal cavity. The simple repair of two-fold perforation is the preferred treatment for enteric perforation because the patient must undergo surgery for one hour. This study was designed to determine the results of primary repair and to counteract the panic formation of surgeons and to repair leaks with enteric perforation.

MATERIALS AND METHODS:

This Randomized control study was held in the Surgical Department Unit II of Services Hospital,

Lahore for one year period from August 2016 to August 2017. 100 patients who met the study criteria were selected and informed consent was obtained from all patients about the study and operation procedure. Patients with short-term symptoms, a single enteric perforation, 48-hour peritonitis, and hemodynamically stable peritonitis were included in the study. In patients with multiple perforations older than 60 years, at the time of presentation, along with the characteristics of septic shock, concomitant conditions such as ischemic heart disease, diabetes mellitus or renal failure are not suitable for surgery as a pre-anesthetic evaluation. Postoperative events were recorded for one week until the patient was discharged. Results of the procedure, ie repair loss, wound infection, septicemia and wound dehiscence were observed.

RESULTS:

A total of 100 patients were selected for the analysis. The incidence of enteric perforation was slightly higher in males than in males. There were 60 men and 40 women selected for the study, so the ratio of men and women was 1.5: 1 (**Table 1**).

Table 1: Sex distribution (n=100)

=n	=n	%age
Male	60	60
Female	40	40

Male to Female ratio: 1.5:1

The patients' ages ranged from 18 to 58 years (**Table-2**). The third decade of patients (58%) followed this in the fourth decade (20%). Patients with enteric perforation were accepted during August and September most of the year. The majority of the patients (95%) had a history of fever and this was followed by sudden pain in the abdomen.

Table 2: Age distribution (n=100)

Age in years	=n	%age
18 – 28	58	58.0
29 – 38	20	20.0
39 – 48	8	8.0
49 – 58	14	14.0

Mean±SD=25±10.47

Other common findings were abdominal distension (93%), constipation, diarrhea and vomiting. General clinical monitoring, stiffness and sensitivity were found in all patients. Pneumoperitoneum was present in 91% of the patients, as in the standing position, as in abdominal radiography. Leukocytosis was present in 67% of the patients and leukopenia in 29% of the patients. It was found that various complications were observed in the wound infection (23%), followed by fistula (14%) and fistula. During the separation of the wound, septicemia and anastomotic leakage represented a lack of complications. In general, 6 patients ended within 30 days after the operation (Table 3). According to various international research in patients with enteric drilling and various treatment options for enteral ileostomy drilling, respectively, which carries a significantly higher risk of morbidity and mortality with an average score of 40% to 84%.

Table 3: Complications (n=100)

Complications	=n	%age
Leakage	3	3.0
Wound Infection	23	23
Wound Dehiscence	6	6
Septicemia	4	4
Fecal fistula	14	14
Mortality	6	6

Total Morbidity=50%

Total mortality =6%

In addition, it also protects the morbidity associated with the second operation performed for closure. Other options for surgical treatment are wedge resection and anastomosis and segmental resection and anastomosis. The risk of complications and death is significantly higher in the aforementioned two processes, reaching 20% and 54%, respectively, according to an earlier international study.

DISCUSSION:

There is a universal consensus on the best surgical treatment of typhoid perforation. This worked until the end a variety of surgical treatments including primary repair, ileostomy and resection and end of anastomosis. Primary repair of enteric perforation remains the preferred treatment modality. In our study, primary repair of enteric sounding is considered the most effective strategy as it is useful for the patient in several ways. It is a simple, fast and cost-effective procedure. Ileostomy is more expensive and all patients have a risk of morbidity from reoperating for closure and also require special attention before closing. This primary repair proved to be particularly beneficial in the patients who died at the last moment of the disease, in terms of morbidity and mortality, it has been found to be superior to other surgical procedures, such as ileostomy, the procedure that saves lives. It is a safe way to check the typhoid perforation and the best treatment option, because it is no longer a source of fatal disease. This study showed no death in the primer repair of enteric perforation to perform the appropriate preoperative operation, proper surgical technique and method by an experienced surgeon. Therefore, the operator must consider multiple factors before the surgeon selects the type of surgical procedure. A universally applicable surgical procedure is probably not applicable to all patients

with enteric perforation. Each method has its own advantages and disadvantages, taking into account the clinical experience and comparing with international studies, proves that primary repair is the safest option for patients with single drill, healthy bowel and minimal contamination. In advance reports, A.R.K. Drilling repair was reported in Bhansali 48%, Purohitg 14.6% and mortality with 28% Adesunkanmill. While overall mortality was 14.2%, K.P. Kohlire Singh and enteric perforation treated with transient ileostomy reported no death in 8 patients. Shah A.A Wani and Wazir reported a mortality rate of 37.5% with resection anastomosis. Therefore, the mortality rate in patients undergoing primary repair perforation compared to previous studies was very low. In short, treatment of enteric perforation is always surgery. Patients should be operated as soon as possible with appropriate strong resuscitation and appropriate antibiotic treatment. Primary repair of sounding is the preferred treatment method in patients presenting early in the course of the disease due to the low rate of complications, hospital stay shorter, faster technology and simple, low mortality rate and no problems with postoperative care.

CONCLUSION:

Primary repair of bilayer perforation is the preferred treatment for typhoid perforation. Long-term

procedures such as resection anastomosis and right hemicolectomy should be avoided in patients with poor general condition and toxemia. For successful treatment of patients with typhoid perforation, early surgery and adequate resuscitation are necessary. Early repair of perforation is a better procedure in enteric perforation because of cost efficiency and lower complication rate compared to other surgical procedures.

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