

## Typhoid Ileal Perforation-Ileostomy the Better Surgical Option.

<sup>1\*</sup>Dr. Mrigendra Kumar Rai, <sup>2</sup>Dr. Vinod Kumar, <sup>2</sup>Dr. Binay Kumar

<sup>1</sup>Registrar, Rajendra Institute of Medical Sciences, Ranchi, <sup>2</sup>Associate Professor, Rajendra Institute of Medical Sciences, Ranchi.

Corresponding author: <sup>1</sup>Dr. Mrigendra Kumar Rai

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### Abstract

**Background:** Intestinal perforation is one of the the most lethal complication of typhoid fever. It is also a challenging surgical emergency. It is solely responsible for 25% of deaths in typhoid fever patients. There is gradual but variable decline in the mortality rate upto less than 5% due to improved understanding of disease pathogenesis and progress in supportive and surgical care areas.

**Objective:** To compare the outcome of different surgical procedures done for typhoid ileal perforation in our tertiary care centre.

**Method:** In this study we compared the four different surgical procdures done over 40 cases divided in equal groups, of intestinal perforation with the history of prolonged fever and diagnosed as a case of typhoid fever by different laboratory tests.

**Result:** The mortality rate is least (10%) in the group having primary ileostomy as campared to highest (50%) in the group having primary repair done for typhoid ileal perforation. The incidence of typhoid perforation is maximum in male and in third decade of life. Most patients having prior history of fever presented with perforation in second week of illness.

**Conclusion:** Primary ileostomy is better surgical procedure done for typhoid ileal perforation in respect of mortality of patients.

**Keywords:** Intestinal perforation, typhoid fever, primary ileostomy, mortality.

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### I. Introduction

Typhoid fever is still endemic in many developing countries where it occurs through out the year.<sup>[1]</sup> Intestinal bleeding and ileal perforations are most lethal complications of typhoid fever.<sup>[2]</sup> It is also a challenging surgical emergency.<sup>[3]</sup> Worldwide, perforation rate ranges from 0.6% to 4.9% cases of enteric fever.<sup>[4]</sup> Intestinal perforation solely responsible for 25% of deaths in enteric fever cases.<sup>[5]</sup> Due to improved understanding of disease pathogenesis and progress in supportive and surgical care areas the mortality due to typhoid perforation has been on gradual but variable decline worldwide. Some centres who are capable of better quality of care are now reporting less than 5% mortality due to typhoid intestinal perforation.<sup>[6,7]</sup>

In this study we compared the outcome of different surgical procedures done for typhoid ileal perforation at our tertiary care centre.

### II. Material And Methods

The present study has been done to carry out the comparative evaluation of different surgical procedures commonly used in typhoid ileal perforation in between november 2015 to october 2016 at Rajendra Institute of Medical Sciences, Ranchi. In this study, only those forty cases of intestinal perforations were taken who had history of prolonged fever and diagnosed as a case of typhoid fever with the help of rising widal titre level, positive blood, stool or urine culture and on laparotomy single distal ileal perforation was found. All these cases were properly resuscitated before taken for laparotomy. Four different groups of equal number of patients (10 patients) were made and four different kinds of procedures were done.

Group I-Primary repair.

Group II-Resection anastomosis.

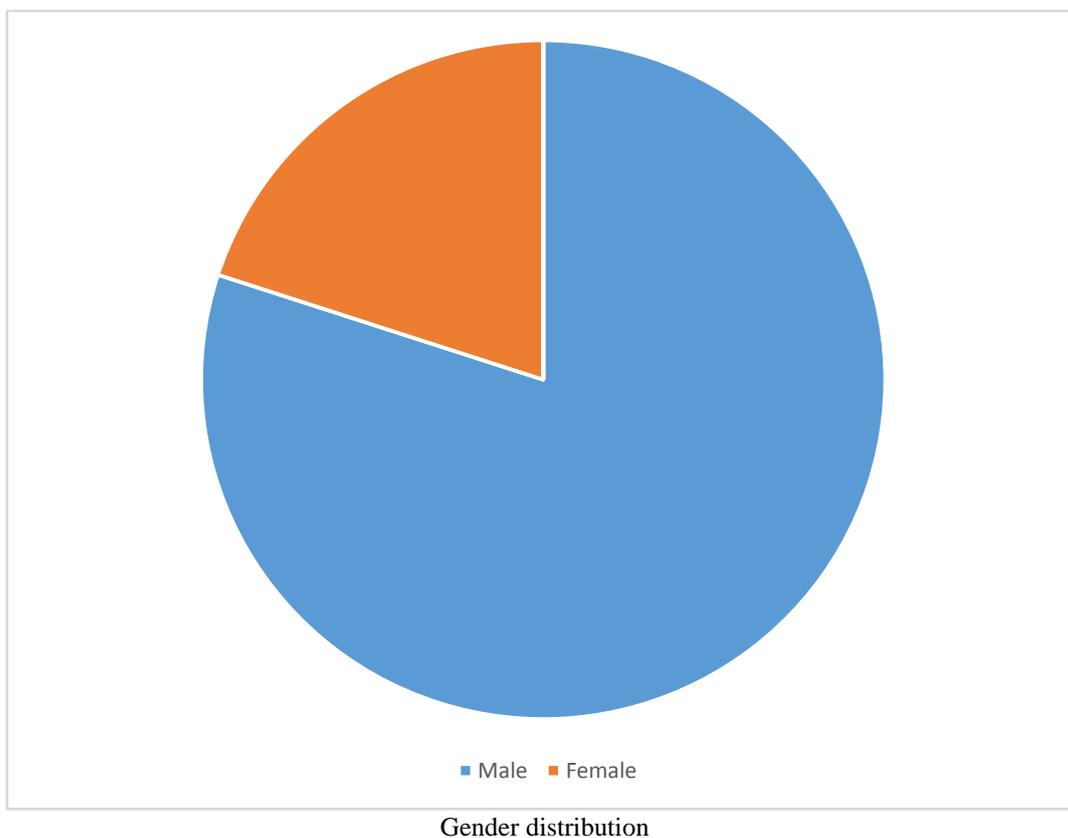
Group III-Repair and ileo-tranverse anastomosis.

Group IV-Primary ileostomy.

Post-operatively, i.v fluids, inj. ceftriaxone, metronidazole and amikacin were given to all patients as per body weight.

### III. Result

Total 40 patients were taken for study, out of which 32(80%) were male and 8 (20%) were female with male female ratio 4:1. The maximum age incidence was in third decade of life i.e 18 patients(45%). Maximum number of patients i.e 18(45%) had history of fever 8 to 14 days prior to perforation. All patients were resuscitated properly prior to operation. Post-operatively the incidence of mortality was minimum among group IV(primary ileostomy) and maximum among group I(primary repair).



**Table 1: Age incidence of typhoid perforation**

Age group(years)	No. of cases	Percentage
0-10	2	5
11-20	11	27.50
21-30	18	<b>45</b>
31-40	7	17.50
>40	2	5

**Table 2: Duration of illness prior to perforation**

Duration(days)	No. of cases	Percentage
1-7	2	5
8-14	18	<b>45</b>
15-21	13	32.5
22-28	6	15
>1 month	1	2.5

**Table 3: Incidence of mortality**

Group	No. of patients	Percentage
I	5/10	50
II	4/10	40
III	2/10	20
IV	1/10	<b>10</b>

#### IV. Discussion

Typhoid fever which occurs throughout the year and is still endemic in many developing countries.<sup>[1]</sup> Among complications, intestinal bleeding and ileal perforations are most lethal and challenging surgical emergency.<sup>[2,3]</sup> Worldwide, the rate of intestinal perforation due to enteric fever ranges from 0.6% to 4.9%.<sup>[4]</sup> Intestinal perforation is solely responsible for 25% of deaths in enteric fever.<sup>[5]</sup> But due to improved understanding of disease pathogenesis and progress in supportive care and surgical skills, the mortality rate due to typhoid intestinal perforation has gradually but variably declined worldwide upto less than 5%.<sup>[6,7]</sup> In our study also the mortality rate was 10% in group IV patients as compared to 50% in group I patients. Highest incidence of perforation occurs during second week of typhoid fever.<sup>[8]</sup> In our study also 45% cases of perforations had history of fever since 8 to 14 days. Highest incidence of typhoid perforation occurs in third decade of life.<sup>[9]</sup> In our study also 45% cases of typhoid perforations were in between 21-30 years of age. Males are more commonly affected by typhoid fever and thus intestinal perforation than females with ratio of 4:1.<sup>[10]</sup> In our study also male to female ratio was 4:1.

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