Short Report

Typhoid Perforation still a common problem: Situation in Pakistan in comparison to other countries of Low Human Development

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Abstract

The objective of this study was to analyze the present situation of typhoid perforation and the factors behind the still common occurrence of the disease in our country. The study was conducted with the collection and retrospective analysis of the data of typhoid perforation treated in surgical unit III of Nishtar Hospital, Multan from January 1998 to September 2000. All the patients were received and operated upon in emergency ward of the hospital, after initial resuscitation as necessary investigation. Primary closure of perforation or primary exteriozation as loop ileostomy were the surgical options adopted. Among 31 patients, 25 were male and 7 female, with a male to female ratio of 3.57:1. Majority of patients were 15-30 years of age. Twenty six (81.25%) were from remote rural areas while only 6 (18.75%) were city dwellers. One patient expired before operation and 30 underwent exploratory laparotomy. Overall expiry rate was 12.5%. Wound infection and burst abdomen were the major post operative complications responsible for prolonged hospital stay. The factors leading to occurrence of typhoid perforation were identified as, lack of civic facilities like clean drinking water and sewage disposal, poverty, poor yield of primary health care system causing a delay in diagnosis and atypical presentation of typhoid and perforation due to the emergence of multi drug resistant strains of salmonella typhae. The results of the study were similar to those of Indian studies but better than African studies.The situation warrants attention of health care providers and policy makers.

Introduction

Typhoid fever has almost been eliminated from developed countries because of sewage and water treatment facilities but remains a common disease and a major cause of morbidity and mortality in the third world countries.[1,2] The emergence of multi drug resistant strains of typhoidal salmonella has contributed to the problem.[3] The incidence of perforation has been reported 1.5% in a study carried out in 2000 in Tokyo Metropolitan Komangome Hospital.[4] Classically the perforation occurs in the third week. This is solitary in 85% cases and is due to infection of Peyer's patches and development of longitudinal ulcers on the anti-mesenteric border within 45 cm of ileocaecal valve in the majority of patients. Perforation is often not appreciated in an already severely diseased patient and it is super-infection resulting from leakage of intestinal bacteria lease to full blown picture of suppurative bacterial peritonitis.

The objective of this study was to analyze the present situation of typhoid perforation and to identify the factors behind the still common occurrence of the disease, in comparison to other countries of low human development.

Patients, Methods and Results

The study was conducted with the collection and retrospective analysis of the data of the patients with typhoid perforation and treated in surgical unit III of Nishtar Hospital, Multan. The patients were received and resuscitated in the emergency ward. After necessasory investigations, they were explored through laparotomy. Primary closure of perforation after freshening the margins, or primary exteriorization as temporary loop ileostomy were the surgical options adopted. Postoperative complications were recorded and managed. Total hospital stay of the patients was also recorded as a measure of morbidity. Thirty two patients of typhoid perforation were received in 33 months period from January 1998 to September 2000. Male patients were 25 (78.15%) and females were 7 (21.87%) with a male to female ratio 3.57:1. Third decade of life was the most vulnerable period (50% cases). Of all the patients 28 (87.5%) were in the range of 15-30 years, i.e., school age children or young adults. Twenty six out of 32 patients were brought from various "chakook" and remote rural areas (Table 1). The major factors responsible for such a high incidence of complicated typhoid in these areas were noted to be the socioeconomic ones and they were: lack of civic facilities including clean drinking water, sewage disposal and optimum health care.

Table 1. Distribution according to civic localities.

Origin of Patients	No.	%
Urban areas	6	18.75
Remote rural areas	26	81.25

Table 2. Presentation of typhoid perforation after the onset of Disease (Fever).

Presentation of patients	No.	%
In 1st week (day 1-7)	11	34.37
In 2nd week (day 8-14)	12	37.50
In 3rd week (day 15-21)	3	9.37
After 21 days	1	3.12
Without history of fever	4	12.50
After settling of fever	1	3.12
Total	32	100

Table 2 shows the presentation of perforation i.e. the number of days after the onset of fever. Majority of the patients presented in 1st and 2nd week of illness. One patient expired before surgery and 3 underwent exploratory laparotomy. One laparotomy was negative i.e. no perforation was found. Primary closure was done in 12 (40%) and primary exteriorization as loop ileostomy was done in 18 (60%) patients. Total deaths were 4 (12.5%). Only 3 patients of primary closure were over the age of 25 years, and there was no mortality in them. Nine patients were of 25 years or below.

The major morbidity responsible for prolonging the hospital stay was wound infection. Among the 31 operated patients, 10 remained clean and their average stay in the hospital was 10.3 days, 12 patients had wound infection and 8 developed burst abdomen. Average hospital stay was 16.5 days. In our study, we did not fined any patient complicated with enterocutaneous fistula due to leakage of anastomosis. This was because of more cautious policy of doing exteriorization in cases of heavy peritoneal soiling and poor gut condition.

Conclusion

Typhoid ileal perforation is still a major health problem in third world countries and reflects their under developed civic facilities and poor yield of their primary health care system. Emergence of multi drug resistant strains of salmonella has resulted in atypical presentation of typhoid perforation, an important cause of delay in diagnosis and poor management. The situation is worse in poor communities of remote rural areas and warrants attention of health care providers and policy makers.

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