Journal of Saidu Medical College 2011; 1(2)

TYPHOID PERFORATION OF ILEUM: AN EXPERIENCE OF 60 CASES

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ABSTRACT

Aims: The aim of our study was to collect data on Ileal perforation due to Enteric fever in this part of the country and share our experience in the management of this common surgical emergency in the under developed countries.

Material and Methods: This was a prospective study carried out on 60 patients admitted and operated for typhoid perforation of ileum in the department of surgery Saidu Teaching Hospital over a period of three years. A proforma was designed for this study based on history, examination, investigations, pre-operative treatment, operative findings, post operative complications and mortality.

Results: Sixty (60) patients were enrolled in this day who were operated on the day of their admission. All had single perforation in the distal ileum. Ileostomy was constructed in all patients. The mortality was 3.33% in our study as compared to 57-58.9% with simple closure, 8.8% with wedge excision and re-anastomosis and 80% in patients treated conservatively. Other complications included, Skin excoriation 23.33%, wound infection 21.66%, wound dehiscence 6.66%, intra -abdominal abscesses 5.00%, ileostomy prolapse 5.00%, ileostomy retraction 6.66% and pleural effusion 1.66%. There was no faecal fistula and re-perforation in our cases.

Conclusions: Ileostomy for enteric perforation of ileum being associated with low morbidity and mortality is recommended for all cases and particularly for those patients having gross contamination.

Key words: Typhoid Ileal perforation, Ileostomy, morbidity, mortality.

INTRODUCTION

Typhoid fever is a major health problem in Pakistan. The two major complications associated with typhoid fever are haemorrhage and perforation of ulcers in the ileum.[1-4] Ileal perforation is the fifth commonest cause of abdominal emergencies due to high incidence of enteric fever and tuberculosis in our country.[2]

Despite the availability of modern diagnostic facilities and surgical expertise, this condition is still associated with high morbidity and mortality.[3] and in some studies it is as high 20%, particularly with simple closure.

Majority of the patients with ileal perforations present as acute surgical emergency, while very few are referred from medical units being admitted there for treatment of typhoid fever. Early diagnosis and prompt surgical intervention is the key to lessen the morbidity and mortality.

In our series we performed ileostomy for all patients with typhoid perforation of ileum and the aim was to know about the post operative complications and mortalities.

MATERIAL AND METHODS

This is an uncontrolled prospective observational study that was conducted in department of surgery Saidu Teaching Hospital/Saidu Medical College from April 2005 to March 2008. Majority of the patients were admitted through casualty, while very few were referred from medical units. Diagnosis of typhoid perforation was based on history and clinical examination. Full blood count, blood sugar, blood urea, electrolytes, ECG and abdominal ultrasound scan and chest radiography were done where indicated.

After resuscitation and administration of intra

venous (I/V) antibiotics, operative exploration was carried out through a mid line incision. Operative findings like degree of contamination, number of perforations, adhesions etc. were recorded. Perforation in the ileum was defined which was brought out in the right iliac fossa and a spouting loop ileastomy was constructed by suturing ileum to the skin using 2/0 catgut.

Postoperatively patients were closely monitored and treatment continued in form of N/G suction, IV fluids, IV antibiotics, analgesics etc. till full recovery. Complications like ileus, wound dehiscence, infection, fever, skin excoriation, ileostomy prolapse and retraction, intra abdominal abbesses, chest infection and mortalities occurred in post operative period and were recorded and treated properly. Uncomlicated cases were discharged on 7-10th post operative day while complicated cases were kept longer. Patients were followed regularly in OPD for any subsequent problem. Closure of ileastomies was performed between 2-3 months.

RESULTS

60 patients admitted and diagnosed as typhoid perforation of ileum were included in the study. 41 (68.33%) were male and 19 (31.66%) were female. 51 (85.00%) were below age of 30 years while only 9 (15.00%) were 30 years and above. Age and sex distribution is shown in Table I.

TABLE I

AGE AND SEX DISTRIBUTION OF PATIENTS (n=60)

AGE	MALE	FEMALE	TOTAL
14-19 years	16	6	22 (36.66%)
20-29 years	19	10	29 (48.33%)
30-39 years	4	2	6 (10.00%)
40-49 years	1	1	2 (3.33%)
50 years & above	1	0	1 (1.66%)
TOTAL	41 (68.33%)	19 (31.66%)	60 (100%)

Total leukocyte count was more than 10,000/ml in 31 (51.66%) patients while it was less than 10,000/ml in 29 (48.33%) patients. Widal test was positive in 34 (56.66%) patients. Chest x-ray showed gas under the right hemi diaphragm in 44 (73.33%) patients. Abdominal ultrasound was done for 10 patients and in 7 (70.00%) patients it detected free fluid in the abdomen.

Abdominal pain was the commonest symptom, being reported by all patients. Other symptoms like fever, vomiting, diarrhoea, abdominal distension and constipation were present in 49 (81.66%), 32 (53.33%), 46 (76.66%), 27 (45.00%) and 13 (21.66%) patients respectively. The duration of pain was 1 day in 11 (18.33%) patients, 2-3 days in 37 (61.66%), 3-7 days in 9 (15.00%) and 7 days or more in 3 (5.00%) patients.

All 60 patients underwent exploratory laparatomy through mid line incision the same day. All patients had single perforation which was brought out as iliostomy in the right iliac fossa. Abdominal closure was performed after thorough wash with normal saline.

Post operative treatment was continued in form of N/G suction, IV antibiotics, IV fluids, analgesics etc. till full recovery.

Patients were regularly followed up for any subsequent complications which were managed accordingly. Post operative complications were recorded on proper proforma. Frequency of these complications has been shown in Table II.

TABLE II
POST OPERATIVE COMPLICATIONS (n = 60)

COMPLICATIONS	No. of Cases	% age
Skin excoriation	14	23.33%
Burst Abdomen	4	6.66%
Wound infection	13	21.66%
Ileostomy prolapse	3	5.00%
Ileostomy retraction	4	6.66%
Intra Abdominal Abscesses	3	5.00%
Pleural Effusion	1	1.66%
Mortality	2	3.33%

Patients were readmitted after 2-3 months for closure of ileostomy. Successful closure of ileostomy was done in all cases.

DISCUSSION

The incidence of typhoid perforation is variable in different parts of the world, but it is common surgical emergency in our country as well as in other under developed countries.[4-5-6] Typhoid perforation is a serious surgical emergency having a high mortality as high as 33.60% as reported by Olurin et al [7], while in some studies it is 4-5%. [8-9] Though enteric perforation have high morbidity and mortality but now a days early detection and proper timely surgical intervention by experienced surgeons has improved the outcome.[10-11]

The maximum incidence of typhoid perforation is in younger age group. In our study 51 (85.00%) patients were below 30 years; this is also supported by study of Koshla[12], and it is commoner in male than female as reported by Khanna and Misra[13], also observed in this study where male to female ratio is 2:1.

In endemic areas the diagnosis of enteric perforation can be made without much difficulty. Usually there is a history of fever extending over a period of 1 4 weeks complicated by sudden onset severe abdominal pain. Our approach is vigorous resuscitation in form of IV fluids, IV antibiotics, N/G suction, Analgesics and correction of electrolytes imbalance followed by lapratomy, as serological and bacteriological confirmation requires a delay of 13 days. Even widal test is not positive in all cases. In our study it was positive in 34 (56.66%) patients contrary to 72% positivity reported by Rashid ect.al[14]

In our series all patients were complaining of abdominal pain while in majority of the patients abdomen was tender, rigid and guarded, however bowel sounds were either sluggish or absent in 40% of cases.

Chest radiography is an important diagnostic tool which showed gas under the right hemi diaphragm in 44 (73.33%) cases in our series, this in comparable to 68% of cases having gas under the diaphragm in a study of Ajao[15].

Treatment of uncomplicated typhoid fever is done medically, but when ileal perforation occurs surgical intervention becomes mandatory. The sooner it is done the higher is the survival.

There is very little place of conservative treatment of perforation as advised by Huckstep[16], and this idea of conservative approach is further turned down by high mortality rate of 80% in 206 patients treated conservatively by M.K Chouhan and S.K. Pande[17].

There are various methods of surgical management of typhoid ileal perforation ranging from simple closure to complex resection of gut. Different studies have shown that ileostomy for ileal perforation is better than simple closure having low incidence of mortality and morbidity. In a study of Q.K. Mohyudden[18], the mortality was 60% with simple closure while it was only 7.5% with iliostomy and also in a series of Ardanan[19] the mortality was as low as 7.4%.

Iqbal has reported mortality of 57.9%, intra abdominal abscesses 14%, would dehiscence and infection 53% and faecal fistula 14% with simple closure of ileal perforation[20]. Wound dehiscence and infection in our study was 26.66% much lower than study of Iqbal, but comparable to incidence of 33% reported by Egglestone and Santoshi [6]. The mortality recorded in our study was 3.33% which is quite encouraging comparing to 4-60% associated with ileal perforations in other series[21].

CONCLUSIONS

We conclude from out data that by exteriorizing the gut content through loop iliostomy with a proper spout is a better treatment option of typhoid perforation of ileum as iliostomy prevents build up of intra-luminal pressure which is an important factor to prevent re-perforation. Any attempt to restore the continuity by simple closure will increase the chances of re-perforation.

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