

Comparison between Primary Repair and Exteriorization in Cases of Typhoid Perforation

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Objectives: This comparative study was conducted at Mayo Hospital, Lahore from April 2004 to May 2005 to compare the results of primary repair and exteriorization in cases of typhoid perforation. **Materials and methods:** 80 patients were selected out of which 48 were males and 32 were females. **Inclusion criteria:** Consisted of a history of fever, abdominal pain, constipation, sharp shooting pain superimposed over the colicky abdominal pain, clinical finding included tense tender abdomen and absent bowel sounds, investigations including gas under diaphragm in abdominal x-ray and positive widal test. **Exclusion criteria:** Consisted of negative Widal test even if there was gas under diaphragm, per op findings suggestive of tuberculosis or histopathology reports suggestive of tuberculosis or any pathology other than typhoid. Primary repair was done in patients who presented within 36 hrs of experiencing sharp shooting pain and per op findings of minimal contamination. Exteriorization in the form of loop or double barrel ileostomy was done in other cases.

Key words: Primary repair, gas under diaphragm, Widal test, loop and double barrel ileostomy

Salmonella Typhi causes enterocolitis, enteric fever and septicemia with metastatic abscesses. It is a common cause of intestinal perforation in Pakistan. Epidemiology of typhoid infection is related to the ingestion of contaminated food or water containing human wastes. After an incubation period of 12-48 hrs enteric fever begins with nausea, vomiting progressing onto moderate to severe colicky abdominal pain with fever. Constipation is also a common feature but diarrhoea may sometimes be present. Gastrointestinal complications include paralytic ileus intestinal haemorrhage and intestinal perforation. Most of these complications occur at the extremes of ages. Pts and methods:

The study was conducted at Mayo Hospital Lahore. A total of 80 pts were selected. The **inclusion criteria** consisted of positive clues in history like nausea, vomiting, fever, moderate to severe colicky generalized abdominal pain, sharp shooting pain in addition to the colicky pain indicating perforation, constipation or diarrhoea. Clinical signs consisted of tense tender abdomen and absent bowel sounds, investigations showing positive Widal test and gas under diaphragm in addition to the routine blood and urine investigations. **Exclusion criteria** were a negative Widal test, internal per op findings suggestive of tuberculosis or any other pathology and histopathology reports showing any other diagnosis.

Criteria for primary repair was that the patients must have presented within the first 36 hrs of experiencing that sharp sever pain in abdomen in addition to the already existent colicky pain and per op minimal contamination. This was done in 26 cases out of which 16(61.5%) were male and 10(38.46%) were females 7(26.9%) were in the age range of 13-40yrs, 8(30.7%) in the age range of 50-60 yrs and 7(26.9%) in the age range of above 60 years. This group was named as group A. Exteriorization was one in all the remaining 54 pts out of which 30(55.5%) were males and 24(45.4%) were females. 26(48%) were in the 13-40 yrs age group, 6(11.1%) in the 40-50 yrs age group,

9(16.6%) in the 50-60 yrs age group and 13(24.07%) were in the above 60 yrs age group. This group was named as Group B.

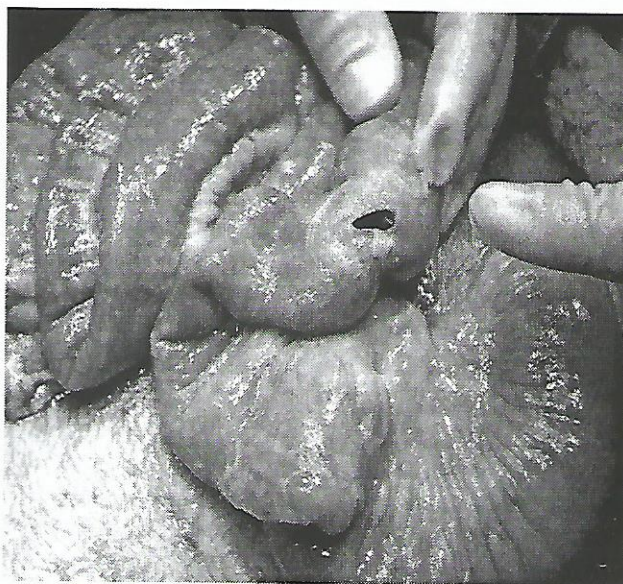
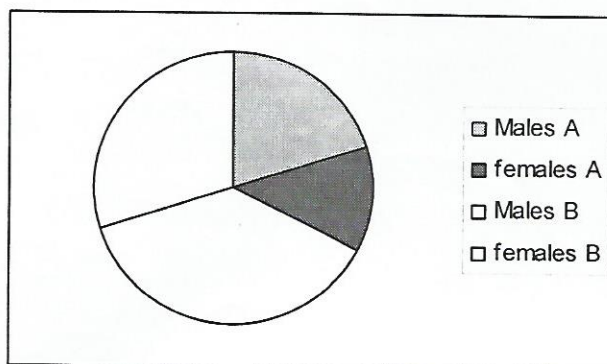


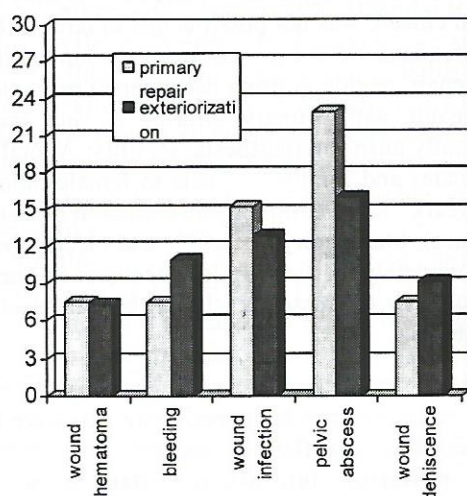
Fig. 1 Typhoid Perforation



Ratio of males and females in the two groups

Complications:**Complications occurred in both age groups**

Complications	Primary repair	Exteriorization
Wound hematoma	2	4
Bleeding	2	6
Wound infection	4	7
Pelvic abscess	6	9
Wound dehiscence	2	5

**Discussion:**

Typhoid perforation is a fairly common outcome in typhoid enteritis patients specially those at the extremes of ages. Treatment modalities aimed at this dreadful complication are commonly debated. In our study we have compared the results of primary repair under favorable conditions and exteriorization. It is worth mentioning here that in cases, where there were multiple perforations in the affected segment, excision of that segment was done before doing primary repair by end to end anastomosis. Results showed that complications such as wound hematoma occurred in 2(7.6%)pts of group A as compared to 4(7.4%)pts of group B. Bleeding occurred in 2(7.6%)pts of group A as compared to 6(11%) pts of group B. Wound infection occurred in 4(15.3%)pts of group A as compared to 7(12.9%)pts of group B. Pelvis abscess formed in 6(23%)pts in group A as compared to 9(16%) cases of group B. Wound dehiscence occurred in 2(7.6%) pts of group A as compared to 5(9.2%) pts of group B.

Although the results in both groups are comparable but it was found that long term morbidity as well as social acceptance in pts of group A who progressed to uneventful recoveries was better as compared to pts of group B.

Conclusion:

As our study shows comparable results so this can be concluded that if the conditions are favourable for primary repair it should be undertaken as it not only decreases the long term morbidity, social out casting but also decreases the economic expenses present in cases of exteriorization. But it must be kept in mind that exteriorization is certainly a better option in cases where the conditions are not favorable for a primary anastomosis.

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