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TYPHOID PERFORATIONS — PROGNOSTIC FACTORS AND MODE OF TREATMENT

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ABSTRACT:

This report examines the characteristics of 60 patients with typhoid perforations, treated over a period of 7.5 years, ending September, 1990. The most important prognostic determinants were perforation/operation interval, age of the patient and mode of treatment. 15% cases were treated conservatively with 11.11% mortality, in 3% only a drainage procedure could be instituted with a 50% mortality and definitive treatment in the form of simple closure (in 54% cases), and wedge resection (in 28% cases) yielded 22.5% and 18% mortality respectively.

INTRODUCTION

Typhoid is a grave disease by itself and when it results in perforation of the gut, then the outlook becomes very serious regarding morbidity and mortality. A variety of complications and prolonged hospitalization are the characteristics of typhoid perforation. History of remittent type of fever and headache for a few days, followed by sudden onset of abdominal pain and features of peritonitis are suggestive of typhoid perforation.[1]

The maximum incidence of perforation is in the second week.[2] The most important evidence of perforation is tenderness and rigidity with absent bowel sounds.[3] This study compares and contrasts the results with respect to morbidity and mortality of the different modes of treatment of typhoid perforation. It can be treated conservatively, if there are only minimal signs of peritonitis, or by operation if there is marked tenderness and rigidity.[4] Operative procedure can be a simple closure in 2 layers or wedge resection and closure in 2 layers.[1]

MATERIAL AND METHODS

All the available record of 60 patients admitted into Surgical B Unit of a District Teaching Hospital, during a 7.5 years' interval, starting April 83 and ending September 90, were thoroughly studied. (A special devised proforma was filled for every patient at the time of discharge). Youngest patiently was a 5 years old girl and the eldest was an

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80 years old man. Widal test was positive in only 35% patients and X-ray erect abdomen showed airfluid levels in 42% and gas under diaphragm in 62% of cases. At the time of admission, almost all the patients were anemic and dehydrated, more than 50% had a raised blood urea and more than 40% had a blood urea greater than 50mg/dl. The average total leukocyte count was 8,000/cumm, while 33% had less than 7,000 leukos/cumm and 15% had greater than 10,000 leukocytes/cumm.

All the patients were treated with intra venous fluids and electrolytes, blood transfusion injectable metronidazole combined with amino glycosides and chloramphenicol.

RESULTS

a) PERFORATION/OPERATION INTERVAL

Patients in whom treatment was instituted less than 24 hours after the onset of perforation, all did very well. None out of the eleven expired and only one patient developed a fistula. Those who received treatment after 2-3 days had a mortality rate of 9.5% and 11% developed fistula. In group receiving treatment after 4-7 days' fistula occurred in 14% and mortality was 20%. In delayed cases, where more than 7 days had elapsed between perforation and treatment. 33.3% died and 16.6% developed fistula.

b) AGE AS PROGNOSTIC FACTOR

It was concluded that adults, aged 11-49 years tolerated the s<ress of perforation and operation well. Both very young (10 years or less) and old patients (over 50 years) tolerated the disease poorly. Patients aged 10 years or below showed a mortality rate of 27%, whereas those aged more than 50 years had a mortality rate of 34%. The grouped in between showed a significantly lower mortality (15.5%).

c) MODE 0 F TRE ATM ENT

For those cases, treated conservatively, the average stay in the hospital was 15 days and mortality remained about 11.11%. for drainage only, the mortality rose to 50%. For wedge resection, the average stay in the hospital was 20 days, as compared to 17.5 days for simple closure, but the mortality was lower for wedge resection (18% as compared to 22.5% for simple closure) and the incidence of fistula formation was also lower (12.5% as compared to 20% for simple closure).

DISCUSSION

Those patients with only slight rigidity and minimum signs were treated conservatively. That is the reason for better prognosis in this group of patients. Probably the perforation was small and disease in the intestines was minimal. Patients with marked tenderness and gross rigidity were treated operatively and in our view should be treated by operation.[4] The procedure should be simple closure in 2 layers.[1]

In our series, patients who were operated earlier after perforation had a better prognosis.[5] Similarly patients who had a single perforation, who perforated early in the disease and were aged 11-49 years had better prognosis. Operating experience of the surgeon also affected the outcome. Post-operative jaundice was a bad sign.[6]

Another important point in the treatment of typhoid perforation is adequate preoperative preparation in the form of intravenous fluids, blood transfusion and broad spectrum antibiotics (to cover Salmonella, Anaerobes and gram negative organisms), as generalised peritonitis is equal to 25-30% burns[4-7] A urinary catheter should be passed pre operatively in all cases and urinary output closely watched. In this series, almost all the patients were anemic, toxic, hypotensive and dehydrated with raised blood urea, and needed thorough pre-operative preparation.[3]

Patients who perforated early in disease had a better prognosis. We have found Typhoid perforations in both sexes, in all age groups, but it was commoner in men, because males have an increased exposure to typhoid fever.[5] Proof of Typhoid was found in 35% paticnts.2 In our experience, Typhoid perforation was common in the rainy season, because of contamination of wells with rain water and in the months of January, when the wells become dry.[2]

CONCLUSION:

We are convinced that all patients with Typhoid perforations do not need surgery. Those with minimal signs of peritonitis can be treated conservatively, with good results. Those with marked signs of peritonitis should be thoroughly prepared pre-operatively and then subjected to simplest possible surgical procedure, as early as possible. With good antibiotic cover, the results are encouraging.

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