

A STUDY ON MANAGEMENT OF NON-TRAUMATIC UPPER GASTRO-INTESTINAL PERFORATION

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Abstract

Immediate treatment of perforated ulcer has been established procedure for some time now. It can be stated that immediate definitive surgery like truncal vagotomy with drainage procedure or proximal gastric vagotomy (PGV) after simple closure with or without an omental patch, for a perforated peptic ulcer offers the prospects of a permanent cure with a mortality and morbidity comparable to that of patients with elective surgery, also chances of complication like the biliary leak after simple closure of perforation is much less than after definitive surgery for perforated duodenal ulcer. Out of 50 cases admitted, all 50 cases were subjected to emergency laparotomy. At laparotomy, site of perforation, size of perforation and amount of peritoneal contamination were determined. Following definitive procedure i.e., closure of perforation with posterior G.J. or with bilateral truncal vagotomy and simple closure of perforation with or without omental patch were done. Simple closure of perforation with omental plug (Graham's patch) was procedure of choice and was done in 39 cases (78%). Definitive surgery (bilateral truncal vagotomy with posterior gastric-jejunosomy) was done in 11 cases (22%) definitive surgery was done in those patients, who had perforation for less than 24 hrs. were hemodynamically stable and who had previous history of peptic ulcer disease and were treated for PUD (Patient having Chronic Ulcer) similar seasonal variation of perforation.

Keywords: Gastro-intestinal perforation, truncal vagotomy, peptic ulcer disease

Introduction

Acute perforation is one of the complications of chronic duodenal ulcer (DU) and occurs in about 10-15% of all recognized chronic peptic ulcer. Acute free perforation is complication of gastric carcinoma and more common in ulcerative type of carcinoma located on lesser curvature.

Lord Moynihan has stated that "Perforation of duodenal and gastric ulcer is one of the most serious and most over whelming catastrophes that can befall a human being ^[1, 2].

Operative treatment is still the treatment of choice. Conservative treatment is definitely unsuitable for routine use but few patients brought to hospital at a late stage, have major concurrent illness and pre-operative shock. These patients may improve with conservative

treatment with Herman Taylor regimen ^[3].

Immediate treatment of perforated ulcer has been established procedure for some time now. It can be stated that immediate definitive surgery like truncal vagotomy with drainage procedure or proximal gastric vagotomy (PGV) after simple closure with or without an omental patch, for a perforated peptic ulcer offers the prospects of a permanent cure with a mortality and morbidity comparable to that of patients with elective surgery, also chances of complication like the biliary leak after simple closure of perforation is much less than after definitive surgery for perforated duodenal ulcer. For the gastric perforation due to carcinoma, partial or complete gastrectomy is the mode of treatment, if the condition of the patient permits ^[4].

The recent studies show that whatever definitive surgery is deemed an appropriate addition to a simple closure of perforated duodenal ulcer, PGV is the procedure of choice ^[5, 6].

If the condition is not diagnosed properly and not adequately treated, it progresses in a definitive manner with a typical course and may lead to death of the patient due to bacterial peritonitis in about 7-8 days.

The mortality increases with delay in operating, the mortality rate, when operation is performed within 6 hrs. of onset of pain, approaches zero. From 6-12 hrs. The rate is 5-10%, from 12-24 hrs. it is 25% and 3rd day after, operations are seldom successful. Hence it is said that "There is no intra-abdominal catastrophe where a successful outcome is more dependent upon early diagnosis and prompt treatment i.e., surgery". This is achieved by prompt transportation of the patient to the major surgical center.

Methodology

This study has been based on the analysis of 50 cases of non-traumatic upper gastro-intestinal perforation (peptic ulcer) admitted to hospital. The cases were collected at random which were admitted and treated in various surgical units. These cases were admitted as emergencies. After admission a detailed history was taken and clinical evaluation was done and possible immediate investigations were done.

Out of 50 cases admitted, all 50 cases were subjected to emergency laparotomy. At laparotomy, site of perforation, size of perforation and amount of peritoneal contamination were determined. Following definitive procedure i.e., closure of perforation with posterior G.J. or with bilateral truncal vagotomy and simple closure of perforation with or without omental patch were done.

Results

Out of 50 patients 20(40%) had pulse rate below 100/min, in 60% of cases the pulse rate was between 100-120/min. at the time of admission. Tachycardia was present in those cases who came late to the hospital and had gross contamination of peritoneal cavity. Patients who came early to the hospital had little contamination of peritoneal cavity and so pulse rate was below 100/ min.

Table 1: Showing pulse rate

Pulse rate	No. cases	%	Time of arrival in Hospital
Below 100/min	20	40	Within 24 hrs.
100 - 120/min	30	60	After 24 hrs. of perforation
above 120/min	-	-	

In the present study of 50 cases 18 cases (36%) belonged to blood group 'O'+ve. 14 cases belonged to 'A'+ve and 13 cases belonged to 'B' positive and 5 cases belonged to 'AB'+ve blood group.

Table 2: Showing blood groups and perforation

Blood group	No. of cases	%
A	14	28
B	13	26
AB	5	10
O	18	36

Treatment and Mortality

All the 50 cases were treated by operation. Simple closure of perforation with omental plug (Graham's patch) was procedure of choice and was done in 39 cases (78%). Definitive surgery (bilateral truncal vagotomy with posterior gastric -jejunostomy) was done in 11 cases (22%) definitive surgery was done in those patients, who had perforation for less than 24 hrs. were hemodynamically stable and who had previous history of peptic ulcer disease and were treated for PUD (Patient having Chronic Ulcer) similar seasonal variation of perforation.

Discussion

Present study shows distension of abdomen in 74% of cases. Distension was present in those who came after 24 hrs. of onset of pain. Tenderness of abdomen was present in all the 50 cases. In most of the cases tenderness was generalized. Variable degree of guarding and rigidity was present in all the 50 cases. Obliteration of the liver dullness in 49% was present. Erect abdomen X-ray showed gas under diaphragm in 49 cases. One patient did not show gas under diaphragm and even obliteration of liver dullness was not present because of early arrival to hospital and stomach being full at the time of perforation. On auscultation, bowel sounds were absent in the 50 cases. AK. Dev *et al.* in his study of 171 cases showed muscle guarding and obliteration of liver dullness in most of the cases and 98% of cases showed gas under diaphragm ^[7].

In the present series maximum (36%) perforation were present in patients with O+ ve blood group. In the series of 159 cases by Clark *et al.* maximum perforations were found in O+ ve patients. Thus, showing persons with O+ ve blood group at higher risk of perforation.

Simple closure of perforation was procedure of choice and was done in 39 (78%) cases. Definitive surgery (bilateral truncal vagotomy with posterior G.J.) was done in 11 (22%) cases. AK. Dev *et al.* showed simple closure as choice of procedure in 80% of cases. J.

Horwitz *et al.* recommended simple closure in 63% of cases. Simple closure was the principle method of management of perforated peptic ulcer. Overall operative mortality rate in the present series was 6%.⁸ The present study showed a significant difference in lethality rate between simple closure and definitive surgery. The perforation located in the stomach is associated with higher mortality rate than in duodenal perforation. In the present study 40% patient with gastric perforation died. Similar lethality rate were seen by C.S yanes *et al.* in his study. The mortality rate with simple closure was 7.7% (3 out of 39) and 0% mortality with definite surgery. Similar low mortality following simple closure was reported by Dark *et al.* and Feliciano *et al.* The lethality increased as the patient age increases. Patients who died were of 75, 71 and 59 years of age. The cause of death was septicemia in 2 cases and M.I. in the third. A K. Dev *et al.* showed mortality of 8% C. Syanes *et al.* had mortality of 8% and Bharti *et al.* 7%. 8 patients (16%) of all cases had one or more major post-operative complication. Wound sepsis was the main post-operative complication^[9, 10].

Conclusion

- Most of the patients had generalized abdominal guarding and rigidity and diffuse tenderness.
- Obliteration of liver dullness was present in 98%.
- Maximum perforation was present in patients with blood group O+.
- The choice of procedure in 39 patients were simple closure of perforation with omental patch.
- 8 patients had post-operative complications.
- The mortality rate was higher in patient treated with simple closure (7.7%) as compared to definitive surgery (0%).

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