

Original Research Article

CLINICAL PROFILE OF NON-TRAUMATIC UPPER GASTRO-INTESTINAL PERFORATION CASES AT A TERTIARY CARE HOSPITAL

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Abstract

Perforation is one of the most dynamic complications of peptic ulcer, in spite of modern management, it is still a life threatening catastrophe. The sudden release of duodenal and gastric contents into the peritoneal cavity through a perforation leads to a devastating sequence of events which if not properly managed, is likely to cause death. Non-traumatic upper gastro intestinal perforation carries a high mortality and morbidity unless early treatment is instituted in form of surgery. 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. Guarding & rigidity was present in all 50 cases to a variable extent. In 49 cases obliteration of liver dullness was present. In one case obliteration of liver dullness and gas under diaphragm could not be elicited, because the patient came early to the hospital and his stomach was full at the time of perforation.

Keywords: Non-traumatic, upper gastro-intestinal perforation, peptic ulcer

Introduction

Gastro intestinal perforation may be defined as any through and through breach in the wall of gastro intestinal tract, perforation can be described either free or contained. Free perforation occur when G.I contents spill freely into the abdominal cavity causing diffuse peritonitis. Contained perforation occurs when full thickness hole occurs in an organ but free spillage is prevented by contiguous organ creation walled off area. The upper gastro-intestinal perforation include perforation occurring in gastric and duodenal region only ^[1, 2].

The main cause of non-traumatic upper gastro-intestinal (G. I) perforation is peptic ulcer. i.e., gastric and duodenal ulcers. The other common cause for non-traumatic upper G.I perforation is gastric carcinoma, the incidence of which is very less. The other rarer causes are ^[3, 4] Non Hodgkins lymphoma of the stomach and duodenum perforation occurs in untreated patient and in post chemotherapy and radio therapy patients.

- a) Gastric diverticula: perforation occurs as a complication in severe cases.
 b) (c) Duodenal diverticulum-perforation occurs as its complication.

Perforation is one of the most dynamic complications of peptic ulcer, in spite of modern management, it is still a life threatening catastrophe. The sudden release of duodenal and gastric contents into the peritoneal cavity through a perforation leads to a devastating sequence of events which if not properly managed, is likely to cause death. Non-traumatic upper gastro intestinal perforation carries a high mortality and morbidity unless early treatment is instituted in form of surgery. In many of the patients the perforation can recur, the basic pathology may continue to produce morbidity, this may require a second surgery at a later date, either in form of a second perforation closure or in form of definite surgery for the basic disease ^[5].

Recent statistics indicate that roughly 10% of the population develop gastric and duodenal ulcer in lifetime. Roughly 1-3% of population above the age of 20 years have some degree of peptic ulcer activity during any annual period ^[6].

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

Table 1: Showing duration of onset of pain

Time	No. of cases	%
Within 24 hrs.	20	40
24 - 48 hrs.	27	54
48 - 72 hrs.	3	6
Above 72 hrs.	-	-

Out of 50 patients studied 35(70%) had vomiting at least once before coming to hospital.

Table 2: Showing frequency of vomiting

No. of Cases	Vomiting	
	Present	Absent
50	35(70%)	15(30%)

Out of 50 patient 37 had previous history of dyspepsia for more than one month before perforation. For the remaining 26% perforation was first presentation of ulcer disease

Table 3: Showing previous HIO dyspepsia. Comparison with other studies

Study	No. of cases	H/O dyspepsia	%
C. Syanes <i>et al.</i>	1483	1146	75
H. Jordan <i>et al.</i>	107	75	70
Bharti <i>et al.</i>	50	39	78
Present study	50	37	74

Out of 50 cases studied 38(76%) were found to be smoker, 12(24%) were non-smoker.

Table 4: Showing Cigarette smoking & perforation: comparison with other studies

Study	No. of Cases	Smoker	%
Sebestan <i>et al.</i>	29	20	69
Soreide <i>et al.</i>	175	140	80
Present study	50	38	76

Out of 50 cases studied 20 were taking NSAIDs & 30 patients were not taking any type of NSAIDs. Most of the patients taking NSAIDs were elderly patients. These drugs were taken for generalized body pains, backache and joint pains.

Table 5: Showing NSA/Ds and ulcer perforation: with other studies

Study	No. of cases	on NASAIDs	%
Gunshefski <i>et al.</i>	88	39	44
Alberto <i>et al.</i>	167	70	42
Present study	50	20	40

Table 6: Comparing the symptomatology

Symptoms	No. cases	%
Pain	50	100
Distension	37	74
tenderness	50	100
Gaurding	50	100
Obliteration of liver dullness	49	98
Gas under diaphragm	49	98
Absent bowel sounds	50	100

<.Pain was presenting complaint in all the patients. Distension of abdomen was found in 74% of cases, 13 had no distension as they came early to hospital. In all 50 cases tenderness was elicited. Only in two cases tenderness was limited to upper abdomen and rest 48 cases had generalized abdominal tenderness.

Guarding & rigidity was present in all 50 cases to a variable extent. In 49 cases obliteration of liver dullness was present. In one case obliteration of liver dullness and gas under diaphragm could not be elicited, because the patient came early to the hospital and his stomach was full at the time of perforation. Erect abdominal X- ray film showed gas under diaphragm in 49 cases. On auscultation bowel sounds were absent in all the 50 cases.

Discussion

In the present study, all 50 cases presented with pain abdomen as their chief complaint. Most of the cases (54%) came to hospital between 24 to 48 hrs. of onset of pain. Only 40% cases reached hospital within 24 hrs of onset of pain Ramesh C *et al.* in their study shows maximum patient (40%) reached hospital within 24-48 hrs. Similar findings were shown by Maourougayan *et al.* 44. The delay is because of difficult topography inadequate means of transport and ignorance of patients.

70% of the patients with perforation had one or more episode of vomiting. 30% of cases did not have any episode of vomiting.

90% of the patients were from low socio-economic status in our study. Ramesh C. *et al.* 41 in his study showed 72% of cases were farmers, labourers, higher incidence in labour class is due to the manual work, stress, and have higher pain threshold ^[7].

Of 50 patients with available data 74% had dyspepsia for more than one month before perforation. For the remaining 26%, perforation was the first presentation of ulcer. Ramesh C *et al.* in his study of 50 cases showed 78% cases having previous history of dyspepsia. C. Syanes *et al.* had 75% and H. Jordan *et al.* had 70% of cases with previous history of dyspepsia. Patients were taking treatment inform of H2 blocker in most of the cases ^[8, 9].

20 patients out of 50 cases studied were taking NSAIDS before the perforation. Gunshefski *et al.* in the study of 88 cases showed 44% were taking NSAIDS. Similar result of 42% patients taking NSAIDS were shown by Alberto *et al.* 14 in his study of 167 cases. This study underscores the recognized predilection of these drugs to cause gastric and duodenal ulceration and perforation. The present study showed 38 patients (76%) were smokers showing strong association between ulcer perforation and cigarette smoking. J.A. Soreide *et al.* 45 in his analysis showed 80% smokers having perforation. Sebestan *et al.* also showed high incidence of smoker (69%) having perforation. Smoking causes immediate vasoconstriction leading to ischemia of mucosa which reduces resistance leading to perforation. Thus association between ulcer perforation and smoking seems biologically possible ^[10].

Conclusion

- The most common cause of non-traumatic upper GI perforation is peptic ulcer.
- Duodenal ulcer perforation account for 90% and gastric ulcer perforation account for 10% of non-traumatic upper GI perforation
- Most of perforation occurs in 31 - 40 years of age showing predilection for younger age group.
- Majority of the patients with non-traumatic upper GI perforation were from low socio-economic status.

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