

Peptic perforation: epidemiology, etiology and management at tertiary care hospital in Gujarat

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Abstract

Objectives: The aims and objectives of the present study are as follows: (1) to assess value of clinical features and radiological investigations in cases of perforated peptic perforation (2) to study the relationship between tobacco, alcohol consumption and perforated peptic ulcer (3) to study the different operative methods (4) to study the histopathological diagnosis of ulcer margin (5) to study the mortality and post-operative complications (6) to assess complains in follow-up and study endoscopic findings.

Methods: This was the prospective study consist of 50 cases of peptic perforation studied at general hospital during the period of 2003 to 2005.

Results: 60% of patients were in age group of 21-50 years. 40% of patients were tobacco chewer. Abdominal pain was the commonest symptom of all patients. The surgical treatment in form of simple closure with omentopexy gives excellent results.

Discussion: In this study the highest no of patients were in 5th decade of life. Male female ratio indicated male preponderance but decrease in the ratio as compare to previous study. Still plain x ray abdomen is the gold standard investigation in diagnosis. With better anaesthesia, higher antibiotics, and aggressive chest physiotherapy post-operative complications were reduced.

Conclusion: The increasing incidence in female may be due to increasing tendency for women to take on the responsibilities and occupations traditionally associated with men. Perforation closure with omentopexy gives excellent result. Post operatively anti H⁻ pylori treatment will help to prevent recurrence.

Keywords: peptic perforation, tobacco chewing, proton pump inhibitor, surgical approach

INTRODUCTION

Before mid-1950, peptic perforation occurred usually as a culminating event in the course of chronic duodenal or gastric ulcer. Now perforation is likely to be associated with smoking, tobacco chewing, alcohol consumption, NSAIDs, steroids, severe stress such as following major surgery, burns and sepsis.^[1] After introduction of newer more potent antiulcerogenic drugs like H₂ blockers and proton pump inhibitors incidence of perforation is reducing.^[2] Because of availability of better facilities, broad spectrum antibiotics, intravenous fluids, anaesthetic agents, understanding of the biological changes, better diagnostic modalities, the mortality related to perforated peptic ulcer reduces up to 0.5% in the last 3 to 4 decades.^[3] Various types of treatment modalities depend upon the condition of the patient are performed ranging from drainage under local anaesthesia, simple suturing, simple suturing with omentopexy, simple suturing with ligamentum teres repair, vagotomy plus pyloroplasty, vagotomy plus gastrojejunostomy plus suturing of perforation and recently laparoscopic suturing of perforation.^[4] The aims and objectives of the present study are as follows: (1) to assess value of clinical features and radiological investigations in cases of perforated peptic perforation (2) to study the relationship between tobacco, alcohol consumption and perforated peptic ulcer (3) to study the different operative methods (4) to study the histopathological diagnosis of ulcer margin (5) to study the mortality and post-

operative complications (6) to assess complains in follow-up and study endoscopic findings.

MATERIALS AND METHODS

This was the prospective study consist of 50 cases of peptic perforation studied at general hospital during the period of 2003 to 2005. After taking routine clinical history, all patients were undergone general examination and more emphasis on abdominal system examination.

The haematological investigations were done in the form of haemoglobin, white blood cell count with differential count, blood group, renal function test, liver function test and blood sugar. The radiological investigations include plain X-ray chest PA view, plain X-ray abdomen AP view- erect and ultrasonography of the whole abdomen.^[5] The treatment was mainly operative. After proper preoperative resuscitation, all patients were undergone different kind of surgeries according to his or her clinical history and peroperative finding in the form of site, size and number of the perforation and extent of peritonitis. Different kind of surgeries like simple closure, simple closure+omentopexy, simple closure+ligamentum teres plasty, simple closure +gastrojejunostomy with or without vagotomy, simple closure+vagotomy with or without pyloroplasty and laparoscopic closure of perforation.

The results in the form of total symptom free, recurrence or mortality were noted. All patients were called for follow-up on post-operative 7th day, 12th day, 20th day, 30th day, 60th day and 90th day. They were asked about presence of pain, appetite, bowel habit and ability to work. They were undergone upper gastrointestinal endoscopy at 90th post-operative day.

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RESULTS**Table-1 Age incidence**

Age in years	No. of patients
0-10	0
11-20	2
21-30	9
31-40	9
41-50	12
51-60	9
61-70	4
71-80	4
>80	1

60% of patients were in age group of 21-50 years. It is the most productive years of life.

Table-2 Relation with bad habits

Personal history	No of patients
Tobacco	20
Alcohol	3
Both	7
Drugs	4

In this study, 40% of patients were tobacco chewer. 16 patients had a past history of acid peptic disease.

Table-3 Symptoms of the patient

Symptom	No of patients
Abdominal pain	50
Vomiting	36
Anorexia	5
Abdominal distension	11

All patients had acute abdominal pain either in upper abdomen or generalised. Pain was burning in nature in the upper abdomen in initial 12 hours and later on became generalised. The abdominal signs like tenderness, guarding and rigidity were present in nearly all patients. Intestinal peristalsis was absent in all patients.

Table-4 Treatment

Type of Surgery	No. of patients
Simple closure	03
Simple closure with omentopexy	40
Simple closure with ligamentum teres repair	05
Drainage under local anaesthesia	02

In this study no patient was treated conservatively because of increased morbidity, development of sub phrenic abscess and peritonitis. Two patients were treated initially by putting intraabdominal drainage tube under local anaesthesia; among them one patient was died on next day and second was operated for exploratory laparotomy and closure of perforation with omentopexy 2 days after putting drain.

Table-5 Post-operative complications

Post-operative complications	No. of patients
Respiratory	7
Wound infection	5
Septicaemia	2
Faecal fistula	1
Bed sore	3
Expired	1

The post-operative complication rate was low and managed conservatively.

In follow-up, 20 patients were totally symptom free, while 15 had mild abdominal pain and 5 had persistent abdominal pain. All patients were treated conservatively. There was no recurrence of the disease.

DISCUSSION

This was the prospective study containing 50 patients having peptic perforation in duration of three consecutive years. All the patients were operated in emergency. In this study the highest no of patients were in 5th decade of life. Most of the patients were belong to middle age group, as bad habits and stress related factors were common.^[6] Male female ratio indicated male preponderance but decrease in the ratio as compare to previous study.it may due to the increasing tendency for women to take on the responsibilities and occupations traditionally associated with men. 60% of patients were labourers.^[7] The peptic perforation is most common in tobacco chewers and smokers.^[8] Abdominal pain was the commonest symptom of all patients.^[9] Signs of localised peritonitis involving right hypochondrium were commonest. Still plain x ray abdomen is the gold standard investigation in diagnosis.^[10] In this study free gas under dome of diaphragm was present in 98% of patients. The surgical treatment in form of simple closure with omentopexy gives excellent results/^[11] It was done in 80% of patients. 72% patients had smaller perforation size (<5 mm diameter) with better outcome & less post-operative complications.^[12] With better anaesthesia, higher antibiotics, and aggressive chest physiotherapy post-operative complications were reduced.^[13] They are mainly respiratory complains (14%) and wound infections (10%).^[14] All patients were provided anti H-pylori treatment post operatively.^[15] No recurrence was found up to 1 year follow up.

CONCLUSION

Peptic perforation is more common in middle age group with male predominance.^[16] The increasing incidence in female may be due to increasing tendency for women to take on the responsibilities and occupations traditionally associated with men.^[17] Tobacco consumption is still commonest etiological Factor.^[18] Perforation closure with omentopexy gives excellent result.^[19] Post operatively anti H -pylori treatment will help to prevent recurrence.^[20]

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