

Accumulative Study of the Value of Conservative Treatment in Selected Cases of Peptic Ulcer Perforation

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Abstract

Original Research Article

Background: Conservative treatment is an alternative method of surgical treatment for the management of perforated peptic ulcer diseases. **Objective:** The objective of the study is to recommend safe and effective treatment in selected cases of peptic ulcer perforation under strict supervision as an alternative to surgery. **Method:** This prospective study was conducted at Surgery Department of M. Abdur Rahim Medical College Hospital, Dinajpur, Bangladesh for a period of July 2008 to July 2009. Hundred cases were selected by special inclusion and exclusion criteria. **Results:** All patients were presented with acute upper abdominal pain, most were in their fourth decade and came to the hospital around twenty four hours of their onset of pain. Diagnosis was made on clinical grounds and confirmed by radiological and imaging examinations. Resuscitative measures were taken in all cases in the form of IV fluid, nasogastric suction, antibiotics and analgesics. The study was designed to treat all the patients conservatively and accordingly all were given conservative regimen up to 24 hours. There after they were assessed clinically. Great deterioration was found in 12 patients and 18 patients showed no improvement who were operated immediately. Conservative measures were continued for 70 patients who responded smoothly with few minor complications. The mortality was 6.33% in the cases treated operatively after failing conservative management. No mortality was found in conservatively treated group. **Conclusion:** Conservative treatment is the safe and secure way as an alternative to surgery for the peptic ulcer perforation. It involves preoperative risk stratification, laparoscopic care and a greater role for non-operative treatment. If we consider surgical complications and patient compliance, non-operative treatment is a beneficial approach for treating perforated patients with peptic ulcer and also under strict supervision it will be effective and workable as well.

Keywords: Peptic, Laparoscopically, Perforation, Abdominal.

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INTRODUCTION

Peptic ulcer disease is very common in Bangladesh. Among the complications of peptic ulcer disease, perforation is one of the commonest acute abdominal emergencies encountered in surgical practice, affecting mainly the middle age group. Mortality & morbidity of peptic ulcer disease is accounted by haemorrhage, perforation, obstruction & sometimes by surgical procedures which are often necessary for their treatment. Of these perforation is potentially the gravest. With the introduction of H₂ receptor antagonist there is a significant reduction of elective surgical cases of peptic ulcer disease & their complications [1]. However the incidence of perforation has not changed appreciably. Surgery is the conventional form of treatment for peptic ulcer disease

perforation that causes significant postoperative mortality & morbidity as well as prolongs the hospital stay. In the era of modern surgery people don't want to go through the open surgical procedure and there is an inclination towards minimal invasive or non-invasive surgery. We usually consider surgical repair and thorough peritoneal toileting as a sole option of treatment for peptic ulcer perforation without categorizing the patients according to severity of the disease, age of the patient or duration of illness and general condition of the patient. Previously result of conservative treatment was not promising perhaps because of wrong selection of patient, non-categorizing the patient and lack of newer generation of antibiotics. In developed countries the frequency of peptic ulcer disease complication is very rare and their surgical complications reduced to minimum because of their

door to door health facilities and technical development in surgical field. They commonly repair and do toileting laparoscopically. But in developing countries like Bangladesh where health facilities are not so developed, open surgical repair and toileting is the choice of treatment and consequently still there are significant postoperative mortality and morbidity. Nearly 50 years ago Taylor established an argument for non-surgical approach to perforated peptic ulcer disease [2], which includes active nasogastric suction, resuscitation, antibiotics and antisecretory therapy with a good result in selected cases. If we can stratified our patients according to the severity of disease, age of the patients, associated co-morbidity, duration of illness and general condition of the patients, perhaps conservative treatment may be an alternative option of avoiding the grave consequences of surgery in selected cases. There is a study of 285 cases of conservative regimen for management of peptic ulcer disease perforation, carried out in different district hospitals of Bangladesh from 1989 to 1996, showed no mortality with minimum morbidity [3]. The aim of this study is to evaluate the legitimacy of conservative management as an alternative option for conventional surgical treatment of peptic ulcer disease perforation in selected cases.

OBJECTIVE

The objective of the study is to recommend safe and effective treatment in selected cases of peptic ulcer perforation under strict supervision as an alternative to surgery.

MATERIALS AND METHODS

Type of Study: A prospective study.

Place of Study - M. Abdur Rahim Medical College Hospital, Dinajpur.

Period of Study - July 2008 to July 2009

Sample size - 100

Data Collection Method: Data collected from the patient in a prescribed protocol.

Data Analysis: All data were analyzed by standard statistical tools.

RESULTS

Table-1 is showing that the duration of acute illness was considered to be the period elapsed between the onset of severe abdominal pain and time of admission into the hospital. No case was able to be admitted before 6 hours of acute illness. Most of the patients were admitted around the time of 24 hours.

Table-1: Duration of acute illness (n=100)

Duration in hours	Number of patients
<6 hours	0
7-12 hours	2
13-18 hours	3
19-24 hours	41
25-30 hours	27
31-36 hours	11
37-42 hours	9
43-48 hours	7

Now here is the cases presented with sudden severe agonizing pain in the upper abdomen. Most of the patient (85%) had generalized muscle guard and rigidity complete obliteration of liver dullness were noted in 22% patient and partial obliteration of liver dullness were noted in most (78%) of the patient indicating less free gas under right dome of diaphragm. Significant free intraperitoneal fluid was found in 40%

of this series by ultrasonography. Most of the patients had sluggish (50%) or absent (35%) bowel sound. Regarding hydration status most patient (60%) had mild dehydration, 36% patient had moderate dehydration and severe dehydration was found in only 4% cases. Eighty patients showed thoracic respiration though 75% patient with rapid and shallow respiration (See Table-2).

Table-2: Presentation and physical findings

Symptom/sign		Number	Percentage
Sudden severe abdominal pain		100	100
Abdominal pain with haematemesis/melaena		2	2
Tachycardia		100	100
Abdominal distension	Nil	10	10
	Mild	65	65
	Moderate	25	25
	Severe	Excluded	
Abdominal tenderness and rigidity	Localized	15	15
	Generalized	85	85
Obliteration of liver dullness	Complete	22	22
	Partial	78	78
Free intraperitoneal fluid (significant)	Present	40	40
Bowel sound	Sluggish	50	50
	Absent	35	35
	Present	15	15
Dehydration	Mild	60	60
	Moderate	36	36
	Severe	4	4
Blood pressure	Normal	88	88
	HTN	5	5
	Hypotension	7	7
Respiration	Thoracic	85	85
	Rapid & shallow	75	75

In Table-3, the erect abdominal X-Ray showed small free gas under only right hemi-diaphragm in most

(93%) cases, here was gas under both domes of diaphragm in 7% cases only.

Table-3: Imaging finding (n=100)

Imaging	Findings	Number of cases
Erect abdominal X-ray	Small free gas under only the Rt dome of the Diaphragm	93
	Small free gas under both domes of the Diaphragm	7

Table-4 is showing that after 24 hours of conservative management, 70 patients showed

improvement, 18 patients were equivocal and 12 patients deteriorated.

Table-4: Results of conservative treatment after 24 hours (n=100)

Result	Number of patients	Inference/Decision
Improve	70	Conservative treatment were continued
No change	18	Converted to surgery
Deteriorated	12	Converted to surgery

Table-5 shows that, out of seventy patients who were treated conservatively 8 patients developed

intra peritoneal abscesses, 6 patients developed pelvic abscesses and 2 developed subphrenic abscesses.

Table-5: Treatment of intra peritoneal abscesses (n=8)

Treatment modality	Number of patients	Inference
Per rectal drainage	06	Remission
Image guided per cutaneous drainage	02	Remission

DISCUSSION

It is a matter of fact whether perforated peptic ulcers should be treated surgically or non surgically. Most of the surgeons still prefer surgical option [4, 5] although non-operative treatment has been proved to be both safe and effective in selected patients. It has been

estimated that half of the perforation seal by themselves [6] and a postoperative trial comparing conservative with surgical treatment in perforated peptic ulcer disease has shown no advantage of surgical treatment with morbidity and mortality [7]. In cases when the patient is haemodynamically stable and mild peritoneal symptoms, conservative treatment can be tried under

strict clinical surveillance of a senior surgeon [8]. It has been established that with nasogastric decompression, substitution of fluids and electrolytes, a proton pump inhibitor treatment, the patients should improve within 12 hours [8, 9]. In most of these cases the leakage, proven by air under the diaphragm has already been sealed and surgery remains unnecessary. If abdominal tenderness increases, the patient becomes haemodynamically unstable or there proof of leakage by contrast X-ray, laparotomy is indicated to irrigate the abdomen and close the leakage. The concept of non-operative treatment is very old, in 1935 Wangensetee advised against operation in seriously ill patients whose admission to hospital had been delayed. For such cases he recommended continuous nasogastric suction to promote or support natural closure of the perforation [2]. From time to time at emergency operation, it has been observed that perforation has been sealed by fibrinous adhesion to the liver or omentum, from there a loose term "leaking perforation" has been kept in literature to include a group of cases in which leakage has in fact sealed. Sometimes in routine operation, upper abdominal adhesions have given the evidence that a past perforation was without recognition [10]. Thus it has been recognized that a perforation may close spontaneously. The intensity of the pathological process therefore ranges widely; at one end the scale is the small duodenal perforation in a healthy person with an empty stomach while at the other end is the large gastric perforation in an elderly with full stomach and poor general condition. Nevertheless, in most cases time factor is the most important consideration. Though gastric aspiration is useful, objective is different in early and late cases. In an early case aspiration is employed to promote prompt sealing of the perforation, but in late cases the idea is to prevent re-infection of the peritoneal cavity whether the perforation seals or not. The question of peritoneal soiling may bring a debate but it mien nasogastric suction, antibiotic therapy and suppression of gastric acid secretion by H₂ blockers can prevent this. Study showed that high risk patients with peptic ulcer perforation can be managed effectively by percutaneous abdominal drainage supported by conservative treatment [11]. This includes preoperative stratification of the risk factors, laparoscopic treatment and a greater role of non operative treatment.

CONCLUSION

This study has suggested here that conservative treatment is the safe and secure way as an alternative to surgery for the peptic ulcer perforation. It

involves preoperative risk stratification, laparoscopic care and a greater role for non-operative treatment. If we consider surgical complications and patient compliance, non-operative treatment is a beneficial approach for treating perforated patients with peptic ulcer in selected cases and also under strict supervision it will be effective and workable as well.

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