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Original Research Article

A study on clinical profile of patients with gastric ulcer perforation

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Abstract: The incidence of perforation is approximately 7-10 cases per 100000 population / year. Perforation occurs in 10-15% of established cases of peptic ulcer and in about 2% of patients perforation is the first manifestation. A detailed history was taken when the condition of the patient is stable. In critically ill patients, the patients were resuscitated and history was taken after the patient was stabilized. The details of 30 patients were arranged in the master chart for convenience of presentation. Perforation is more common in male compared to female, the ratio being 14:1 Out of 30 cases 28 were male. Most of the patients were from rural area belonging to poor socioeconomic status and were unskilled workers.

Keywords: Gastric ulcer, Perforation, Complications

INTRODUCTION:

"Perforation" is the natural termination of an ulcer, which continues to penetrate deeper tissues. Perforation of duodenal ulcer greatly out number gastric ulcer [1].

The incidence of perforation is approximately 7-10 cases per 100000 population / year. Perforation occurs in 10-15% of established cases of peptic ulcer and in about 2% of patients perforation is the first manifestation. Anterior ulcer tend to perforate because of the absence of protective viscera and major blood vessels, in contrast to the bleeding ulcers that are usually situated posteriorly in <10% of patients with high death rate.

Boyd is of the opinion that perforation is more common in ulcers of short duration from few days too few weeks in which there is rapid penetration of deep layers. Ulcers of long duration with abundant scar tissue are less likely to perforate or penetrate. Ulcers with continuous symptoms are more harmful than ulcers with history of remissions.

In a study of 201 cases of perforation by John Gelmon in 1953, 119 (58%) were found to be acute and 82 (42%) were chronic ulcers [2]. As judged by operation (Illingworth, 1975), in about 90% of case the perforation has resulted from sloughing off the floor. In rest, the most careful questioning fails to elicit a previous history of peptic ulcer.

It is also fallacious to conclude whether the ulcer is chronic or acute from the naked eye appearance of the perforation at the time of operation. Lawdon (1952) in a survey of series treated by primary gastrectomy and subjected to histopathological examination concludes that perforation occurs more often in chronic ulcers. From those of 41 cases, 22 were undoubtedly chronic, 16 were grouped as subacute and remaining 3 as relatively acute [3].

METHODOLOGY:

The diagnosis was made on clinical findings supported by investigations like plain x-ray abdomen erect posture. In cases managed surgically, confirmation was made on the operation table only and intra-operative edge biopsy taken to look for malignancy and H.Pylori.

A detailed history was taken when the condition of the patient is stable. In critically ill patients, the patients were resuscitated and history was taken after the patient was stabilized. The details of 30 patients were arranged in the master chart for convenience of presentation.

The hospital records were also reviewed to obtain appropriate epidemiological information regarding age, sex, occupation, and clinical presentation, duration of symptoms, past history of chronic gastric ulcer, investigations and mode of treatment.

For selecting a case for definitive surgery most times general condition of the patient taken up for surgery and also operating findings were taken into consideration. In those cases, where both these conditions were satisfactory, definitive surgery was performed, giving weightage to the choice of the surgeon.

In all other cases of perforation, surgery was done to close the perforation expect where condition of the patient was very poor. All the patients with suspected peptic ulcer perforation were examined thoroughly and base line findings were recorded, repeated examination of the patient was done resuscitation and till the diagnosis is confirmed.

Tachycardia associated with fever, tenderness in the epigastrium and abdominal rigidity pointed towards the diagnosis of peritonitis. I examined all the patents as per the proforma. In the all patients, with peptic ulcer perforation complete physical examination to rule out associated disease was done.

RESULTS:

Table1: Sex Incidence

SL NO	SEX	NO OF CASES	PERCENTAGE
1	MALE	28	93.33
2	FEMALE	2	6.67

Perforation is more common in male compared to female, the ratio being 14:1 Out of 30 cases 28 were male

Table 2: Occupation

H/O OF SMOKING & ALCOHOL	NO OF CASES	PERCENTAGE
PRESENT	26	86.67
ABSENT	04	13.33

Perforation is more common in unskilled workers.

Table 3: Relation with Smoking and Alcohol

SL NO	OCCUPATION	NO OF CASES
1	UNSKILLED WORKERS	18
2	SEMISKILLED WORKERS	8
3	SKILLED WORKERS	2
4	DEPENDENT	2

Among 30 cases only 04 patients had no history of alcoholism and smoking. The incidence of perforation is more in cases of smokers and alcoholics.

Table 4: Relation with H/O Gastric Ulcer

H/O OF ULCER	NO OF CASES	PERCENTAGE
PRESENT	13	43.33
ABSENT	17	56.67

Table 5: Duration of symptoms Before Presentation

DURATION(in hrs)	NO OF PATIENTS	PERCETAGE
0.6hrs	0	0
7.12hrs	03	10%
13-24hrs	09	30%
>24hrs	18	60%

Table 6: Condition of Patients at the Time of Admission

DURATION (in hrs)	NO OF CASES	GENERAL CONDITION OF THE PATIENT AT THE TIME OF ADMISSION	
		GOOD/AVERAGE	SHOCK
6-12hrs	03	03	-
13-24 hrs	09	06	03
>24hrs	18	12	06

The poor the condition of patient at the time of admission, worse is the prognosis.

Table 7: Outcome

DURATION (in hrs)	NO OF CASES	Recovery		
		Good	Complications	Death
0-6	-	-	-	-
7-12	03	03	-	-
13-24	09	07	02	-
>24	18	12	07	02

Late the presentation, more the complication is.

DISCUSSION:

Gastric ulcer perforation is one of the commonest surgical emergencies. In our studies it constituted 9% of total abdominal emergency admission in Victoria Hospital, Bangalore.

Although incidence of surgery for peptic ulcer diseases has reduced drastically with advent of omeprazole and H_2 receptor antagonist, but surgery for perforation has not changed.

Age incidence:

Peptic ulceration is common in the age group of 30-50 years in our study, but age is no bar for perforation to occur. It has also been reported in 4 years old infant [4].

In a study it is reported that age of a patient, rather than the type of surgery with influences the mortality in a perforated peptic ulcer and he reported the mortality rate of 0.6% in <50 years age group, 15% in 50-60 years age group and 45.2% in >60 years age group (1998). In the present series (2005), the morality in 50-60 years group is 11, 12%in>60yeas group [5].

Sex incidence:

In our studied series 93.33% were males and 6.67% were females, and the male-female ratio being 14:1. Perforation is more common in males than females; because males were subjected to more stress and strain of life and female sex hormone offer some security against perforation as claimed by Debakay [6].

Occupational incidence:

It is believed that perforation of peptic ulcer occurs in those people who are engaged in heavy manual labour. Wair (1966) in relatively 1390 cases fin Scotland, found highest incidence in fishermen, farm labourers and heavy manual worker. Less than half the number was professional sedentary occupation.

In our studies, it is noticed that perforations occurred in the patients belonging to poor socioeconomic status and more so in the rural population, who are manual workers (unskilled workers). >90% belonged to the poor working class.

The incidence of perforation in urban class was less, because of effective medical treatment and early surgery they seek whenever they suffer from peptic ulcer disease.

Habits:

Svanes.C and Fevang BT *et al.;* [7] Showed that chronic smoking increased the risk of ulcer perforation to 10-fold in the age group of 15-74 years, and there was highly significant dose-response relationship. The results were similar in men and women and for gastric and duodenal ulcer perforation. They concluded that smoking is a casual factor for ulcer perforation and accounts for a major part of ulcer perforations in the population aged > 75 years. In our study 26 patients out of 30 patients were smokers and alcoholic.

Chronicity of disease and perforation:

In the present study, history of chronic peptic ulcer was present in 12 cases indicating that the perforation was common in chronic peptic ulcer cases.

CONCLUSION:

- The perforation was common between age group of 30-50 years.
- Gastric perforation was more common in males; it was 93.33% in males and 6.67% in females.

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