



AETIOLOGICAL FACTORS OF PEPTIC PERFORATION : A STUDY IN RURAL MEDICAL COLLEGE

General Surgery

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ABSTRACT

Background: Peptic ulcer is a common disease. It gives rise to so many complications. But with advent of current peptic ulcer treatment they are not common. Peptic perforation is one of the dreaded complication. In this study we attempt to find out which etiological factors are commonly associated with perforation.

Material and method: we studied 50 patients of peptic perforation in Bardhaman Medical College of West Bengal between Feb 2017 To Jan 2018. Detailed clinical history was taken and examination was done to find the etiological factor associated. Rapid urease test done per operatively to find presence of H Pylori.

Results and conclusion : peptic perforation was found to be more common in middle age group, among poor socioeconomic group of people with poor nutrition. Males are affected (>90%). More than 65 Percent patients tested positive for H pylori. Smoking alcohol and NSAID has definite role in peptic perforation.

KEYWORDS

INTRODUCTION

Each year peptic ulcer disease (PUD) affects 4 million people around the world [3]. Complications are encountered in 10%-20% of these patients and 2%-14% of the ulcers will perforate [1,,3]. Perforated peptic ulcer (PPU) is a quite rare, but it is a life threatening complication and the mortality rate is around 30 percent [2]

There are several factors for perforated peptic ulcer disease (PPUD), those are

- Elderly age Group
- Low BMI

Poor socioeconomic status,

- H Pylori infection,
- Use of NSAID drugs,
- Addiction like excessive smoking, alcohol etc.

In our study we wanted to see which factors are more frequently associated with perforation.

MATERIAL AND METHOD STUDY DESIGN

This study was Prospective, Uncontrolled And Non-randomized.

1. STUDY AREA

This study was conducted in the Out Patient Department and Emergency ward and all surgical units of Department of Surgery Burdwan Medical College and Hospital between Feb 2017 to jan 2018

2. STUDY POPULATION

The study included any patient presenting with features of perforative peritonitis in OPD or in emergency.

3. STUDY PERIOD

The study was conducted between Approx. 1yr. (Feb 2017 to Jan 2018)

4. SAMPLE SIZE

A total number 50 patient were studied during the study period admitted through OPD or emergency.

5. SAMPLE DESIGN INCLUSION CRITERIA

Patients presenting with features of perforative peritonitis having peptic perforation

EXCLUSION CRITERIA

1. Patients having sealed peptic perforation (no apparent perforation seen) detected during operation.
2. Traumatic peptic perforation.

3. Refusal by the patient to participate in the study.
4. Perforative peritonitis other than peptic perforation.

Study tools: detailed clinical history to find association with different etiological factors like age, sex, addiction, socioeconomic condition etc. H pylori status was checked by rapid urease test.

STUDY TECHNIQUE: Diagnosis of peptic perforation was made clinically and then it was confirmed radiologically. Resuscitation was done and operation was done at the earliest. Rapid urease test was done for detection of h pylori.

STATISTICAL ANALYSIS

Statistical Analysis was performed with help of SPSS software of IBM. Data was presented as percentages for qualitative variable. P-value was calculated by Chi-square test/ Fisher's exact test. A p-value of <0.05 was considered statistically significant.

RESULTS AND ANALYSIS :

Fifty cases of peptic perforations were studied. And following observations were made.

AGE: it was prevalent almost all age group but incidence seemed to be highest in young and middle age group between 25 to 50 yrs."

AGE GROUP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<25	3	6.0	6.0	6.0
	26-50	41	82.0	82.0	88.0
	>50	6	12.0	12.0	100.0
	Total	50	100.0	100.0	

GENDER: Males are more affected than females. 94 % of peptic perforations were males.

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	47	94.0	94.0	94.0
	FEMALE	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

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	Total	50	100.0	100.0	

SOCIOECONOMIC STATUS: Incidence is much higher in poors.

SOCIO-ECONOMIC STATUS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	POOR	41	82.0	82.0	82.0
	AVERAGE	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Poor nutritional status was also associated with higher incidence of perforation. 68 percent patients were found to be underweight.

BMI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NORMAL	13	26.0	26.0	26.0
	UNDER WEIGHT	34	68.0	68.0	94.0
	OVER WEIGHT	2	4.0	4.0	98.0
	OBESE	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

H PYLORI: Though 90% cases of peptic ulcers are associated with H pylori, only 68% was found in peptic perforation.

H.PYLORI STATUS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO H PYLORI	16	32.0	32.0	32.0
	H PYLORI	34	68.0	68.0	100.0
	Total	50	100.0	100.0	

NSAID : About 54 Percent Patient Had History of NSAID intake

NSAID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES NSAID	27	54.0	54.0	54.0
	NO NSAID	23	46.0	46.0	100.0
	Total	50	100.0	100.0	

ADDICTION: Smoking And Alcohol Intake definitely has a role in perforation

ADDICTION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ONLY SMOKING	7	14.0	14.0	14.0
	ONLY ALCOHOL	5	10.0	10.0	24.0
	SMOKING + ALCOHOL	28	56.0	56.0	80.0
	OTHERS	3	6.0	6.0	86.0
	NO ADDICTION	7	14.0	14.0	100.0
	Total	50	100.0	100.0	

Those who are addicted to both smoking and alcohol had more perforations.

DISCUSSION

So from study of 50 cases in a year we arrived at the following conclusions.

- Mean age of peptic perforation is 39.08+9.36 years.
- Most common age group is 26-50years (82%).
- 91.2% perforation patients were male. So, it's male preponderance.
- Peptic perforation is most common in low socio-economic status (82%) of which H.pylori positive cases are (80.5%).
- 68% of the patients were under-weight.
- Prevalence of H Pylori positive perforated peptic ulcer was 68%.
- 54% of peptic perforated patients took NSAIDS.
- 70% were smokers.
- 56% were addicted to both smoking and alcohol
- peptic perforation also depends on Socio-economic status (97.1%) as well as BMI (82.4%)

In developing countries patients are generally young male smokers while in developed countries elderly patients with multiple comorbidities are common[3]. NSAID use was frequently found in perforation patients. About a quarter of chronic NSAID users are found to develop PUD and 2%-4% will bleed or perforate[3]. H pylori infection can be found in over 90 percent cases of duodenal ulcer [4], but 68 percent of cases peptic perforation had H pylori infection.

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