



TO STUDY THE ASSOCIATION OF H. PYLORI WITH PEPTIC ULCER PERFORATION

Dr. Alok Maurya

PG-JR- 3rd Year, Department of General Surgery, Teerthanker Mahaveer Medical College and Research Centre, Moradabad.

Dr. Roop Kishan Kaul*

Professor, Department of General Surgery, Teerthanker Mahaveer Medical College and Research Centre, Moradabad.*Corresponding Author

ABSTRACT

INTRODUCTION: Peptic ulcer disease is quite common in Indian scenario. Other than haemorrhage, perforation is yet another complication to be addressed. Various risk factors predispose the patient to *Helicobacter pylori* (*H. pylori*) associated the peptic ulcer perforation. Not many studies have been done on this subject, especially in India. Many patients try to adapt with new modifications of lifestyle that has yet increased the chances of disease. **AIMS AND OBJECTIVE:** Aim of our study was to ascertain various risk factors and find the association of *H. Pylori* with peptic ulcer perforation with an object to prevent the patient from becoming a carrier of the infection and recurrence of problem. **MATERIAL AND METHODS:** Ours is a descriptive cross sectional study on 50 patients who were suffering from peptic ulcer perforation caused by *H. pylori*, done in Department of General Surgery, Teerthanker Mahaveer Medical College and Research Centre. A set of questionnaire was created and after request their answers were recorded, kept confidential, and data was analysed. **RESULTS:** 28-38 aged people were affected most followed by 50-60 yrs., Males were predisposed, more in, low socioeconomic, smokers, alcohol addicts. Duodenal perforations are more common. **CONCLUSION:** Patients who come with perforation should be examined for infection and all related risk factors should be considered in the Indian setting. This will provide a more thorough understanding of illness epidemiology and will also contribute to patients outcome and improvement. Patients should be informed about risk factors in order to enhance their outcome.

KEYWORDS : H. PYLORI, PEPTIC ULCER PERFORATION, ACID PEPTIC DISEASE

INTRODUCTION:

Acid Peptic Disease (APD) is a term which is used to define erosions in the region of mucosal layer of gastro-duodenal region which can occur anywhere from gastro-oesophageal (GE) junction up to duodenum. Gastric ulcers are localised lesions in the gastric mucosa that can spread into the submucosa or deeper layers of the stomach. Their occurrence is due to an imbalance between gastric acid and mucosal defences. Around 75 percent of stomach ulcer are estimated to be caused by *Helicobacter pylori* (*H. Pylori*).¹⁻⁶

To put it in terms of numbers, peptic ulcer disease (PUD) is widespread, according to a research, 5-10% lifetime rate in the population and 0.2% yearly incidence rate in the general population.⁷ Perforation has been reported at rates ranging from 0.004 to 0.014 percent per year, with an average 30- days mortality rate of 23.5 percent based on sample size weighting.⁸ Because of its rarity, perforation deserves special attention.⁹ Perforation of peptic ulcer represents a major indication for an operative intervention and is the most common presentation in emergency department of a PUD patient. It is a life-threatening complication as peritoneal irritation results in septic shock due to bacterial contamination of the peritoneal cavity.¹⁰

The most appropriate management in cases of GI haemorrhage is endoscopic management but only done when patient is stabilized.¹¹

Appropriate treatment is Graham's Omental Patch Repair. The first repair of peptic ulcer perforation was done by Krieger in late 20th century which was later modified by Graham by adding a layer of omentum over the primary repair.^{12,13}

H. pylori eradication regimen consists of four drugs gave best elimination rates in infection with *H. Pylori*.¹⁴

- LANSOPROZOLE
- METROGYL
- CLARITHROMYCIN
- TETRACYCLIN

OBJECTIVES:

Our study will ascertain the risk factors associated with peptic ulcer perforation caused by *H. pylori* thereby finding ways to provide better treatment and reduce the chances of the affected becoming a carrier of the disease.

The aim of the study is to study the *H. pylori* infection in peptic ulcer perforations.

We believe our attempt, will help these patients to gain knowledge about their disease, that will help them not only to face the existing

situation but, also build their losing hope.

MATERIAL AND METHODS:

A descriptive cross sectional study was conducted in the Department of General Surgery Teerthanker Mahaveer Medical College and Research Centre, Moradabad (U.P.) on 50 patients who were suffering from peptic ulcer perforation caused by *H. pylori*. After consent being taken, for inclusion in the Study, a detailed questionnaire was to created, patients response were recorded maintaining full privacy.

Following was the list:

- Age
- Sex
- Socio-Economic status
- Smoking
- Alcohol Intake
- Distribution of Perforation

INCLUSION CRITERIA:

- Patients above 18 years of age.
- Peptic ulcer perforation (both gastric and duodenal) with or without peritonitis admitted in Teerthanker Mahaveer Medical College & Research Centre.

EXCLUSION CRITERIA:

- All patients with traumatic Gastro-Duodenal perforation.
- Patient who had received anti-*H. pylori* regimen (pre-operatively or postoperatively).
- Patient having some other associated pathology like tuberculosis, pancreatitis, malignancy.
- Patients associated with prolonged or current NSAIDs & steroids use.

OBSERVATION AND RESULTS :

We, in our study, tabulated results after putting patients on a set of questions and recorded the reply.

1. Age:

28-38 age group was most affected followed by 50-60 age group.

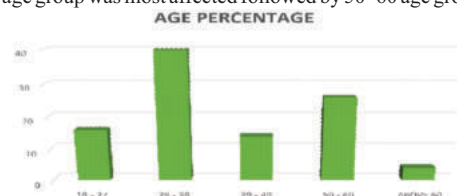


FIGURE:01

2. Sex: Male: Female=2.5:1

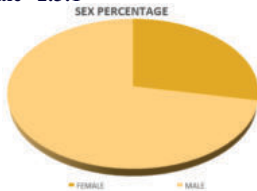


FIGURE:02

Above figure show the sex distribution where the highest percentage been observed in male category.

3. SMOKING DISTRIBUTION:-

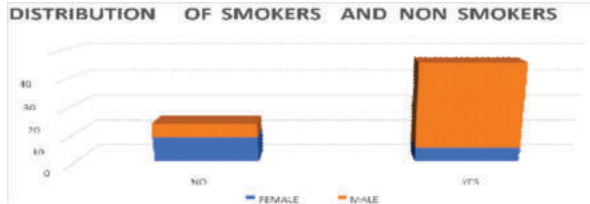


FIGURE:03

The above figure 03 show the smoking distribution where the smoking habit been highly observed in male category where as a small frequency of smoking habit been also observed in female.

**4. SOCIO-ECONOMIC-
TABLE:01**

SOCIO ECONOMIC STATUS		
	Frequency	Percent
HAVING BPL CARD	27	54.0
NO BPL CARD	23	46.0
Total	50	100.0

The above table 01 show the socio-economic status where the highest percentage been observed in above BPL category.

**5. ALCOHOL DISTRIBUTION:-
TABLE:02**

		ALCOHOL		Total
		NO	YES	
SEX	FEMALE	12	2	14
	MALE	10	26	36
		22	28	50

The above table 02 show that mostly the cases of alcohol intakes are from male category.

**6. DISTRIBUTION OF PERFORATION:-
TABLE:03**

	FREQUENCY	PERCENTAGE
GASTRIC PERFORATION	12	24
DUODENAL PERFORATION	38	76
TOTAL	50	100

The above table 03 and show the gastric and duodenal distribution where the presence of duodenal followed by gastric ulcers as 38, 12 respectively been observed.

DISCUSSION :

Peptic ulcer perforation is a serious surgical emergency. The purpose of this study was to ascertain the prevalence of H. pylori infection in patients with gastroduodenal perforation at TMMC&RC in order to give medication to the patient that would prevent him/her from becoming a carrier of the infection and recurrence of the problem. 28-38 years aged people were affected more followed by 50-60 years. Ugochukwu et al., Dogra et al., showed male predominance. 15 Studies conducted by Aman et al., showed that most of the patients came from low socioeconomic class.^{16,17} When the educational status was taken into account the highest percentage was observed to have achieved by primary education followed by illiterate category.¹⁸⁻²¹ Kato et al, analysis indicated smoking had a greater incidence of both gastric and duodenal ulcers when compared to nonsmokers.²² In addition to this, alcohol consumption is also a risk factor for the disease. With respect to the distribution of perforation the duodenal perforation is more than the gastric perforation. Almost every next histopathological

examination showed presence of H.pylori on Giemsa and Warthin-stary stain.

CONCLUSION

Patients who come with perforation should be examined for infection and all related risk factors should be considered in the Indian setting. This will provide a more thorough understanding of illness epidemiology and will also contribute to patient outcome improvement. Patients should be informed about risk factors in order to enhance their outcome.

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