

A Clinical Study on Peptic Ulcer in a Tertiary Care Hospital

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ABSTRACT

Background: Peptic ulcer disease (PUD) is a common condition that both primary care providers and Gastro enterologists encounter. Peptic ulcers are acid induced lesions found in the stomach and duodenum characterized by denuded mucosa with the defect extending into the sub mucosa or muscularis propria. In United Kingdom the prevalence is 10% in 2000, and approximate incidence is about 5,00,000 new cases per a year. In South Asia the prevalence is 156.62 per 100,000 Population in 2019.

Aim of the Study: To know the prevalence, clinical features and complications of peptic ulcer in a rural medical college in south India.

Materials and Methods: We have conducted this study in government medical college, in the department of General Surgery, for 8 months from February 2021 to November 2021. We have included 230 total number of patients in this study out of these 230, males were 145 and females were 85.

Results: We have included total number of 230 patients in this study. Out of these 230, Male patients were 145 and Female patients were 85. The common age group involved is between 20 years and 70 years. The commonest age is 5th and 6th decade. Males are more commonly affected than females.

Conclusion: Peptic ulcer disease is very common disorder in surgical practice. Males are commonly affected than females, it is common in 5th and 6th decade. The common predisposing factors are smoking, alcoholism and dietary habits. Early diagnosis and treatment play major role in preventing the complications.


Keywords: Duodenal Ulcer, Gastric Ulcer, Bleeding, Pain abdomen, H-pylori.

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INTRODUCTION

Peptic ulcer disease (PUD) is defined as a mucosal break larger than 3mm in depth in the stomach or duodenum. The prevalence is 6% - 12% in the United States. In India lifetime prevalence was 11.22%. The prevalence of peptic ulcer increases with age with maximum prevalence of 28.8% in the 5th decade of life.¹

The duodenal to gastric ulcer ratios 17.1:1. Duodenal and gastric ulcer were common in men. The major causes of peptic ulcer disease are Helicobacter pylori infection and NSAID usage. Other common causes are stress, burns, surgery and increased acid secretion as in Zollinger Ellison syndrome. The predisposing factors are smoking, alcohol, steroids.²

The ulcers are formed when acid production exceeds the rate of mucosal protection. The bicarbonates protect the mucosa; will be suppressed by Aspirin and NSAIDs. The micro-organism H. Pylori, increases acid production and decrease Mucosal thickness.³ The common clinical features are pain abdomen which is epigastric and burning in type and related to food intake,

nausea, vomiting, dyspepsia, haematemesis. The common complications are gastrointestinal bleeding. Perforation and gastric outlet obstruction. The major investigations in peptic ulcer disease are testing for H. pylori, upper GI endoscopy, barium meal series are still used in some centres.⁴ There are 2 types of ulcers 1. Gastric Ulcer 2. Duodenal Ulcer.

Peptic ulcer is common among adults in modern society. The physical morbidity and economic incapacity associated with this disease justify continued interest in its epidemiology. Studies from the West reveal that 5-10% of the adult population can expect to develop a peptic ulcer during their lifetime. Most previous epidemiological data have dealt with autopsy, surgery, clinically diagnosed cases, and/or barium studies.⁴

From clinical experience and retrospective hospital-based surveys, it has been suspected that peptic ulcer is widely prevalent in India, more common among the population of South India than North India and the clinical behaviour of peptic ulcer in India is different from that in the West.

MATERIAL AND METHODS

We have conducted this study in the department of General Surgery, in government medical college, Suryapet. We have included total 230 number of patients in this study. We have obtained consent from all the patients by giving consent forms in their local language. After collecting detailed history, we have examined all the patients in detail and advised investigations like complete blood picture, random blood sugar, blood urea, serum creatinine, blood grouping and RH typing (for cases of GI Bleeding) serum electrolytes, stool for malena, ultrasound abdomen, barium swallow examination, upper GI endoscope and test for H. Pylori. After collection of data, it is compiled in systemic manner and computerized by using Ms office.

RESULTS AND DISCUSSION

We have examined total number of 250 patients out of these 280 patients' males were 145 and females were 85 in number. The common age group involved is between 20 and 70 years. The comments age is 5th and 6th decade, and males are more commonly affected than females.⁵ In our study the maximum incidence is in 5th and 6th decade. In males it is 25.51% and 26.89%; in females it is 14.48% and 29.4% respectively. The study conducted by Araki S, Goto Y et al shows that the 29% of males in 5th decade and 31.2% in 6th decade are affected.⁶ In our study gastric ulcers are noticed 60.2% in males and 54.11% in females. Duodenal ulcers are in 39.8% of males and 45% of females. According to study conducted by Malhotra SL et al shows almost similar results.⁷

The main causes of peptic ulcer disease in our study are helicobacter pylori infection is 43.4% in males and 36.37% in female patients; NSAIDS are causing in 39.8% of male patients and 41.3% of female patients. The study conducted by Ivy AC et al shows that H. pylori infection was noticed in 48.2% of males and in 32.3% of females; NSAIDS are causing in 44.3% of males and in 47.2% of female patients.⁸ The common clinical features in our study are pain abdomen in 93.1% of males and 92.5% of females; Nausea and vomiting's were observed in 63.4% of males and 80.2% of females; dyspepsia was noticed in 60.1% of males and 71.7% in females. During endoscopy noticed some cases of bleeding duodenal ulcers.

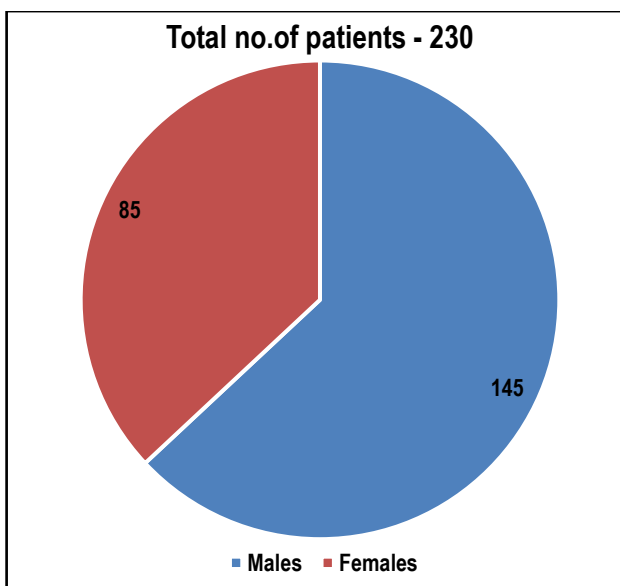


Table 1: Age Wise Distribution

Age In Yrs	No. of Patients (M) - 195	No. of Patients (F) - 85
20 – 29 yrs	19 (13.10%)	8 (9.42%)
30 – 39 yrs	23 (15.86%)	15 (17.6%)
40 – 49 yrs	28 (19.31%)	16 (18.8%)
50 – 59 yrs	37 (25.51%)	21 (14.48%)
60 – 69 yrs	39 (26.89%)	25 (29.4%)

Table 2: Types of Ulcers

Types of Ulcers	No. of Patients (M) -145	No. of Patients (F) - 85
Gastric Ulcer	87 (60.2%)	46 (54.11%)
Duodenal Ulcer	58 (39.8%)	39 (45.99%)

Table 3: Different Causes of Ulcers

Different Causes	No. of Patients (M) -145	No. of Patients (F) - 85
H. Pylori Infection	63 (43.4%)	31 (36.37%)
NSAIDS	58 (39.8%)	35 (44.13%)
Stress	15 (10.34%)	13 (15.96%)
Others	9 (6.20%)	6 (7.5%)

Table 4: Different Clinical Features

Different Causes	No. of Patients (M) -145	No. of Patients (F) - 85
Pain Abdomen	36 (93.1%)	79 (92.5%)
Nausea & Vomiting	92 (63.4%)	68 (80.2%)
Dyspepsia	87 (60.1%)	61 (71.7%)
Others	14 (9.65%)	8 (9.4%)

Peptic ulcer disease is defined as, a mucosal break, larger than 3mm in depth in the stomach or duodenum. Worldwide the prevalence is 6% - 12%. In India lifetime prevalence is 11.22%. The Incidence of PUD is more common in males than females. The incidence of peptic ulcer disease slowly increases with age and reaches maximum in 5th and 6th decade.⁹ Peptic ulcers are commonly divided into 2 types 1. Gastric Ulcer 2. Duodenal Ulcer. Duodenal and gastric ulcers share many common features in terms of pathogenesis, diagnosis and treatment. Most common causes are helicobacter pylori infection and NSAIDS. The common predisposing factors are smoking, alcohol, stress, steroids and certain food habits.

Duodenal ulcers occur most often in 1st position of duodenum and located within 3cms of pylorus. They are usually 1cms – 3cms in size. Malignant Duodenal ulcers are rare, many gastric secretory abnormalities are observed in duodenal ulcers. Bicarbonate secretions significantly decreased.¹⁰ Gastric ulcers are usually malignant. There are 4 types of Gastric ulcers Type 1 occurs in gastric body, Type 2 in antrum, Type 3 in pylorus, Type 4 ulcers are found in cardia and are associated with low gastric acid production. Prostaglandins plays a critical role in maintaining gastroduodenal mucosal integrity and repair. Interruption of prostaglandin synthesis can impair mucosal defence and repair; specific chronic disorders have been shown to have a strong association with PUD. 1. Advanced age 2. Chronic Pulmonary disease 3. Chronic renal failure 4. Cirrhosis 5. Nephrolithiasis.

The diagnosis of peptic ulcer in previous studies has been made on clinical symptomatology alone and/or barium meal studies. Endoscopy, however, remains the most accurate way of diagnosing peptic ulcer and has an added advantage that target biopsies

can be obtained from suspicious lesions. Active ulcers in the duodenal bulb can be differentiated from scars causing duodenal deformity. Barium meal has limitations in these contexts.

The point prevalence of peptic ulcer in the present study was 4.72% and the lifetime prevalence was 11.22%. This is an underestimate of the lifetime prevalence as the mean age of the population studied was only 36.3 yr; and there may be quite a few peptic ulcers which must have healed without leaving scars or deformity. Male predominance was seen with duodenal ulcer as well as gastric ulcer. These data are comparable to similar studies from the West.¹¹ The lifetime prevalence of peptic ulcer in North India in the present study was also similar to the projected figure of Ivy.

The clinical behaviour of peptic ulcer in India is different to that in the West. In India, peptic ulcer is less likely to bleed or perforate and more likely to cause stenosis and gastric outlet obstruction. Conflicting data come from other centres which have shown a much higher incidence of perforation (25%) and lower incidence of ulcer bleed (4.5%) and pyloric stenosis with obstruction (6.1%). Malhotra found a higher incidence of pyloric stenosis (20%) than ulcer bleed (12.1%) and perforation (10%) in South India and unusually high incidence of ulcer bleed (30.5%) in Assam, North East India. These data have been obtained from hospital series.

Epidemiological data from India suggest that peptic ulcer is more common in the poor. Raghavan found that the highest incidence (56.5%) of peptic ulcer was among the semiskilled workers and the lowest (2.5%) in professional and managerial group.¹² This was so, even with the fact that the amenities and conditions of work were better, and responsibilities of work were less for the semi-skilled workers. Malhotra, however¹³, found that the incidence of peptic ulcer was more or less identical in the lower as well as in the higher income groups. Figures from the United Kingdom and the United States suggest that ulcer, gastric and duodenal, tend to be more common in the poor than in the rich.

CONCLUSION

Peptic ulcer disease is very common disorder in surgical practice, Males are commonly affected than females, it is common in 5th and 6th decade. The common predisposing factors are smoking, alcoholism and dietary habits. Early diagnosis and treatment are plays major role in preventing the complications. Upper GI Endoscopy plays a major role in the diagnosis of Peptic Ulcer.

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