

# Prevalance Of Disease With Epigastric Pain With Reference To Gastric Pathology

P Karthick, T Sowmya, K Chidambaram, R Natarajan

## Citation

P Karthick, T Sowmya, K Chidambaram, R Natarajan. *Prevalance Of Disease With Epigastric Pain With Reference To Gastric Pathology*. The Internet Journal of Health. 2010 Volume 13 Number 1.

## Abstract

Back ground:Epigastric pain - pain in the mid-upper abdomen. The differential diagnosis of epigastric pain is broad. Pain in this area can be due to gastroenterological, pancreaticobiliary and other causes, including non-gastroenterological disease. The prevalence of gastric pathology has been studied in detail and incidence of Helicobacter Pylori in peptic ulcer disease has been analysed.Methods:All the patients attending the OPD with epigastric pain has been examined and those cases with pathology affecting organs other than stomach have been excluded. The remaining patients has been subjected to routine endoscopic biopsy and screening for H.Pylori (by Rapid Urease Test).Results:Prevalence of disease with epigastric pain with reference to gastric pathology in this community is 83.3%.Incidence of helicobacter pylori among the patients with acid peptic ulcer disease symptoms was up to 74% which correlate with the world wide prevalence.Conclusion:Patients attending hospital with epigastric pain are mostly due to gastric pathology-acid peptic ulcer disease with high incidence of Helicobacter pylori. Hence patients attending hospital with epigastric pain, after excluding the causes of pain due to organs other than stomach should be subjected to routine upper gastro intestinal endoscopy, endoscopic biopsy and should be screened for Helicobacter pylori. Which highly prevent the patients more susceptible for carcinoma stomach. More over promotion of health education and awareness of the disease makes the patients present to hospital at earlier stage and prevents devastating complications.

## INTRODUCTION

### EPIGASTRIC PAIN - PAIN IN THE MID-UPPER ABDOMEN

The differential diagnosis of epigastric pain is broad. Pain in this area can be due to gastroenterological, pancreaticobiliary and other causes, including non-gastroenterological disease .Gastrointestinal causes of epigastric pain include: Ulcers (stomach or duodenum), Non-ulcer dyspepsia/indigestion, Irritable bowel syndrome, Gastro oesophageal reflux disease (GERD), Stomach cancer, and abdominal wall hernias.

Pancreaticobiliary causes of epigastric pain include: Acute pancreatitis, Chronic pancreatitis , Cholecystitis ,Gallbladder dyskinesia, Sphincter of Oddi dysfunction, Pancreatic cancer,Pancreatic cysts and pseudocysts,Cholangitis,Bile duct stones, Pancreas divisum.

Non-gastroenterological causes of epigastric pain include: Atypical manifestation of coronary heart disease/angina, Myocardial infarction, especially that of the posterior wall of the heart other causes are also possible. The most common

gastroenterological cause is “Peptic ulcer disease (PUD)”

Peptic ulcer disease (PUD) is defined as an erosion in the lining of the stomach or duodenum.” peptic” alludes to pepsin, a proteolytic enzyme that catalyzes the hydrolysis of proteins. About 4-10% develops PUD at some point.PUD incidence increases with age, with PUD most common in those older than 40yrs. The major forms of peptic ulcer are duodenal ulcer (DU) and gastric ulcer (GU).There exists incomplete knowledge regarding the cause of peptic ulcer disease. Available information, however, supports a central role for H. pylori and a necessary role for acid and pepsin. Despite the focus on the role of infection with H. pylori, an understanding of basic gastric physiology remains central to a consideration of ulcer pathogenesis. Although PUD has a variety of causes, including stress, NSAID use, smoking...it is most frequently associated with HELICOBACTER PYLORI this accounts for 90% of diagnosed cases.

## AIM OF THE STUDY

To identify the causes of epigastric pain of gastric origin in this community.

To correlate mainly the peptic ulcer disease with the presence of H.Pylori incidence.

### MATERIALS AND METHODS

To examine all the patients attending the OPD with epigastric pain and to exclude those cases with pathology affecting organs other than stomach by USG (ultrasound abdomen), biochemical analysis, ECG, Chest X ray as per the case.

To subject the remaining patients to routine endoscopic biopsy and screening for H.Pylori (by Rapid Urease Test).

### INCLUSION AND EXCLUSION CRITERIA'S

Figure 1

INCLUSION CRITERIA	EXCLUSION CRITERIA
<ul style="list-style-type: none"><li>• Patients attending our OPD with complaints of epigastric pain, irrespective of gender.</li><li>• Patients above 13 years of age.</li><li>• After all investigations-epigastric pain due to gastric pathology.</li></ul>	<ul style="list-style-type: none"><li>• Patients below 13 years of age.</li><li>• Epigastric pain due to organs other than stomach.</li></ul>

### RESULTS

#### PREVALANCE OF DISEASE AFFECTING THE STOMACH

Of the 120 consecutive patients presented with epigastric pain 20 (16.7%) patients had pain due to organs other than stomach.

Hence the prevalence of disease affecting the stomach-83.3% (100 out of 120 patients).

So the other 20cases where excluded from the study.

#### INCIDENCE

Of the 100 consecutive patients who underwent upper gastrointestinal endoscopy 72 were helicobacter pylori positive.

Of the 70 males 50 (71.4%) were positive for H.Pylori and of 30 females 22 (73.3%) were positive for H.Pylori.

#### ENDOSCOPIC FINDINGS

In 100 patients studied,

62 patients had gastritis/gastroduodenitis of which 45 were positive for H.Pylori (72.5%).

11 patients had duodenal ulcer of which 9 of them were positive for H.Pylori (81.8%).

4 patients had reflux esophagitis of which 3 were positive for H.Pylori (75%).

6 patients had gastric ulcer of which 4 were positive for H.Pylori (66.6%).

7 patients had carcinoma stomach of which 5 were positive for H.Pylori (71.4%).

10 patients had normal study of which 6 were positive for H.Pylori (60%).

### MICROBIOLOGICAL INTERPRETATION

The urease broth was inspected after 24 hours and of 100 patients 72 were positive for H.Pylori.

#### AGE DISTRIBUTION OF PATIENTS AND H.PYLORI INCIDENCE

Figure 2

AGE GROUP	NUMBER OF PATIENTS.	H.PYLORI POSITIVE	PERCENTAGE
16-30	28	20	71.4%
31-45	39	24	80%
46-60	22	18	81.8%
61-75	11	10	90.9%

#### DYSPEPSIA AND H.PYLORI INCIDENCE

Out of 100 patients,

83 of them had dyspepsia and of them 61 were H.Pylori positive (73.4%).

Of the dyspeptic patients 8 of them had endoscopically normal study and of these 5 of them were positive for H.Pylori (62.5%).

#### MALE: FEMALE PRESENTATION

Figure 3

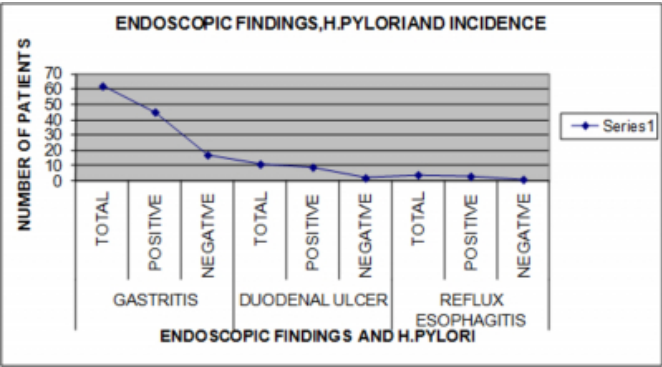


Figure 4

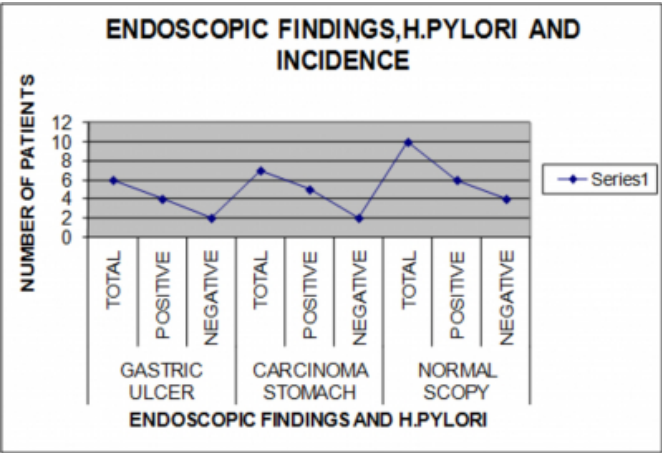


Figure 5

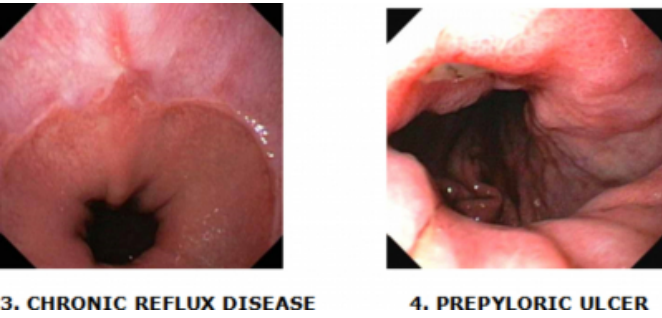


Figure 6

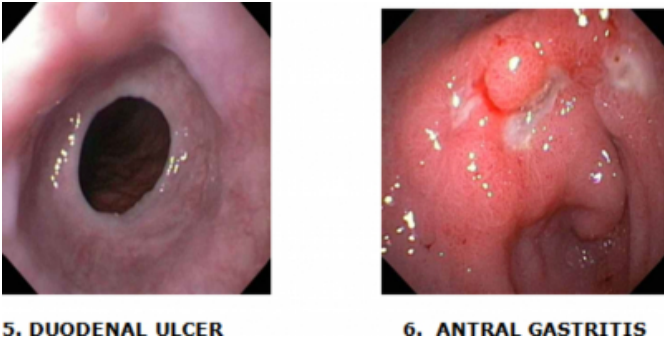
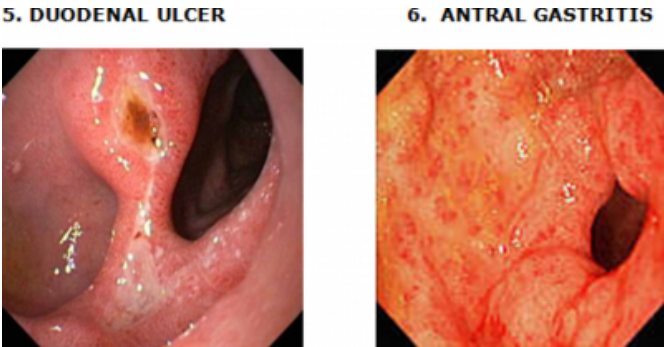


Figure 7



**Figure 8**

## **7. ANTRAL GASTRITIS.**



## **DISCUSSION**

**EPIGASTRIC PAIN**-The differential diagnosis of epigastric pain is broad. Pain in this area can be due to both pancreaticobiliary and other causes, including non-gastroenterological disease. But the major cause and the disease prevalence is more with gastric pathology when compared to the other organs, moreover in gastric pathology **ACID PEPTIC ULCER DISEASE** has its peak incidence. *Helicobacter pylori* have emerged as the new factor in the pathogenesis of acid peptic disease. studies conducted all over the world have confirmed the strong correlation between the presence of *H.Pylori* and histological evidence of inflammation[7,8]Of the 120 consecutive patients presented with epigastric pain 20 (16.7%) patients had pain due to organs other than stomach. Hence the prevalence of disease affecting the stomach-83.3% (100 out of 120 patients).This shows the cause of epigastric pain of gastric origin in this community is more(83.3%),when compared to

the other organs(hepato biliary/pancreatic/cardiac/pulmonary)-16.7%.

*H.Pylori* incidence in patients with epigastric pain of gastric origin was ranging from 60 to 96.6%.In most of the studies it was more than 85%.In our study of 100 patients with epigastric pain of gastric origin, *H.Pylori* was found in 72% in which 50 males (71.4%) and 22 females (73.3%) were positive which was compared to the previous studies.

Out of 11 patients who had duodenal ulcer on endoscopy 9 were positive for *H.Pylori* (81.8%). On various studies conducted *H.Pylori* incidence in duodenal ulcer patients are between 66 to 90%.[6].62 patients had gastritis/gastroduodenitisendoscopically and *H.Pylori* was found in 45(72.5%) and in previous studies it was positive for 89.8%.[1,6].6 patients had gastric ulcer in which *H.Pylori* was positive in 4(66.7%).on previous studies it was ranging from 55 to 70%.[1,4]Of 7 patients of carcinoma stomach 5 (71.4%) were positive for *H.Pylori*. Of the 10 patients who had normal endoscopic findings *H.Pylori* was positive in 6(60%) which proves the cause of non-ulcer dyspepsia may be due to *H.Pylori*. [2,3,5,6].83 out of 100 patients has dyspepsia and of them 61 were positive for *H.Pylori*(73.4%) and of the dyspeptic patient 8 of them had normal endoscopy study and of these 5 of them were *H.Pylori*(62.5%).The incidence rate in them were more or less equal to the overall incidence rate, which include patients with positive endoscopic findings, so *H.Pylori* can be considered as the main cause for the occurrence of non-ulcer dyspepsia though controversies occurs about it.

## **CONCLUSION**

### **THE FOLLOWING FACTORS EMERGE FROM THE STUDY**

Prevalence of disease with epigastric pain with reference to gastric pathology in this community is 83.3%.

The major cause and the disease prevalence is more with gastric pathology when compared to the other organs, moreover in gastric pathology **ACID PEPTIC ULCER DISEASE** has its peak incidence.

Prevalence of *helicobacter pylori* among the patients with acid peptic ulcer disease symptoms was up to 74% which correlate with the world wide prevalence.

*Helicobacter pylori* incidence is maximum among patients with positive endoscopic findings for gastritis.

Helicobacter pylori incidence was more or less equal among males and females.

Helicobacter pylori should be considered as the main causative agent in the occurrence of non-ulcer dyspepsia.

In the view of the above results patients attending hospital with epigastric pain are mostly due to gastric pathology-acid peptic ulcer disease with high incidence of Helicobacter pylori. Hence patients attending hospital with epigastric pain, after excluding the causes of pain due to organs other than stomach should be subjected to routine upper gastrointestinal endoscopy, endoscopic biopsy and should be screened for Helicobacter pylori. Which highly prevent the patients more susceptible for carcinoma stomach. More over promotion of health education and awareness of the disease makes the patients present to hospital at earlier stage and prevents devastating complications.

## References

1. Fiocca R, Villani L, Turpini F. High incidence of campylobacter like organisms in endoscopies biopsies from patients with gastritis with or without peptic ulcer. International journal of gastroenterology. 1987; 38:234-244.
2. Kazi JI, Jafarey NA. Association of H.pylori with acid peptic disease in Karachi. J. Pak Med Assoc. 1990 Oct; 40(10):240-241.
3. Van Horn K.G, Dworkin B.M. Direct gram stain and Urease test to detect H.Pylori. Diag Microbiol. Infect Dis .1990; 13(6):449-52.
4. Wyle FA. H.Pylori current perspectives. J. Clin. Gastroenterology. 1991; 13 (1): 114-24.
5. Fallingborg J, Peulesen LO, Gruve A, Teglbjaerg PS. San. Frequency of H.Pylori and gastritis in healthy subjects without gastrointestinal symptoms. J. Gastroenterology. 1992 May; 27(5): 388-90.
6. Rudlli A, Vialesse G, Brayier F.H. Pylori and gastrointestinal disease in 547 symptomatic young adults. gastroenterol. Clin. Biol. 1996; 20(4):367-73.
7. Nakuru Haim shmuely, Samson obure. et.al. Dyspepsia symptoms and H.Pylori infection. Emerg Infect Dis. 2003; 9(9):1103-1107.
8. J. Athene Lane. et.al. Impact of H.Pylori eradication on dyspepsia, health resource use, and quality of life in the Bristol helicobacter project randomized controlled trial. BMJ. 2006; 332:199-204.

**Author Information**

**P. Karthick, M.S**

Department Of General Surgery, Chennai Medical College Hospital and Research Centre

**T.K. Sowmya, M.S**

Department Of General Surgery, Chennai Medical College Hospital and Research Centre

**K.Raja Chidambaram, M.S**

Department Of General Surgery, Chennai Medical College Hospital and Research Centre

**R.M. Natarajan, M.S**

Department Of General Surgery, Chennai Medical College Hospital and Research Centre