Section: General Surgery

Original Research Article

A STUDY TO DETERMINE THE FREQUENCY OF SIGNIFICANT DISEASE BY UPPER GASTROINTESTINAL ENDOSCOPY IN ADULT PATIENTS WITH EPIGASTRIC PAIN

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Abstract

Background: The Aim of the study is to determine the frequency of diagnosis of significant disease by upper gastrointestinal endoscopy in adult patients with epigastric pain. The objective is to study the frequency of clinically significant gastrointestinal findings in patients with epigastric pain, to study the sex differentiation of significant findings in gastrointestinal tract in patients with epigastric pain. 3.To emphasise the importance of endoscopic evaluation as an initial investigation in patients with epigastric pain. **Materials and Methods:** The study will be conducted among the in-patients and out-patients in Rajah Muthiah Medical College. The data will be collected from a specially designed proforma pertaining to patient particulars, proper history, clinical examinations, ultrasound abdomen. The patients presented with epigastric pain were evaluated by detailed clinical examination followed by endoscopy after getting written consent from patients. Biopsy taken wherever required. The endoscopy findings of all patients in the study were recorded and evaluated. Inclusion criteria is patients above 12 years of age, Patients of both sexes. Exclusion criteria is patients less than 12 years of age, Patients with abdominal pain confirmed by ultrasound abdomen to have pathologies like cholecystitis, hepatitis, pancreatitis, Post operative patients. **Conclusion:** The prevalence of significant findings in upper gastrointestinal evaluation of patients with epigastric pain by endoscopy is relatively higher than the prevalence of normal finding. The prevalence of symptom is modestly higher in the males population compared to females. The prevalence of epigastric pain declines slightly with increase in age. The malignant lesions of the stomach and esophagus is relatively high in the dyspeptic patients in the present study. Thus upper gastrointestinal endoscopy has a vital role in the initial evaluation and investigation of patients with epigastric pain.

INTRODUCTION

The term epigastric pain is used to describe pain in the mid-upper abdomen. The differential diagnosis of epigastric pain is broad. Pain in epigastric region can be due to esophagitis, gastritis, peptic ulcer, pancreatitis, cholecystitis. So causes other than upper gastrointestinal tract is ruled by doing ultrasound abdomen. Endoscopy is often the first diagnostic tool in the investigation of dyspepsia in many patients with dyspepsia.[1-5]

Epigastric pain may be caused by a number of foods, medications, systemic disorders and diseases of luminal gastrointestinal tract. An organic cause is found however in only 40% of patients with epigastric pain usually peptic ulcer disease, gastro oesophageal reflux disease or gastric cancer. In over half of patients no obvious causes are found and the dyspepsia is labelled as idiopathic or functional dyspepsia. Epigastric pain is common among adults. It is modestly higher in women than in men and surprisingly declines slightly with age.[6-10]

Aim and objectives

Aim of the Study

The Aim of the study is to determine the frequency of diagnosis of significant disease by upper gastrointestinal significant disease by upper gastrointestinal endoscopy in adult patients with epigastric pain.

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Objectives

- To study the frequency of clinically significant gastrointestinal findings in patients with epigastric pain.
- To study the sex differentiation of significant findings in gastrointestinal tract in patients with epigastric pain.
- To emphasise the importance of endoscopic evaluation as an initial investigation in patients with epigastric pain.

MATERIALS AND METHODS

Place of study: General Surgery Department, Rajah Muthiah Medical College, Annamalainagar, Chidambaram.

Method of collection of data: The study will be conducted among the in-patients and out-patients in Rajah Muthiah Medical College. The data will be collected from a specially designed proforma pertaining to patient particulars, proper history, clinical examinations, ultrasound abdomen. The patients presented with epigastric pain were evaluated by detailed clinical examination followed by endoscopy after getting written consent from patients. Biopsy taken wherever required. The endoscopy findings of all patients in the study were recorded and evaluated.

Inclusion Criteria

- Patients above 12 years of age.
- Patients of both sexes

Exclusion Criteria

- Patients less than 12 years of age.

Patients with abdominal pain confirmed by ultrasound abdomen to have pathologies like cholecystitis, hepatitis, pancreatitis.

Post-operative patients

RESULTS

Data Analysis: Socio Demographic Characteristics of Subjects.

Table 1: age distribution

Age	No. of subjects	Percentage
13-25	60	12
26-35	80	16
36-45	140	28
46-55	106	21.2
56-65	74	14.8
>65	40	8

The population with age group more than 13 years were included in the study. Subjects between 36 to 45 years of age predominated the population comprising 28% of the total.

Table 2: Sex Distribution

Sex	No. of Subjects	Percentage
Male	266	53.2
Female	234	46.8

Males predominated the study population comprising 266 (53.2%) of the total study population

Table 3: Distribution of Endoscopic findings in all subjects

Endoscopic Findings	No. of Subjects	Percentage
Normal Study	217	43.4
Significant lesions	283	56.6

Normal study was found in 43.4% of dyspeptic patients. The subjects with significant lesions formed the - majority.

Table 4: distribution of endoscopic findings among the significant lesions

Endoscopic Findings	No. of Subjects	Percentage
Duodenal ulcer	34	6.8
Gastric ulcer	15	3
Growth stomach	21	4.2
Gastric erosions	66	13.2
Hiatus hernia	10	2
Esophagitis	79	15.8
Duodenitis	27	5.4
Growth esophagus	8	1.6
Others	23	4.6

Among the significant lesions of endoscopic finding esophagitis forms the majority

Table 5: distribution of significant lesions of endoscopy among male subjects

Significant endoscopic findings	No. of Subjects	Percentage
Duodenal ulcer	20	4
Gastric ulcer	11	2.2
Stomach growth	16	3.2

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Gastric erosions	39	7.8
Hiatus hernia	6	1.2
Esophagitis	44	8.8
Duodenitis	17	3.4
Esophageal growth	6	1.2
Others	12	2.4

Among the significant lesions in male subjects esophagitis and gastric erosions constitute the majority forming 8.8% and 7.8% of total population.

Table 6: distribution of significant lesions of endoscopy among female subjects

Significant endoscopic findings	No. of Females Subjects	Percentage
Duodenal ulcer	14	2.8
Gastric ulcer	4	0.8
Stomach growth	5	1
Gastric erosions	27	5.4
Hiatus hernia	4	0.8
Esophagitis	35	7
Duodenitis	10	2
Esophageal growth	2	0.4
Others	11	2.2

Among the significant lesions in female subjects esophagitis forms the majority (7% of total population).

DISCUSSION

The patients presented with epigastric pain, their age, sex and endoscopic findings were recorded in a proforma. The prevalence of symptom among different age groups and both the sexes were derived from the data collected. The prevalence of all the significant lesions in endoscopy was derived and their age & sex distribution was charted out. All the data tables and interpretations are presented at the observation and results chapter.[11-15]

Now let us discuss the results of the present study with literature back ground and compare with hypothesis.

Result 1

The frequency of diagnosis of clinically significant disease by upper gastrointestinal endoscopy in patients with symptom is less compared to frequency of normal study at endoscopy.

Among the 500 subjects with epigastric pain, normal study of upper gastrointestinal tract was found in 217 subjects forming 43.4% of the total population [Table 5].

Among the 500 patients 283 [Table 5] had significant findings forming 56.6 % of the study population.

The present study goes in accordance with the study of Thomson AB et al which concluded that significant findings were identified in 58 % of the patients with epigastric pain.

Result 2

The prevalence of symptom is modestly higher in male than in female.

Of the 500 subjects 266 subjects were males forming 53.2 % of study group [Table 2].

Result 3

Among the 500 patients with symptom, 28% belong to 36 - 45 years age group. The prevalence of symptom in this study is 21.2%, 16% and 14.8% in the age frequencies of 46-55, 26-35, and 55-65 years respectively.

Result 4

Out of 500 subjects, the prevalence of symptomatic patients with a significant endoscopic finding among the 13 to 25 age group is 8.6%. It increases to 11 % and 16.8 % at 26 to 35, and 36- 45 years group respectively.

Among the various endoscopically significant findings gastric erosions and esophagitis forms 13.2 and 15.8 percentage of the entire study population and becomes the most common organic cause of epigastric pain in the study. This result goes in accordance with Kenneth R mcquaid et al study which gives data stating that the evidence of esophagitis is present in 15 % of patients with dyspepsia.

Duodenal and gastric ulcer forms together around 9.8% of the population in the present study. In the Thomson A B et al study the prevalence of peptic ulcer diseases were around 5.3 % and the wai CT et al study showed a prevalence of 14.9 % for peptic ulcer disease among the dyspeptic patients. In the present study the prevalence is at mid-point with respect to the above two studies.

In the present study, the prevalence of gastric malignancy and esophageal malignancy is around 2.6 % and 1 % respectively. In Wai CT et al study the prevalence of both gastric and esophageal malignancy was 0.47 % of the dyspeptic population.

The frequency of occurrence of gastric malignancy increases after 45 years of age in this study. At 36-45, 45-55, 55-65 and more than 65 years groups the prevalence of gastric malignancy is 0.4%, 0.8%, 0.2% and 2.1% respectively and is in accordance with the Wai C T et al study.

According to this study, the age threshold of 45 years is reasonable for screening of growth stomach, by endoscopy, as the prevalence increases as age increases more than 45.

Summary

The present study is an attempt to assess the yield of upper gastrointestinal endoscopy in epigastric pain

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patients on south Indian population and to study the frequency of various causes of epigastric pain.

The sample in this study consisted of 500 epigastric pain patients with 266 males and 234 females admitted in general surgery ward, Rajah muthiah medical college.

All the patients underwent an upper gastrointestinal endoscopic evaluation at the general surgery department endoscopy room and their findings recorded in a proforma along with details of their sociodemographic variables, physical examination and history. The subjects received appropriate treatment after they were diagnosed but were not followed up. The datas were analyzed and the prevalence of epigastric pain according to age and sex distribution was tabulated.

The prevalence of normal study of endoscopy in epigastric pain was found to be less common than significant endoscopic findings in the present study. The prevalence of epigastric pain was modestly high in male patients compared to females.

The prevalence of epigastric pain decreased with increase in age in both sexes. The prevalence of epigastric pain was found to increase upto mid forty age group but decreased thereafter.

Gastric and oesophageal malignancies showed a high prevalence among dyspeptic patients in this study. The most common cause of epigastric pain was esophagitis and gastric erosions in both the sexes, but gastric ulcer and duodenal ulcer was relatively less common in the present study among study population.

CONCLUSION

The prevalence of significant findings in upper gastrointestinal evaluation of patients with epigastric pain by endoscopy is relatively higher than the prevalence of normal finding.

The prevalence of symptom is modestly higher in the males population compared to females.

The prevalence of epigastric pain declines slightly with increase in age.

The malignant lesions of the stomach and esophagus is relatively high in the dyspeptic patients in the present study.

Thus upper gastrointestinal endoscopy has a vital role in the initial evaluation and investigation of patients with epigastric pain.

REFERENCES

1. Bailey and love short practice of surgery, 26th edition , 1021-1061
2. Essential surgical practice by sir alfred cuscheri, 4th edition, page 193, 261-319
3. Schwartz principles of surgery 8th edition, page 844-846, 934-991
4. Maingot s abdominal operation, 10th edition, page 189-217
5. Text book of surgery, sabiston, 18th edition, volume-1, page 1223-1275
6. Lee mcgregor, synopsis of surgical anatomy, 12th edition, page 19-22
7. Last s anatomy, regional and applied, 11th edition, page 258-261
8. Bockus gastroenterology, 5th edition, chapter 23, page 295-315.
9. Diseases of gi tract&liver -david j.c sherman, 3rd edition, page 99.
10. Ackermans surgical pathology,7 th edition,st.louis,mo-cv mosby;1988
11. Practical gastro intestinal endoscopy, peter b.cotton. Second edition 1983. .
12. Endoscopic interpretation, normal and pathological appearance of the gastro intestinal tract, micheal o. Blackstone, 1984.
13. Edmonson j. History ofinstruments for gastrointestinal endoscopy. Gastrointest endosc 1991; 37:s27-s56.
14. Schindler r. Gastroscopy.new york: hafner, 1966.
15. Morrissey jf,tanakay,thorsen wb.the relative value of the olympus model gt-5 gastrocamera and olympus model gi-f gastrocamera fiberscope.gastrointes endosc 1968;15:197-200

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