



Incidence of Upper Gastrointestinal Tract Malignancy in Patients with Dyspepsia in India

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ABSTRACT

Background and Objectives: Dyspepsia is a common condition that clinicians encounter in their practice and it has a great impact on the patients quality of life. The incidence of upper gastrointestinal tract malignancy in patients with dyspepsia and their predictability based on history is unknown. This study helps to evaluate the incidence of upper GIT malignancy, different endoscopic presentation of dyspepsia, to reduce unwanted prescriptions, and to study importance of upper GI endoscopy. **Methodology:** Study includes 140 dyspeptic patients attending the OPD and admitted to all the units in Department of General Surgery in SSIMS & RC, Davangere with the complaints of upper abdominal pain/discomfort, nausea, vomiting, bloating/fullness of upper abdomen and were evaluated by detailed history & clinical examination followed by upper GI Endoscopy after getting written consent from patients. Biopsy were taken for HPE if any suspicious lesion of malignancy is present. This study conducted over period of two years. **Results:** A total of 140 patients 84 are males and 56 are females. Maximum of these were in age groups between 25 to 55 years. Most common symptoms were epigastricpainac counting for 81.4%, followed by nausea/vomiting, heartburn, food intolerance, in digestion and weight loss. The endoscopy were normal in 72(51.4%) patients. The abnormal findings included gastritis accounting for 19.3%, gastritis with duodenitis (7.1%). hiatus hernia (4.3%), duodenal ulcer (3.6%) esophagitis (2.9%), Ca esophagus (2.9%), Ca stomach (2.1%) and gastric ulcer (1.4%) Incidence of malignancy is increased in patient with dyspepsia along with alarming symptoms. **Conclusion:** Dyspepsia with alarm symptoms increases risk of malignancy, whereas in dyspepsia without alarm symptoms there is reduced risk of malignancy. Incidence of upper GIT malignancy in dyspeptic patient with significant upper GIs copy findings is 5.7%.

Keywords: Upper GI endoscopy; Dyspepsia, gastritis; duodenitis; duodenal ulcer; upper GI malignancy.

INTRODUCTION

The term, dyspepsia, encompasses a heterogeneous group of upper abdominal symptoms which include discomfort, pain, bloating, fullness, burning or indigestion [1]. Dyspepsia was defined according to the ROME IV consensus criteria as: predominant epigastric pain lasting at least 1 month [1].

Functional dyspepsia refers to patients with dyspepsia where endoscopy has ruled out organic pathology that explains the patient's symptoms.

Endoscopy has been considered, as the gold standard diagnostic tool to evaluate patients with an upper

gastrointestinal disorder. Excellent visualization of the oesophagus, gastro-oesophageal junction, duodenal bulb and second part of duodenum can be obtained. In addition to clear mucosal views, diagnostic endoscopy allows mucosal biopsies to be taken, which may either undergo processing for histological examination or be used for near patient detection of H. Pylori infection using a commercial ureas based kit [2]. In addition, brushings may be taken for cytology and aspirates for microbiological culture [2].

Dyspepsia is a common condition that clinicians encounter in their practice and it has a great impact on the patients quality of life. Not every patient in primary care may need investigations. Directing diagnostic tests only to those with a high probability of benefiting from having their diagnosis established is valuable.

A systematic review reported that approx 20% of the population has symptoms of dyspepsia globally. Dyspepsia is more common in women, smokers, and those taking NSAID drug. Patients with dyspepsia have a normal life expectancy, however, symptoms negatively impact on quality of life and there is significant economic impact to the health and society.

Gastric and oesophageal cancers are rare, accounting annually for 1% of deaths from all causes. Gastric cancer is on the decline, while oesophageal cancer is on the increase. Gastric cancer may be declining because of the decreasing prevalence of H.pylori. Squamous cell carcinoma and adenocarcinoma account for 95% of all oesophageal tumours [3].

Traditionally squamous carcinoma was the most frequent lesion but in recent years adenocarcinoma has become the predominant disease. Adenocarcinoma of the oesophagus is believed to originate from columnar metaplasia of the oesophagus (Barrett's oesophagus), providing a rationale for endoscopic screening of patient's with Barrett's oesophagus.

Adenocarcinoma is responsible for over 95% of all gastric malignancies. Half of patients are inoperable at the time of diagnosis and few of these survive five years, while of those undergoing operative treatment 20% are alive after 5 years [4]. Overall 5 year mortality for this disease is therefore approximately 90%. Gastric neoplasia is strongly associated with H.pylori infection but as the vast majority of H.pylori infected individuals do not develop gastric carcinoma other environmental and genetic factors must be important.

This study helps to evaluate the incidence of upper GIT malignancy, different endoscopic presentation of dyspepsia, to reduce unwanted prescriptions, and to study importance of upper GI endoscopy.

METHODOLOGY

A prospective clinical study was undertaken at SS Institute of medical science, to know the various upper gastro-intestinal endoscopic findings in patients presenting with dyspepsia. The study was conducted for a period of two years. The patients selection was by convenience sampling. Dyspeptic patients were included in this study with their informed consent. A detailed clinical history was elucidated, followed by careful clinical examination, which were recorded as per the proforma. All the patients included in the study underwent upper gastrointestinal endoscopy and the findings were noted.

The inclusion and exclusion criteria's were as follows:

Inclusion criteria:

- 1) Patients presenting with dyspepsia.
- 2) Patients above 18yrs of age.

Exclusion criteria:

- 1) Patients aged less than 18 yrs.
- 2) Pregnant women.

RESULTS

Out of 140 dyspeptic patients, only 8 patients i.e 5.7% were diagnosed to have upper gastrointestinal malignancy. This study shows that maximum incidence is in the 6th decade and above and more common in males than females.

Table I: Showing distribution of study subjects according to age prevalence in patients presenting with dyspepsia

Age	No of Cases	Percent
<20	2	1.4
20-29	16	11.4
30-39	33	23.6
40-49	44	31.4

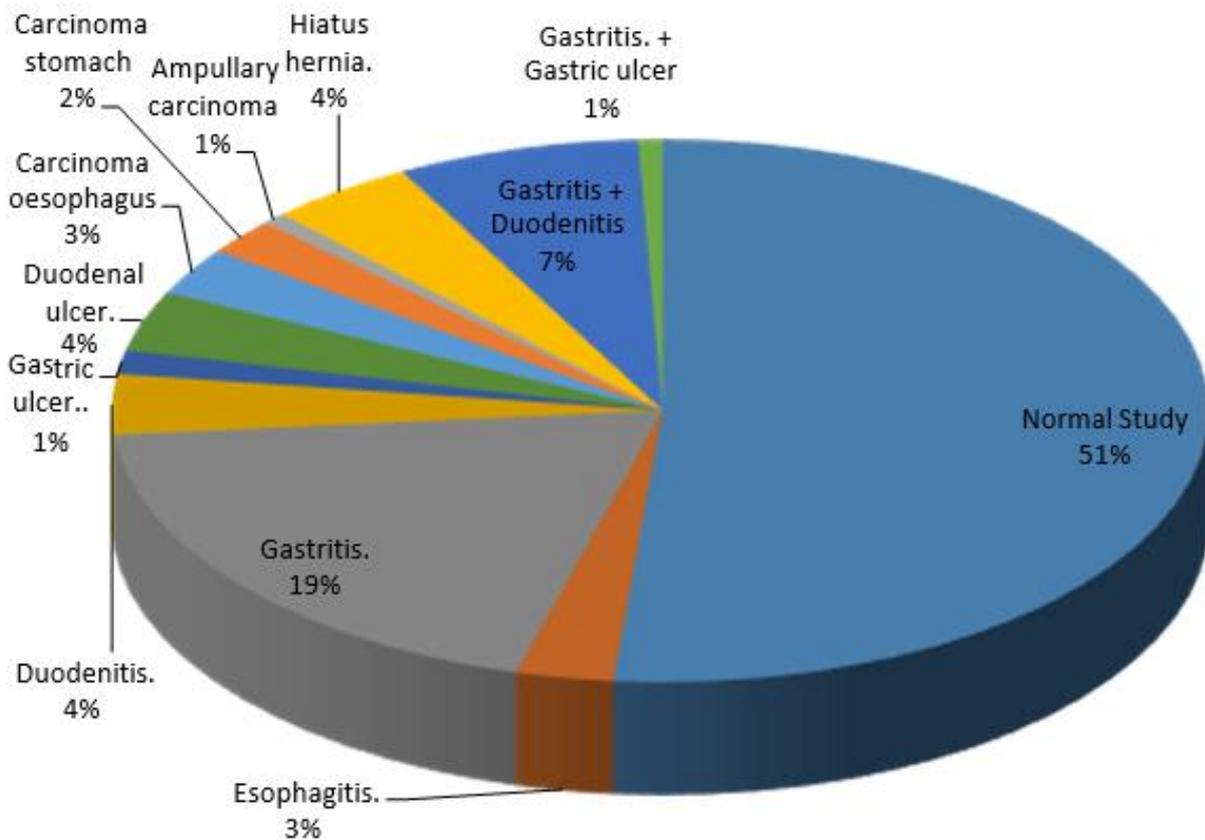
50-59	18	12.9
>60	27	19.3
Total	140	100

Table II: Showing distribution of clinical features in patients with dyspepsia

Clinical features	No. of cases	Percentage
Epigastric pain	114	81.4
Heart burn	68	48.6
Nausea/vomiting	88	62.9
Food intolerance	66	47.1
indigestion	50	35.7
Loss of weight/appetite	30	21.4
Total	140	100.0

Table III: Showing distribution of endoscopic findings with patient with dyspepsia

Endoscopy Findings	No of Cases	Percent
Normal Study	72	51.4
Esophagitis.	4	2.9
Gastritis.	27	19.3
Duodenitis.	5	3.6
Gastriculcer..	2	1.4
Duodenalulcer.	5	3.6
Carcinomaoesophagus	4	2.9
Carcinoma stomach	3	2.1
Ampullary carcinoma	1	0.7
Hiatushernia.	6	4.3
Gastritis+Duodenitis	10	7.1
Gastritis.+Gastric ulcer	1	0.7
Total	140	100.0



Graph 1: Showing distribution of study subjects according to endoscopy findings in patients with dyspepsia



Fig 1: Endoscopic view of carcinoma lower esophagus with candidiasis

Table IV: Showing incidence of upper GIT malignancy in relation to addiction in dyspeptic patients

Addiction	No of cases	Percent
Smoking	3	37.5
Alcohol	2	25.0
Tobacco chewing	3	37.5
None	0	00.0

DISCUSSION

A prospective clinico-pathological study entitled “**Incidence of Upper Gastrointestinal Tract Malignancy in Patients with Dyspepsia in India**” was undertaken in SS Institute of Medical College and Research Center, Davangere to study the endoscopic findings of dyspepsia and to detect oesophago gastro duodenal carcinoma at early stages. After informed consent 140 cases of dyspepsia were included in the study and were studied clinically as per the proforma over a period of two years. All the patients under went upper gastro-intestinal endoscopy and various findings were noted.

Comparison of Age Distribution:

The majority of patients with dyspepsia were in the age group of 25– 55 years. The mean age in our study subjects was 45.39 years. In the studies conducted by various authors, the mean age was as shown in table below:

Sl. No	Name of study	Mean age in years
1	Thomson A BR <i>et al.</i> , [5]	45.9
2	Ziauddin [6]	42.2+15
3	Choomsri Petal [7]	41
4	Present study	45.39

Comparison of gender distribution

In this study 60% were male patients, 40% were female patients. The incidence of different presentations of dyspepsia were common in males compared to females.

The male / female ratio in the studies conducted by Khan N *et al.*, [8] – 2.3:1, Ziauddin [6]- 1.6:1, Mustapha SK *et al.*, [9]- 1.1:1 respectively. In these studies also the majority of patients were males as observed in our study.

In a population based study in Australia, female adults significantly outnumbered males in most functional gastrointestinal disorders includes functional dyspepsia.

Comparison of various endoscopic findings:

In the present study, clinically significant endoscopic findings were observed in 72 patients accounting for 51.4%. Gastritis was by far the most common finding (19.3%). The next common findings were gastritis with

duodenitis accounting 7.1%. And most common carcinoma was carcinoma of esophagus (2.9%), followed by carcinoma stomach (2.1%) and ampullary carcinoma (0.7%).

The percentage of cases with gastritis in this study was higher than that observed in studies by Sarwar *et al.*, [10] and Ziauddin [6]. The percentage of patients with GERD was nearly equal to that observed by Sarwar *et al.*, [10].

Comparison of common endoscopic findings in various studies:

Sl. No	Name of the study	Gastritis
1	Sarwar <i>et al.</i> , [10]	13%
2	Ziauddin [6]	18%
3	Present study	19.3%

In the present study, clinically significant endoscopic findings were observed in 72 patients accounting for 51.4%. Gastritis was by far the most common finding (19.3%). The next common findings were gastritis with duodenitis accounting 7.1%. And most common carcinoma was carcinoma oesophagus (2.9%), followed by carcinoma stomach (2.1%) and ampullary carcinoma (0.7%).

The percentage of cases with gastritis in this study was higher than that observed in studies by Sarwar *et al.*, [10] and Ziauddin [6]. The percentage of patients with GERD was nearly equal to that observed by Sarwar *et al.*, Comparison of common endoscopic findings in various studies.

Comparison of incidence of gastric malignancies:

In this study there were 3 patients with carcinoma stomach accounting for 2.1%, 4 patients with carcinoma of esophagus accounting for 2.9%, 1 patients with periampullary carcinoma accounting for 0.7%.

Incidences of gastric malignancies observed by various authors are as follows:

Sl. No	Name of study	Percentage of gastric malignancy
1	Choomsri Petal [7]	1%
2	Khan N <i>et al.</i> , [8]	3%
3	Ziauddin [6]	4%
4	Present study	2.1%

CONCLUSION

Upper GI endoscopy is a useful diagnostic modality to identify the specific pathology in patients with dyspepsia. Dyspepsia is more common in male patients as compared to female. It is more common in age group of 25-50 years of age.

Abnormal Endoscopic findings were found in 49% of patients with dyspepsia. And the common abnormal endoscopic findings included gastritis followed by duodenitis, duodenal ulcer and esophagitis.

Dyspepsia with alarm symptoms increases risk of malignancy. Where as in dyspepsia without alarm symptoms there is reduced risk of malignancy. Incidence of upper GIT malignancy in dyspeptic patient with significant upper GIs copy findings is 5.7%.

Prevalence of large number of inflammatory lesions as a result of increased acid production and low incidence of malignancy in the study group suggests that the uninvestigated patients with dyspepsia may be initially managed medically with acid suppressive therapy.

DECLARATIONS:

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Conflict of Interest: None declared

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