

Incidence of malignancy in oesophagus and stomach in dyspeptic patients in a tertiary care centre

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Abstract:

Background: Most of the oesophageal and gastric malignancies are diagnosed at relatively in advanced stages in our country compared to the developed countries. Dyspeptic symptoms are said to be one of the earliest symptoms in these conditions. Hence, subjecting all the patients (above 40 years of age – high risk group for malignancy) with dyspeptic symptoms, to upper gastro intestinal endoscopy study and with biopsy when necessary, will aid in early detection of carcinoma.

Materials and methods: All the patients of 40 years and above with dyspeptic and associated 'Alarm signs' (Alarm signs – vomiting, early satiety, weight loss, dysphagia and malena) attending Sri Manakula Vinayagar Medical College Hospital out patient department between October 2020 to January 2022 were included in this study. Totally 96 patients were included. All these patients were subjected to upper gastrointestinal endoscopy and biopsy was taken when necessary (suspicious of malignancy). Histopathological study was done in all the specimens by the pathologists of our institution.

Results: Of the total 96 patients 45 were males (47%) and 51 were females (53%). The histopathological examination revealed that 12 patients had malignancy, 1 oesophageal carcinoma, 1 oesophagogastric junctional carcinoma and 10 gastric carcinoma.

Conclusion: As the incidence of Upper gastro intestinal (oesophagus and gastric) malignancy is about 13% in patients of dyspeptic and associated symptoms above the age of 40 years, subjecting all the patients above 40 years having dyspeptic symptoms will aid in early detection of oesophagogastric malignancy.

Key words: Oesophagus, Stomach, Malignancy, Carcinoma, Endoscopy, Biopsy.

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I. Introduction:

Dyspepsia is a widespread disorder that affects 10-20% of the population in the Asia Pacific region (1,2) and reflux approximately in one third of individuals who seek health care (3). The various causes for dyspepsia are chronic peptic ulcer disease, gastrooesophageal reflux disease with or without oesophagitis, oesophageal or gastric malignancy, pancreatobiliary disease, Helicobacter pylori gastritis, duodenitis, gall stones, gastro intestinal dysmotility etc. Endoscopy has become the gold standard investigation for patients with dyspepsia. Gastric or oesophageal carcinoma is identified in 2% of patients referred for endoscopy to evaluate dyspepsia (4). Along with dyspepsia if any patient is having any one of the following signs such as gastrointestinal bleeding, unintentional weight loss, progressive difficulty in swallowing, persistent vomiting, early satiety it is said the patient is having a 'Alarm sign' with dyspepsia.

Many guidelines have recommended that prompt endoscopy should be reserved for high risk patients with alarm signs or for patients older than 50-55 years, whereas H. pylori 'test and treat' strategy or empirical therapy is justified for low risk patients, such as young patients without 'alarm signs' (5 - 8). Hence, all the patients of age above 40 years with dyspepsia and associated 'alarm signs' were subjected to upper gastro intestinal endoscopy study and biopsy taken when needed.

II. Materials And Methods:

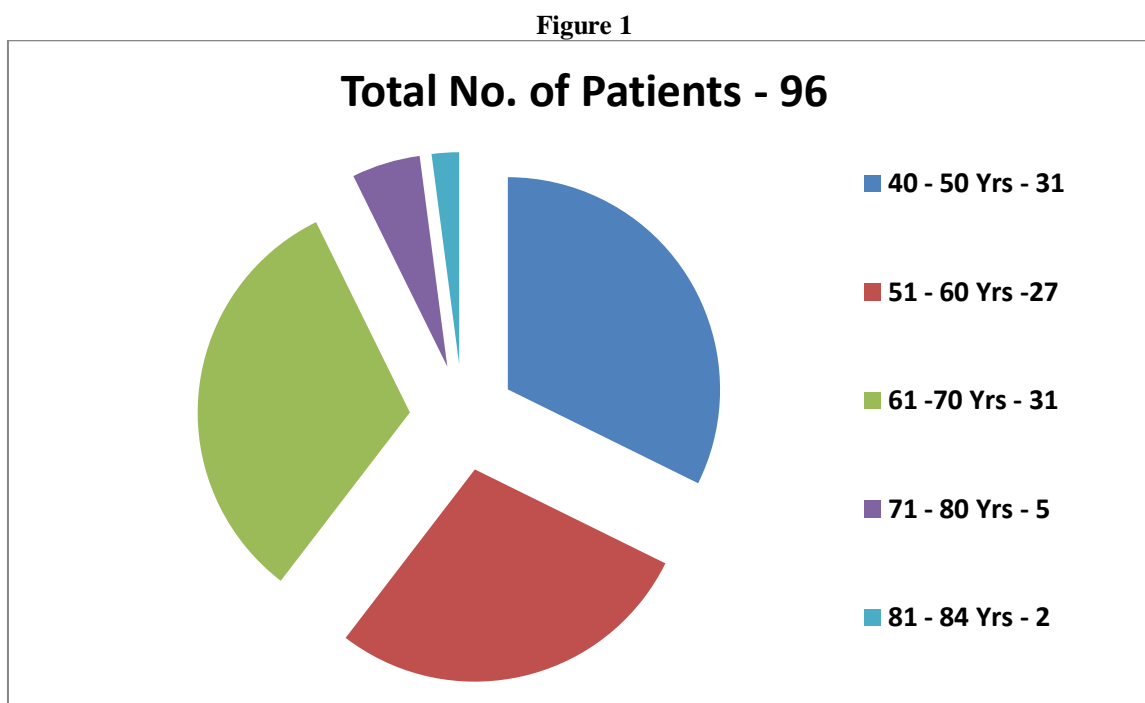
A prospective study was conducted at Sri Manakula Vinayagar Medical college and Hospital to study the incidence of malignancy in oesophagus and stomach in dyspeptic patients of age more than 40 years. Dyspeptic patients willing to give consent and be part of the study were included. A detailed history was elicited followed by clinical examination, which was recorded in a proforma. This study is a hospital based cross sectional study. The patients attending our hospital with dyspeptic symptoms from October 2020 to January 2022 were included in this study.

Exclusion criteria - 1. Patients with age less than 40 years. 2. Patients with known history of oesophageal or stomach malignancy. 3. Patients with history suggestive of irritable bowel syndrome 4. Patients with known history of pancreatico biliary disease 5. Patients who are HIV positive.

Methods – Basic blood investigations such as complete blood count, haemoglobin, blood urea, serum creatinine were done for all the patients. Patients who were on anticoagulant therapy were advised to stop the drugs for 5 days before planned upper gastro intestinal endoscope. All the patients were advised to be in nil by mouth for 6 hours before endoscopic examination. Endoscopic examinations were done by senior endoscopists. When suspicious lesions were viewed, they were biopsied and sent in formalin solution for histopathological study.

III. Results:

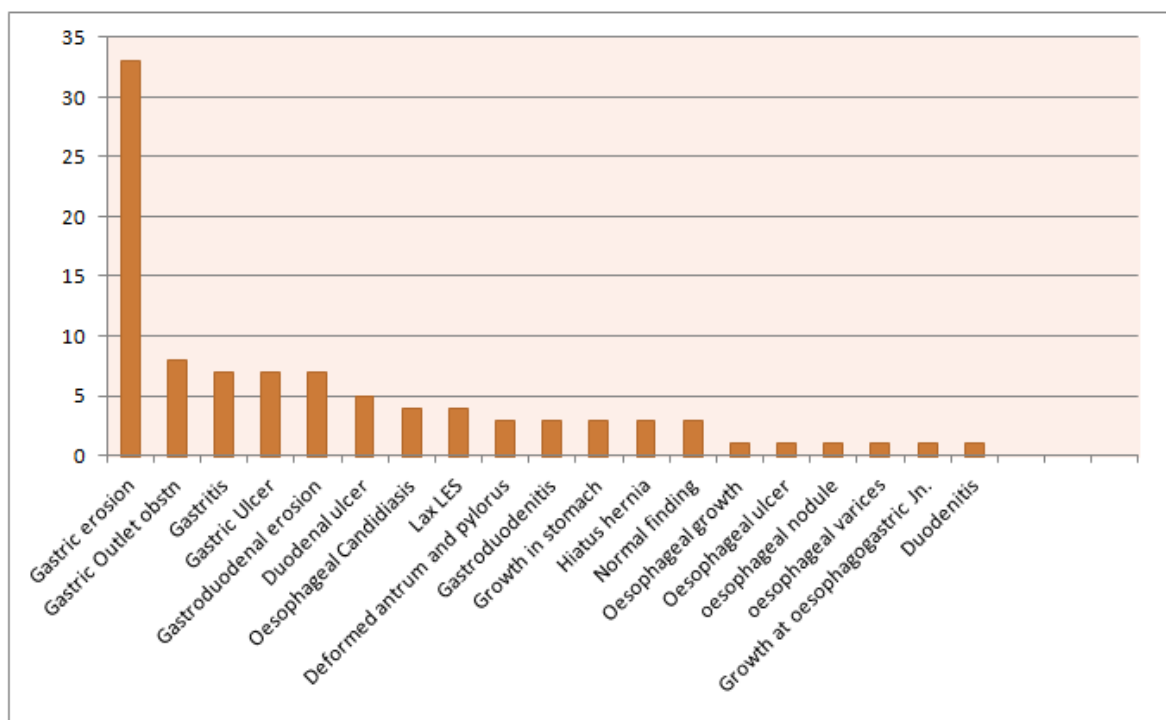
Of the 96 patients included in this study 45 (47%) were male and 51(53%) were female. The number of patients in various age group is as follows 40 -50 years – 31 patients, 51 – 60 years- 27 patients, 61 – 70 years – 31 patients, 71 – 80 years- 5 patients, 81 – 84 years – 2 patients (Figure 1)



Upper gastro intestinal endoscopic findings:

Out of the 96 patients 3 showed normal findings. 33 had gastric erosions, 7 had partial gastric outlet obstruction, 7 had gastritis, 7 had gastric ulcer, 7 had gastroduodenal erosions, 5 had duodenal ulcer, 4 had oesophageal candidiasis, 4 had lax lower oesophagogastric sphincter, 3 had deformed antrum and pylorus, 3 had gastroduodenitis, 3 had growth in stomach, 3 had hiatus hernia, 1 had oesophageal growth, 1 had oesophageal ulcer, 1 had oesophageal nodule, 1 had oesophageal varices, 1 had growth at oesophago gastric junction and 1 had duodenitis (Figure 2)

Figure 2



Evidence of carcinoma - Out of the 96 patients, 81 patients underwent endoscopic biopsies, 12 patients were proved to have carcinoma in their biopsied specimen. The number of patients in each age group and the carcinoma detected in them is tabled in Table No. 1.

Table No. 1.

Age group in years	No. of Patients	Male	Female	Biopsy proved carcinoma (Stomach/ oesophagus)	Male	Female
40 – 50	31	14	17	2	1	1
51 – 60	27	12	15	3	3	0
61 – 70	31	15	16	3	2	1
71 – 80	5	2	3	3	1	2
81 – 84	2	2	0	1	1	0

Type of malignant lesion:

In this study the distribution of malignant cases as per ‘WHO classification of malignant lesions of the stomach’ is 4 cases of papillary/tubular adeno carcinoma, 1 case of mucinous adeno carcinoma, 4 cases of poorly cohesive carcinoma, 3 cases of undifferentiated carcinoma. In this present study we found no cases of carcinoid and MALT lymphoma (Figure 3)

Figure 3

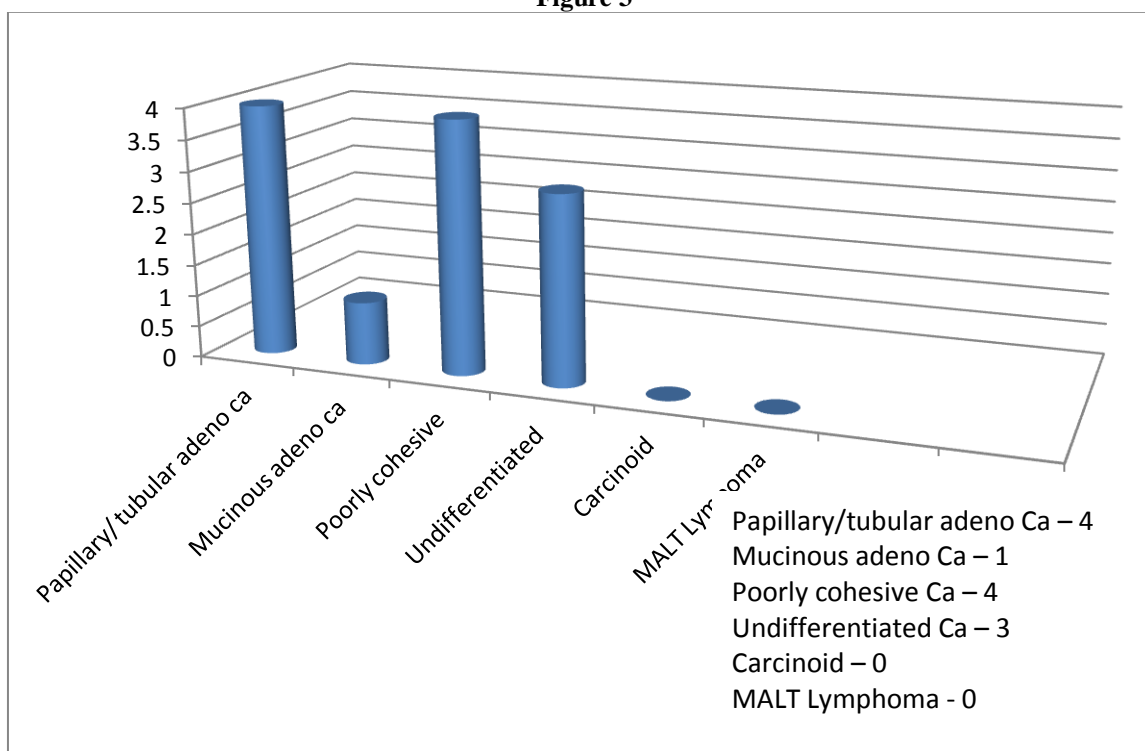
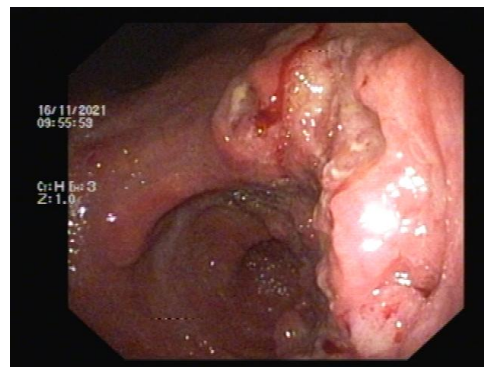


Fig 4- Distal oesophageal growth (carcinoma)



Fig 5 – Body of stomach growth (Carcinoma)



Alarm signs:

In this study 47 patients were presenting with at least one alarm sign. Vomiting in 28 patients, early satiety in 5 patients, weight loss in 9 patients, dysphagia in 9 patients, malena in 4 patients. In those 12 cases proved to have oesophagus or gastric malignancy the alarm signs, one or more, present is as vomiting in 9 patients, early satiety in 4 patients, weight loss in 6 patients, dysphagia in 2 patients, malena in 2 patients. All the 12 patients also had at least one alarm sign along with dyspepsia (Table No. 2).

Table No. 2

Dyspepsia + Alarm signs	No. of cases.
Vomiting, early satiety, weight loss	3
Vomiting, dysphagia, weight loss	2
Malena, weight loss	1
Vomiting	4
Early satiety	1
Malena	1

IV. Discussion:

In a definition that focused on functional dyspepsia, the Rome process defined dyspepsia in a restrictive manner as 'pain or discomfort centered in the upper abdomen (9). Discomfort may be characterized by or associated with upper abdominal fullness, early satiety, bloating or nausea. The prevalence of uninvestigated dyspepsia was 17% in Afro Americans and 13% in American Caucasians (10). Analysis of multiracial population in Singapore, South East Asia, indicated the ethnic adjusted prevalence of uninvestigated dyspepsia to be 8.1%, 7.3% and 7.5% in the Chinese, Malays and Indians respectively (11). Female individuals appear to be more prone to dyspepsia than males (12,13,14). In a study of Taley et.al, the authors concluded that aspirin and non aspirin, non steroidal anti inflammatory drugs (NSAIDS) were associated with an almost two fold higher risk of upper gastrointestinal tract symptoms in the elderly, while smoking and alcohol were not found to be significant risk factors (15). Dyspeptic symptoms were found to be more common in those harboring H.pylori infection than in H.pylori negative subjects (16).

In dyspeptic individuals, an underlying malignancy is found in as few as 1% of cases of dyspepsia (17). In a study by Faintuch J. Silva et.al. (18), 1.4% stomach malignancies and 0.35% oesophagus malignancy was detected. In a study by Ahamed Gado (19) 1% stomach malignancy was identified. Bytzer P et.al. (20) performed a study and found 0.91% gastric carcinoma and 0.45% oesophageal malignancy. In India however percentage of cases diagnosed as malignant were slightly higher. In a study by Sumathi et.al (21) 8.3% prevalence of a histology confirmed malignant lesion was evident. In our study, we had included only the patients above 40 years (high risk group for malignancy). Out of 96 cases, 12 cases found to have malignant lesion, this is 12.5%. The 'alarm signs' (vomiting, dysphagia, early satiety, weight loss, melena) associated with dyspepsia reveal serious clinical illness like malignancy or peptic ulcer disease. Most of the committees of gastroenterological associations have recommended guidelines for referral to endoscopic investigation for dyspeptic patients of any age with alarm symptoms (22 - 26). In our study all the 12 patients proved to have malignancy had one or more alarm symptoms.

Appropriate age threshold for evaluation of dyspepsia by endoscopy has been controversial. Many studies have been conducted for the same. In United Kingdom a study done by Derek Gillen et.al. the age criteria used was more than 55 years (27), in Germany a study done by N. Schmidt et.al. they assessed and opined 'lowering the threshold to >40 years would have decreased the rate of missed gastric cancer in 0.8%' (28). A study conducted by Liou J et.al. in Taiwan, an area of high background prevalence of gastric cancers, demonstrated that 0.4 to 5% gastric cancers would have been missed if endoscopy had not been offered to patients less than 55 years of age. They have recommended that 40 years is the optimal age threshold of screening endoscopy for uninvestigated dyspepsia in Taiwan (29)

In the present study we have included cases more than 40 years of age having complaints of dyspepsia. We found in this study 2 patients were below the age group of 55 years. Thus according to our study, increasing the age threshold to more than 55 would have meant missing upper GI cancer in 2 patients which makes up for (2 for 31 cases) 6.45%.

V. Conclusion:

Offering oesophago gastro duodenoscopy to all the patients above 40 years with dyspeptic symptoms associated with 'alarm signs' will facilitate in the early diagnosis of upper gastrointestinal malignancy. Hence, we recommend oesophago gastro duodenoscopy to all the patients above 40 years having dyspepsia.

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