



Study of Incidence of Malignancy in Upper Gastrointestinal tract in Dyspeptic Patients

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Abstract

Objective: *The aim of study was to evaluate the results obtained by histopathological examination of biopsy material of dyspeptic patients who had undergone endoscopy. A correlation with causative agents and various risk factors with the results of histopathological examination was done.*

Material and Methods: *A total 600 dyspeptic patients were studied and among them 26 cases with malignancy have been included in the present study. Biopsy materials of the present study were collected from Sri Krishna Medical college, Muzaffarpur. Selection of cases for study in the present work was done by taking detailed history and clinical examination of patient suffering from dyspepsia. Prior to endoscopic biopsy all the relevant routine investigations (CBC, ESR, LFT, KFT, BT, CT, Blood sugar and Viral markers) were performed. Upper GIT endoscopy was done in selected patients suffering from dyspepsia and suspected biopsy material was taken out and kept in fixative (10 % formal saline). Tissue was processed and stained by H & E stain for histopathological examination.*

Result: *Malignancy in dyspeptic patient was more in male than female and more common in those whose staple food was rice (46.15 %). Adenocarcinoma of stomach was most common malignancy (92.3 %) followed by squamous cell carcinoma of oesophagus (7.69 %).*

Conclusion: *The present study has pointed out important epidemiological contribution in the incidence of upper GIT malignancy in dyspeptic patients.*

Keyword: *Dyspepsia, endoscopic biopsy, upper GIT malignancy.*

Introduction

Dyspepsia is a term used broadly to describe episodic or persistent upper abdominal symptoms believed to arrive from the upper digestive tract. Symptoms may or may not be related to eating and may induce epigastric pain, bloating, fullness, belching, nausea or early satiety.

Dyspepsia is prevalent in more than one fourth of general population and is the frequent reason for medical consultation. There are several factors, which causes dyspepsia in general population. Acute, self limited indigestion may be caused by over eating, eating too quickly, eating high fat foods, eating during stressful situations or

drinking too much alcohol or coffee. Many medications cause dyspepsia, including aspirin, NSAIDs, antibiotics (metronidazole, macrolides), corticosteroids, digoxin, theophyllin, iron and narcotics.

Over 40% of patients who present with dyspeptic complaints to the physicians are concerned about underlying malignancy. Yet the prevalence of malignancy among such patient is only 1-5% (Mc. Quaid et al).

The management of patients presenting with dyspepsia remains controversial. It has been shown to be cost effective and associated with long term improvement to test and treat young patients positive for H. Pylori, who present to the primary case setting. Prompt endoscopy is recommended in patients over age 50 years, those with alarm symptoms and those who have failed previous therapy. (Lee MG, 2004)

The incidence rate of gastrointestinal tract cancer in India is moderate to low, and it varies significantly from region to region.

In both sexes, the carcinoma of oesophagus is the commonest site followed by stomach, gall bladder, rectum, colon, liver and pancreas. (Mohan Das K.M. et al)

Stomach cancer incidence rates are much lower in India than elsewhere, but the stomach remains one of the 10 leading sites of cancer in both sexes of India. (Rao D.N. et al 2002)

The incidence of small intestinal malignancies is very low (1-5% of G.I.T. malignancies in India). (Cohen et al)

Materials and Methods

Present study was conducted in the Department of pathology, Sri Krishna Medical College, Muzaffarpur, with the help of Department of Medicine, during the period of September 2018 to August 2019.

Altogether 600 dyspeptic patients were studied. Selection of cases for study in the present work was done by taking detailed history and clinical examination of patients suffering from dyspepsia. Prior to endoscopic biopsy, all the relevant routine

investigations (CBC, ESR, LFT, KFT, BT, CT, Blood Sugar, and Viral markers) were performed. Upper GIT endoscopy was done in selected patients suffering from dyspepsia and suspected biopsy material was taken out and kept in fixative (10% formal saline). Tissue was processed and stained by H & E stain. Now the slide was examined under low and high power of light microscope respectively.

Results

Out of 600 dyspeptic patients, only 26 i.e. 4.3% were diagnosed as having malignancy. This study shows that maximum incidence of malignancy is in the 6th decade followed by 5th decade and more common in male than female (2:1). The most common site of malignancy is pyloric antrum (73.07%). Adenocarcinoma of stomach is most common malignancy (92.30%) followed by squamous cell carcinoma of oesophagus (7.69%).

Table I Showing incidence of various types of dyspepsia (with or without malignancy) in dyspeptic patients

	No. of cases	Percentage
Total no. of dyspeptic patients	600	100
Functional dyspeptic patients	318	53
Organic dyspeptic patients	282	47
Organic dyspeptic patients without malignancy	256	42.7
Organic dyspeptic patients with malignancy	26	4.3

Table II Showing incidence of upper GIT malignancy in dyspeptic patients in different age groups:

Age in year	No. of cases	Percentage
0 - 10	00	00%
11 - 20	00	00%
21 - 30	01	3.8%
31 - 40	03	11.5%
41 - 50	07	26.9%
51 - 60	12	46.10%
61 & above	03	11.5%

Table III Showing sex incidence in upper GIT malignancy in dyspeptic patients

Sex	No. of cases	Percentage
Male	18	69.2%
Female	08	30.7

Table IV Showing incidence of upper GIT malignancy in different socio-economic groups

Socio-economic group	No. of cases	Percentage
Upper class	02	7.69%
Upper middle class	05	19.2%
Lower middle class	08	30.7%
Lower class	11	42.3%

Table V Showing duration of symptoms in dyspeptic patients with upper GIT malignancy:

Duration of month	No. of cases	Percentage
0 - 2	00	00%
3 - 5	02	7.6%
6 - 8	15	57.6%
9 - 11	07	26.9%
12 & above	02	7.69%

Table VI Showing various site of involvement of upper GIT malignancy in dyspeptic patients based on endoscopic findings :

Site	No. of cases	Percentage
Cardia	00	00%
Body	05	19.23%
Antrum	19	73.07%
Oesophagus	02	7.69%

Table VII Showing incidence in relation to histopathological types of upper GIT malignancy in dyspeptic patients

Site	Histopathological findings	No. of cases	Percentage
Stomach	Adenocarcinoma	24	92.3%
Oesophagus	Squamous cell carcinoma	02	7.69%

Table VIII Showing incidence of upper GIT malignancy in patients in relation to food habits:

Type of food	No. of cases	Percentage
Staple food rice	12	46.15%
Staple food rice & wheat	06	23.07%
Staple food wheat	03	11.54%
Food with plenty of animal protein	05	19.23%

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

Type of addiction	No. of cases	Percentage
Smoking	11	42.30%
Alcohol	08	30.76%
Tobacco chewing	05	19.23%
None	02	7.69%

Table X Showing different symptoms in the present series of patients (n=26):

Symptoms	No. of cases	Percentage
Pain abdomen	24	92.30%
Nausea & vomiting	14	53.84%
Dysphagia	01	3.84%
Abdominal mass	16	61.53%
Heart burn	12	46.15%
Anorexia	21	80.76%
Weight loss	19	73.07%
Weakness	19	73.07%
Ascites & jaundice	02	7.69%

Discussion

Out of 600 dyspeptic patients, 318 (53%) are diagnosed as functional and 282 (47%) as organic dyspepsia. Among organic dyspeptic patients 256 (42.7%) are without malignancy and 26 (4.3%) are with malignancy. Julkunan (1995) reported almost same incidence of functional and organic dyspepsia with or without malignancy, but this study is dissimilar to Peterson (1995) who reported in his series, functional dyspepsia in 71% and organic dyspepsia in 29%. Kang (1994) observed functional dyspepsia in 50.4% and organic dyspepsia in 49.6% in his study.

Maximum incidence of GIT malignancy is in the 6th decade (46.1%) followed by 5th decade (26.9%) in the present series of study. Khodaskar et al (1982) from central India, Prabhakar (1981) from Amritsar, Subharwal et al (1975) from Ludhiana and Paymaster (1968) from Mumbai have also observed in their study that more than 60% of stomach carcinoma occurs in 5th and 6th decade. Neuget (1996) and Nagraj Rao D et al (2002) have also analysed in their study that maximum incidence of gastric malignancy is in the 6th decade of life.

After analysing socio-economic status, it is observed that lower socio-economic group (42.3%) are most commonly affected followed by lower middle class (30.7%). Prabhakar et al (1981) from Amritsar reported in their study that the incidence of upper GIT malignancy is higher in lower socio-economic group (46%), which is supported by others like 43.4% by Koteshwar Rao et al (1984) from Karnataka, 41.7% by

Khodaskar et al (1982) from central india and 45.8% by Neuget et al (1996) from USA.

After analysing duration of symptoms, it is observed that the most common duration of symptoms is between 6-8 months (57.6%), followed by 9-11 month (26.9%). This study is similar to Sharma (1974) and Costello et al (1977) who said that majority of the patients suffering from gastric malignancy presented within 6-8 months. But Phospha Krishna (1969) in his study found that all gastric malignancy patients presented within 2-4 months of symptoms.

In the present study adenocarcinoma of stomach is found to be the most common malignancy followed by squamous cell carcinoma of oesophagus. Remine (1969) reported that 95% of gastric malignancy was adenocarcinoma. Illingworth (1967) and Meyer (1995) have also reported in their study that majority of cases, the carcinoma is adenocarcinoma in nature.

It is observed that gastric malignancy is predominantly found in those who take rice as main constituent of food (46.15%). Segi et al (1957) observed a high incidence of gastric malignancy (48.3%) who used rice as staple food. Nearly half of the patients (42.30%) in the present study is found to be addicted with smoking. This finding is similar to study made by Gajalaxami C.K. et al (1996) who reported that bidi and cigarette smoking are significant risk factors for stomach cancer.

Commonest presentation of gastric malignancy is abdominal pain (92.30%) followed by anorexia (80.76%), weight loss (73.07%) and weakness (73.07%).

Conclusion

The present study has pointed out important epidemiological contribution in the incidence of upper GIT malignancy in dyspeptic patients, but this study is limited to 26 cases so no final conclusion can be derived from this. It is for the future workers to find out the more detailed epidemiological and various aspects of upper GIT malignancy in this region.

There is a strong need to educate people, and make them realize the importance of the ill-effect of smoking, alcohol use and various aspects of life style which are associated with upper GIT malignancy, especially to the illiterates and people of low socio-economic group.

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