www.jmscr.igmpublication.org
Impact Factor (SJIF): 6.379
Index Copernicus Value: 79.54
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v6i9.03

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Original Article

Incidence of Upper Gastrointestinal Tract Malignancy in Patients with Dyspepsia-A Prospective Study

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Abstract
Background: *Dyspepsia is having one or more symptoms of epigastric pain, discomfort, post prandial fullness, early satiety. It may be functional or organic. Among the organic causes of dyspepsia, only 5.12% are found to be malignant of which Adenocarcinoma stomach is the main cause followed by s.c.c of esophagus.Ca stomach is more common in blood grp A ,alcoholic,& in male patients. Antrum is the most common site of involvement, more common in 6th decade of life. Abdominal pain is the most common presentation followed by anorexia. This study hi lights these risk factors in detail & compares the results with other studies.*
Aim & Objectives: *To know the incidence of malignancy in the dyspeptic group to take endoscopic biopsy, HP study confirmation and to correlate various causative agents & risk factors.*
Material & Methods: *This prospective study was based on detailed study of 780 pts with dyspepsia attending S.C.B medical college 0PD of gen surgery, gen medicine, gastroenterology during the period from sept 2014 to sept 2016.in the dept. of gen. surgery. A detail history, clinical exam was carried out.pts were selected according to the inclusion criteria. They underwent routine investigations, endoscopic evaluation & biopsy whenever required. The results showed the incidence of GI malignancy & its contributory factors.*
Results: *In the prospective study in 780 dyspeptics pts 55%were functional dyspepsia & 45% were organic. Among organic dyspepsia 5.12% were detected with malignancy (max. age 6th decade). Adenocarcinoma stomach was the most common followed by s. c. c of esophagus. Factors associated with ca stomach are male, alcohol, blood gr A, low socio economic status. Abdominal pain was the most consistent finding (90%), followed by anorexia (80%), wt loss, weakness. Our results are almost comparable to the results of other studies.*
Conclusion: *GI malignancy particularly Adenocarcinoma stomach followed by s.c.c esophagus were found only 5.12% of the total no of pts with organic dyspepsia. There is a strong need to educate people regarding the risk factors like smoking, alcohol use, other life style.*
Keywords: *organic dyspepsia, GI malignancy, adenocarcinoma stomach.*

Introduction

Dyspepsia is defined as having one or more symptoms of epigastric pain, discomfort or burning sensation, post prandial fullness or early satiety (Tack et al 2006).Bloating & nausea often coexist with dyspepsia but no specific. so not included. Heart burn is also excluded from diagnostic symptoms criteria since it s thought to primarily arise from esophagus and is suggestive of GERD although it may occur con commitantly. Similarly retrosternal pain suggestive of esophageal origin is also distinguished from dyspepsia. it may be functional or organic dyspepsia. [1,2] According to ROME III working group functional dyspepsia is defined as the symptoms thought to originate in gastroduodenal region in the absence of any organic, systemic, metabolic disease (Tack et al 2006).duration should be atleast 3 months. Organic dyspepsia denotes dyspepsia for which a responsible disease process has been identified. In this group 3 major causes GERD(25%) with esophagitis (5-15%), chronic peptic ulcer diseases (5-15%) & malignancy (<2% in the pts refd for endoscopy for dyspepsia) were found.[3,4,5] Our study reported a prevalence of dyspepsia from 21-41% but recent study shows it to be 32-54% (karger et al 1990)[6]. Malignancy among such pts is only 1-5%. (McQuaid). Endoscopy is the standard exam. to diagnose the upper GI malignancy. American association of UGI (AGA)recommends dyspepsia pts over 55 or those with alarm features such as wt loss, dyspepsis, GI bleeding, anaemia, persistent vomiting, should undergo endoscopy. In both the sexes adenocarcinoma was the most common. followed by s.c.c esophagus. Many risk factors associated with these are tobacco, alcohol, diet containing nitrites, consumption of tea, coffee & more so in low economic status. [8,9] These risk factors are very prevalent in odisha.

S,C,B medical college is one of the pioneer institutes of odisha. Not much studies has been done in the topic. More studies are still required to highlight the different aspects of the problem.

Our aim was to know the incidence of malignancies in these sorted out dyspeptic pts in specified period of time, to evaluate the results of endoscopic biopsy & its histopathological exam in dyspeptic pts & also to correlate the findings to various causative agents & risk factors.

Material & Methods

This study was based on a detailed study of patients with dyspepsia attending OPD of department of medicine, dept. of gastroenterology, dept of surgery during the period from September 2014 to September 2016 in the Dept of surgery, s.c.b medical college, cuttack. A prospective study was done with regard to age, sex, symptoms & its duration, severity & the associated risk factors. The inclusion criteria were all patients with dyspepsia who had agreed to undergo UGI endoscopy. Exclusion criteria were the patients under 14 yrs & pts with documented liver diseases. Alarm symptoms included were wt loss, dysphagia, GI bleeding, anaemia, persistent vomiting. Reports of available laboratory & endoscopic reports were also obtained. Detailed history & clinical examination were carried on these pts according to a proforma containing particulars of the pt (name, age, sex, address, ocupation), chief complaints (pain abdomen, nausea vomiting, haematemesis, melena, anorexia, wt loss, dysphagia, odynophagia, dyspepsia, flatulence, abdominal mass, weakness, heart burn, regurgitation) past history (peptic ulcer, previous gastric surgery, malignancy) family h/o GI malignancy, personal history (alcohol drinking, bidi or cigarette, betel nut chewing, khaini chewing.) socio economical status. After history & clinical examination routine examinations (DC, TLC, Hb, Blood grouping), stool exam for ocult blood, upper GI endoscopy, histopathological examination of the biopsied tissues were done. Upper GI endoscopy was recommended in pts with dyspepsia who had alarming symptoms. Endoscopy was done & tissue biopsies were taken. The biopsies were then kept in 10 % formal saline & are sent to department of pathology,

S.C.B medical college for Histopathological examination.

Results: in our study the following observations were made.

Table-1 Incidence of various types of dyspepsia (with or without malignancy)

	no. of cases	percentage
Total No. of dyspeptic patients	780	
Functional dyspeptic pts	429	55
Organic dyspepsia	351	45
Organic dys.without malignancy	311	39.8%
Organic dys with malignancy	40	5.12%

Among 351 cases of organic dyspeptic pts, 40 pts (11.39%) were malignant & 311 pts (88.6%) were without malignancy. Out of 780 dyspeptic pts 40 pts ie 5.12%were malignant.

Table-2 Incidence of upper gi malignancy in dyspeptic pts in diff. age groups

Age in years	no of cases	percentage
0-10 YRS	00	00
11-20	00	00
21-30	03	7.5
31-40	04	10
41-50	12	30
51-60	16	40
61 & above	05	12.5

There is maximum incidence of malignancy in 6th decade (40%)

Table-3 Sex incidence of ugi malignancy in dyspeptic pts

Sex	no of cases	percentage
Male	24	60%
Female	16	40%

Male to female ratio is 1.5

Table- 4 Incidence of upper g.i. malignancy in dyspeptic patients as per their socioeconomic status

Socioeconomic group	No. of cases	Percentage
Upper class	02	5%
Middle upper class	07	17.5%
Middle lower class	13	32.5%
Lower class	18	45%
Total	40	100%

Incident is more common in lower socioeconomic group (45%).

Table- 5 Histopathological types of upper gi malignancy in dyspepctic patient

Site	Histopathological findings	No. of cases	Percentage
Stomach	Adenocarcinoma	36	90
Oesophagus	Squmous cell carcinoma	04	10

Adenocarcinoma of stomach is the most common malignancy (90%) followed by squamous cell carcinoma of oesophagus (10%)

Table-6 Incident of upper gi malignancy in relation to habits & addictions

Types of addictions	No. of cases	Percentage
Smoking	16	40
Alcohol (Handia)	17	43.3
Tobacco chewing	5	13.3
None	01	3.3

Majority of patients are alcoholic (43.3%) followed by smoking groups (40%).

Table- 7 Incidence in various blood groups

Blood group	no of cases	percentage
A	20	50
AB	01	3.33
B	10	26.67
O	08	20
TOTAL	40	100

Table- 8 Various sites of involvement

Site	no of cases	percentage
Cardia	2	5
Body	6	15
Antrum	29	72.5
Esophagus	3	7.5

Most common site is pyoloric antrum (73.3%) followed by body (16.67%) & then esophagus (6.67%)

Discussion

The present study was carried out on 780 patients (pts) with various symptoms of dyspepsia. All the patients were subjected to UGI endoscopy and suspected lesions were biopsied.Tab1 shows out of 780 pts 429(55%) were functional and 351 (45%) were organic. Among pts with organic causes 19.5% & only 5.12%of total dyspeptic pts

were found to be malignant. This observation was similar to Julkunen's study (1995)[6] but disimilar to Peterson's study who reported functional cases to be 71% & organic cases 29%.This study was also similar to marritsalo's study(2008)who showed incidence of UGI malignancy in dyspeptic pts with alarming symptoms was 5.5%. Tab2 shows the max. incidence was found in 6th decade followed by (f/b) 5th decade. This is in accordance with the study by Paymaster, Mumbai (1968), Prabhakar from Amritsar (1981), Khodaskar[7] et al (1982) but Tandon & Usha sharma[11] (1984) showed the incidence is max. in 5th decade. Tab3 shows, in our study male were 66.67% & female were 33.3%, the ratio being 1.5:1.Paymaster [10] from TMH mumbai reported M:F ratio to be 2.6:1. In USA it s 2:1. The incidence is more common in low economic status (45%) which also reflects in study by Prabhakar et al(43.4%)and Khodaskar (41.7%). Tab8--shows the parts affected were antrum (72.5%), body (15%), esophagus (7.5%) & cardia (5%). Lumpkin (1963), Sharma (1974), Ferostio-Preiser (1996) also showed the same. Gadeker's study showed the body to be commonly affected.Tab5 showed adenocarcinoma is the MC malignancy similar to other studies. Malik et al (1976) found 90.3% were adenocarcinoma f/b lymphoma (5.6%), sarcoma (2.8%) and 1.3%were carcinoid.

In our study gastric malignancy was found predominantly in those who who take rice & some form of alcohol as their main diet. Segi et al noticed a high incidence in those who use rice as their staple diet. Tondon[11] also observed the same with green vegetables, citrus fruits, showed protective effects.Siddiqui[15] et al(1992)reported in his study that consumption of red chili , salted tea maybe a possible cause of stomach cancer. Smoking was found in half of our pts similar to study by Gajalaxmi c.k et al[13] (1996).Alcohol addiction was present in 43.3% of our cases similar to Segi .Tobacco chewing contributes 13.3% of our cases which is not found in Nagraj[12] et al study (2002). Present study reveals that gastric malignancy in dyspeptic pts were more common in blood group A f/b B.(Rai,saronwala & singh 1972 study showed the same. Koteswar rao showed the higher incidence in O group f/b A.[14] In our study most common symptom is abdominal pain (90%), f/b anorexia (80%), wt loss (80%), abdominal mass (30%). Phosphakrishna (1965) observed the same where as Shahon in his study showed that majority presented with abd. Pain (66%) f/b epigastric mass (49%),jaundice and ascitis was found in 3.3% cases.[16]

Conclusion

The present study has pointed out important epidemiological contributions in the incidence of UGI malignancy in dyspeptic pts of S.C.B medical college, cuttack. This prospective study was carried out on 780 dyspeptic pts out of which 40 pts were diagnosed with malignancy mostly adenocarcinoma stomach f/b s.c.c of esophagus. It is more common in smokers, alcoholics, low socioeconomic status, people with blood gr A. There is a strong need to educate people regarding the ill effect of smoking, alcohol, and to have a healthier life style.

Source of funding: Nil
Conflict of interest: Nil
Approval of ethical committee: Taken

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