



GASTRIC CANCER IN YOUNG PATIENTS WITH NO ALARM SYMPTOMS: FOCUS ON DELAY IN DIAGNOSIS

Gastroenterology

Rathod Vivek* DM Gastroenterology Postgraduate. *Corresponding Author

Nithin K R DM Gastroenterology Postgraduate

Kani Shaik Mohamed DM Medical Gastroenterology

ABSTRACT

INTRODUCTION: There has been a tendency in recent years to delay endoscopy in dyspeptic patients younger than 45yrs with no so-called "alarm symptoms." This study was conducted to test whether this policy might lead to an increased rate of delayed diagnosis of gastric cancer.

METHOD: A retrospective study was carried out on gastric cancer patients younger than 45 years of age identified from databases in our hospital from October 2020 to September 2021. Characteristics analyzed included duration and features of dyspeptic symptoms, presence of alarm symptoms, time interval from the onset of symptoms to diagnosis and pathological characteristics.

RESULTS: In the study group we found 30 patients had gastric cancer (17 females, 13 males). 06 patients (20%) presented with uncomplicated dyspepsia and 24 patients with (80%) alarm symptoms (persistent vomiting, anemia, weight loss, dysphagia). None had positive family history. In those with uncomplicated dyspepsia epigastric pain was the most common complaint (64.1%) followed by vomiting (30.4%). Weight loss was the most common alarm symptom (53.3%), followed by anorexia (46.6%). Of the 6 patients without alarm features 3 were having adenocarcinoma, 2 lymphoma, 1 signet ring cell carcinoma. The mean delay from first symptoms to final diagnosis was 16.8 weeks in patients with alarm symptoms and 29.3 weeks in patients without alarm symptoms

CONCLUSION: Significant proportion of young (≤ 45 yrs) gastric cancer patients present without alarm symptoms. We need to review the existing standard age criteria (>45 yrs) for endoscopy in dyspepsia without alarm features particularly in high gastric cancer prevalence areas.

KEYWORDS

Young gastric cancer, endoscopy, dyspepsia.

INTRODUCTION

Dyspepsia is an important and costly health problem not just on account of the high prevalence in the general population, but also because of the considerable size of the dyspeptic population requiring consultations, endoscopy and drug prescriptions (1).

To cope with the increasing demand for endoscopy, which in most patients does not reveal serious diseases, and to contain costs, various guidelines have proposed that empirical treatment strategies with endoscopy be reserved for non-responders among patients 45 years of age or younger presenting with alarm symptoms (AS). These features were adopted in order to minimize the risk of missing gastric cancer (GC) or delaying diagnosis if still in a treatable stage.

European and American authorities recommended this so-called 'test-and-treat strategy' for *Helicobacter pylori* infection as a safe and cost-effective management strategy for dyspeptic patients (2–4). However, this strategy has raised some concern, since young GC patients may have no AS and thus empirical treatment or absence of early endoscopy may delay the diagnosis of GC, resulting in a more advanced stage at diagnosis and negatively affecting survival.

To date, no investigations have been carried out to evaluate the prevalence of AS in young GC patients, or the potential impact of absence of AS on delay of diagnosis, stage of GC at diagnosis and survival.

We evaluated the frequency of alarm symptoms in a series of young gastric cancer patients and whether the absence of alarm symptoms would delay the diagnosis of gastric cancer in young patients.

PATIENTS AND METHODS

Patients of younger than 45 years of age with gastric cancer diagnosed between October 2020 to September 2021 were retrospectively identified from databases in our hospital (Kilpauk Medical College, Chennai).

The clinical characteristics analysed from each patient's records included, for this study: sex, age at diagnosis, duration and features of dyspeptic symptoms, presence of alarm symptom, time elapsing from the onset of symptoms to histological diagnosis. Weight loss, anorexia, dysphagia, anaemia and GI bleeding were considered symptoms of complicated dyspepsia or alarm symptom. Epigastric pain, heartburn,

nausea and vomiting were classified as symptoms of uncomplicated dyspepsia. Since it is impossible to retrospectively discriminate between persistent vomiting in relation to meal form 'simple' vomiting, we regarded this dyspeptic symptom as related to uncomplicated dyspepsia.

Statistical Analysis

The distribution of individual characteristics was evaluated by simple descriptive statistics and variable frequency between the groups and was compared using the Fisher exact tests.

The Wilcoxon rank-sum tests for unpaired data were used for statistical evaluation of the significant differences between the two groups for continuous variables.

RESULTS

A total of 30 patients were studied (13 men, 17 women; median age 40 years, range 19–45). Of these 06 patients (20 %) presented with uncomplicated dyspepsia and 24 (80 %) complained of one or more AS at the time of diagnosis.

Among patients without alarm symptoms, Epigastric pain was the most common complaint (64.1%) followed by vomiting (30.4%), heartburn and nausea.

Weight loss was the most common alarm symptom (53.3 %), followed by anorexia (46.6 %), dysphagia or anaemia (7.6%) and GI bleeding (3.2%); no patient presented abdominal mass.

Anorexia was related to weight loss in 90% of cases and reported as the only AS in one patient. Patients complaining of AS presented epigastric pain and vomiting as the more frequent coexisting dyspeptic symptoms (Table I). The frequency of the various dyspeptic symptoms in patients with AS was not significantly different from that of patients with uncomplicated dyspepsia (Table I).

Of the 6 patients without alarm features 3 were having adenocarcinoma, 2 lymphoma, 1 signet ring cell carcinoma.

The mean (SD) time elapsing from first symptoms to final diagnosis was 16.8 (13.9) weeks (median 12.1; range 0–53) for patients with alarm symptom and 29.3 (39.9) weeks (median 12.7; range 1–209) for patients with no alarm symptom ($P = ns$).

Table – 1 Comparisons Of Various Dyspeptic Symptoms For Patients With And Without Alarm Symptoms

	Complicated dyspepsia (n = 24) (80%)	Uncomplicated dyspepsia (n = 06) (20%)	P value
Weight loss	13 (53.3%)		
Anorexia	11 (46.6%)		
Anaemia	10 (40%)		
Dysphagia	4 (16.3 %)		
GI bleeding	2 (8.3 %)		
Epigastric pain	14 (60.5%)	4 (66.6%)	0.7
Vomiting	9 (39.5%)	2 (33.3 %)	0.2
Epigastric discomfort	3 (12.5%)	1 (16.6%)	0.2
Slow digestion	4 (16.3 %)	1 (16.6 %)	1.0
Heartburn	5 (20.8 %)	1 (16.6 %)	0.6
Nausea	7 (29.1 %)	3 (33.3%)	0.07

DISCUSSION

The incidence of gastric cancer is decreasing worldwide but its prognosis is still poor making it third most common cause of cancer related death. Gastric cancer is considered as disease of elderly with peak incidence occurring at 60 to 70 years age. Gastric cancer is not rare in young dyspeptic patients without alarm symptoms (5-7). The incidence of gastric cancer in young patients varies from 7% to 13% of total patients. Some authors have defined young age as less than 35 or 45 years however most of the authors have used 40 years as cut off age to define “young age” for gastric cancer. Age of 45 years or less was considered as young as in our study. In our retrospective survey, only 20 % of Gastric cancer patients presented without alarm symptoms . This figure is comparable to that of another prospective report (8), but lower than that reported in other retrospective studies (5, 9–11). It is difficult to compare our data with those of these studies because of the different age cut-off, settings and stage of GC, definition of AS and because gastric and oesophageal cancer have been grouped together in most of these reports.

Overall, gastric cancer was more common in male, but in young group females were more common. In our study Male to female ratio was 1: 1.30 . Comparable findings with higher proportion of female in young group are reported by other authors in similar studies . The cause of higher proportion of women in young age group is not known.

Of the 6 patients without alarm features 3 were having adenocarcinoma, 2 lymphoma, 1 signet ring cell carcinoma. Poorly differentiated carcinoma was more common in young patients in our series which is similar to series from by many other authors. Poorly differentiated tumor has poorer prognosis in majority of patients (12).

Among patients without alarm symptoms, Epigastric pain was the most common complaint followed by vomiting, heartburn and nausea. Weight loss was the most common alarm symptom followed by anorexia. Although the AS considered in these and other retrospective studies are similarly classified, even though poorly defined in most instances, the major difference between our study and those of others concerns the prevalence of all alarm features. In our study vomiting is regarded as a symptom of uncomplicated dyspepsia. Since it was not possible to define a grade of severity of the symptoms and to differentiate 'simple' vomiting from 'persistent' vomiting, this has been considered as an indicator of functional non-organic dyspepsia, as reported elsewhere (13). Indeed, in this regard, it is still not clear, in the current guidelines, whether vomiting should be considered as an AS or a symptom suggesting uncomplicated or functional dyspepsia (3).

We found that the mean time delay from first symptoms to final diagnosis was not statistically significantly different between patients with and without AS. This finding is in keeping with those of a prospective study by Martin et al., who found that there is no significant relationship between the nature of symptoms and delay in diagnosis (8). In this study, even when an AS, such as dysphagia, was the main symptom, the diagnosis was not made significantly more rapidly than in patients without AS.

As in their study, we found a considerable variation in the delay from onset of symptoms to final diagnosis, in particular in patients presenting with uncomplicated dyspepsia, and an overall median delay of 12 weeks. Indeed, it is possible that patients with a long history of dyspepsia, particularly those without AS, had dyspeptic complaints

unrelated to their GC, thus using the term 'diagnostic delay' for these patients is not justified.

However, the correct evaluation of the delay in diagnosis may be biased by the study design. We have no information regarding patient-related or doctor-related delay, nor do we know whether patients have been submitted to previous investigations. In a retrospective study, it is also difficult to correctly evaluate the severity of symptoms at onset and determine whether they are modified with time. In fact, it is possible that GC patients with AS at diagnosis had complained of uncomplicated dyspepsia at the onset of their symptoms, and developed AS later. We do not know whether these patients differ from those presenting with AS as far as concerns delay of diagnosis, features and stage of GC. A prospective study is needed to evaluate this aspect.

In our study we showed that significant proportion of young (<= 45yrs) gastric cancer patients present without alarm symptoms. We need to review the existing standard age criteria (>45 yrs) for endoscopy in dyspepsia without alarm features particularly in high gastric cancer prevalence areas.

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