Original article

Alarm symptom in dyspepsia: is there really a reason to be alarmed?

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Abstract

Our study was a retrospective study of 796 patients between March 2011 to Feb 2014 (4 years review), older than 45 years presenting to KR Hospital Surgery OPD with complaints of dyspepsia associated with any one of the alarm symptom. We found the sensitivity and predictive values of alarm symptoms of dyspepsia to UGI Cancers insufficient to be used as efficient screening for selection of cases for UGI-scopy. But due to a dearth of better predictors and until better predictors are made available, alarm symptoms can definitely be used as a guide to detect cancer early in younger patients with the aid of UGIscopy.

Introduction:

Our study was a retrospective study of 796 patients between March 2011 to Feb 2014 (4 years review), older than 45 years presenting to KR Hospital Surgery OPD with complaints of dyspepsia associated with any one of the alarm symptom. We found the sensitivity and predictive values of alarm symptoms of dyspepsia to UGI Cancers insufficient to be used as efficient screening for selection of cases for UGI-scopy. But due to a dearth of better predictors and until better predictors are made available, alarm symptoms can definitely be used as a guide to detect cancer early in younger patients with the aid of UGIscopy. Our aim was to assess the diagnostic accuracy of alarm symptoms in predicting UGI malignancy in patients with dyspepsia.

Materials and methods:

A retrospective study of 796 patients between March 2011 to Feb 2014 (4 years review), older than 45 years presenting to KR Hospital Surgery OPD with complaints of dyspepsia associated with any one of the alarm symptom (Dysphagia, Weight loss, Anemia, Vomiting, Bleeding). Endoscopy performed after 6-8 hours nil per oral. If any growth/lesion was visualised on endoscopy, biopsy was performed and specimen sent for histo-pathological examination. Endoscopy findings registered in a report book. Cases were followed up for histo-pathological report and findings were noted. Different lesions noted on endoscopy and histopathological examinations are correlated with alarm symptoms of dyspepsia patients.
**Inclusion criteria**  Dyspepsia patient >45 years with history of any one of the alarm symptom (Dysphagia, Weight loss, Anemia, Vomiting, Bleeding).

**Exclusion criteria**  Patients with previous investigations for dyspepsia, dyspepsia <45 years, known case of upper GI malignancy, recent treatment for dyspepsia (less than 4 weeks), recent use of acid suppression (less than 4 weeks).

**Observations:**

| Table 1: Observed Number of UGI Cancers among patients presenting with specific alarm symptom |
|----------------------------------|-------------|------------|----------------|----------------|-------------|
|                                  | Dysphagia  | Vomiting  | Anemia / Bleeding | Weight Loss |
| UGI Cancer                       | 32         | 6         | 3               | 3             |
| Other Findings                   | 386        | 64        | 49              | 27            |
| Total cases                      | 418        | 70        | 53              | 30            |

| Table 2: Calculating Sensitivity, Specificity, Positive predictive value (PPV), Negative predictive value (NPV). |
|---------------------------------|-------------|------------|-----------------|----------------|-------------|
| Sl no                           | Alarm symptom | Total cases | carcinoma | Sensitivity (%) | Specificity (%) | PPV (%) | NPV (%) |
| 1                               | Dysphagia   | 418        | 32       | 38.1           | 43.23          | 7.66    | 77.78   |
| 2                               | Vomiting    | 70         | 6        | 30             | 91.7           | 8.57    | 98.07   |
| 3                               | Anemia/bleeding | 52         | 3        | 16.67          | 93.70          | 5.77    | 97.98   |
| 4                               | Weight Loss | 30         | 3        | 23.08          | 96.18          | 10      | 98.69   |

**Discussion:**

Dyspepsia is defined as “an upper gastrointestinal symptom complex characterized by epigastric pain or discomfort and may include heartburn, acid regurgitation, excessive burping/belching, abdominal bloating, feeling of abnormal or slow digestion, early satiety or nausea”.\(^1\) About 40% of the general population report dyspepsia at some time in their life making it a fairly common disease.\(^2,3\) Upper gastrointestinal (UGI) malignancies are estimated to be responsible for 1%–3% of all cases of dyspepsia\(^4,7\) Currently anti-secretory treatment is started for dyspepsia and endoscopy is reserved for dyspepsia with danger signs\(^8\). The American Gastroenterological association currently recommends endoscopy in all patients over the age of 45 years presenting with dyspepsia with or without alarm features. Alarm features for dyspepsia are anemia, dysphagia, bleeding, recurrent vomiting and weight loss.\(^9\)

India is known for a high prevalence of H Pylori Infection and a high incidence of UGI malignancies. Malignancies demand early detection and treatment. Diagnosis of an advanced (incurable) cancer carrying a poor prognosis, with endoscopy, carries little value clinically/economically. Hence, it is important that we find good predictors of malignancies to justify UGI endoscopy, a time consuming expensive investigation, rather than basing it on age/alarm symptom alone.
This study was conducted at KR Hospital Mysore. Dyspepsia is a relatively common problem in this part of the world. Economic and time constraints require careful evaluation of the patients so as to avoid costly investigations. Endoscopy provides sufficient patient reassurance and is the investigation of choice for targeting therapy. The results of this study indicate that there is a high prevalence of clinically significant upper gastrointestinal findings in patients with uninvestigated dyspepsia with alarm symptoms. We confirmed that clinically significant endoscopic findings were slightly more common in older patients with dyspepsia. We studied several alarm symptoms to learn whether they can provide useful diagnostic information to classify dyspeptic patients, referred to a tertiary GI clinic, as high-risk and low-risk for UGI cancers. Fransen and colleagues suggested using alarm symptoms in combination with other factors – such as age, gender, or smoking – might be a better tool for selection of high-risk patients. Numans and colleagues developed a risk-prediction model using calculated total scores and showed that classical alarm symptoms, via a risk-prediction model, are useful predictors of UGI malignancy. Like the results of our study, nearly all of these studies showed a relatively low predictive value for each alarm symptom, but perhaps a number of unnecessary endoscopies could be avoided using a combination of symptoms. Our results showed that no single predictor could perfectly differentiate between high- and low-risk groups. Furthermore, most esophageal cancer patients with dyspepsia are relatively elderly patients and dysphagia/weight loss indicate that the cancer is beyond the point of curability and use of this risk-prediction model would perhaps not be a significant risk to them.

**Conclusion:**
Alarm symptoms have a low sensitivity/specificity for detecting UGI cancer rates and hence are not the most ideal way to screen for patients for need of endoscopy. But due to a dearth of better predictors and until better predictors are made available, alarm symptoms can definitely be used as a guide to detect cancer early in younger patients with the aid of UGIscopy.
References:


