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Endoscopic evaluation of patients with dyspepsia in a secondary referral hospital in Egypt

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Abstract *Background:* Dyspepsia is a common clinical problem. More than half of patients presenting with dyspepsia have no detectable lesion for their symptoms. The common organic causes of dyspepsia include peptic ulcer, esophagitis and cancer. The diagnostic test of choice is endoscopy. Age specific thresholds to trigger endoscopic evaluation may differ by gender, availability of resources and regional disease specific risks.

Aim: The aim of the study was to determine the prevalence of significant endoscopic lesions in Egyptian patients presenting with dyspepsia in relation to age.

Materials and methods: This was a retrospective study. Data on patients presenting with dyspepsia and scheduled for upper gastrointestinal (UGI) endoscopy between January 2000 and January 2013 were collected.

Results: One thousand four hundred patients with dyspepsia (31% of all endoscopies) were assessed by UGI endoscopy. Fifty-one percent were male. The mean age was 43 ± 15 years. Four hundred and fifty patients (32%) had a history of smoking, 388 (32%) were taking aspirin or non-steroidal anti-inflammatory drugs and 22 (2%) were consuming alcohol. Endoscopy revealed normal findings or miscellaneous irrelevant findings in 913 patients (65%). Significant endoscopic findings were diagnosed in 487 (35%). These included peptic ulcers in 245 patients (18%), esophagitis in 191 (14%), erosive gastroduodenitis in 112 (8%) and UGI malignancy in 16 (1%). Significant endoscopic findings were associated with increasing age.

Abbreviations: UGI, upper gastrointestinal; NSAIDs, non-steroidal anti-inflammatory drugs.

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Conclusion: Dyspepsia is a common indication for endoscopy in Egypt. Endoscopy revealed normal findings or miscellaneous irrelevant findings in the majority of patients. The most frequent significant pathologies included peptic ulcer, esophagitis and erosive gastroduodenitis. These were associated with increasing age. UGI malignancy was uncommon and found in older age groups.

1. Introduction

Dyspepsia is defined as pain or discomfort in the upper abdomen.[1] It is a common disorder with a prevalence of up to 40% in the general population in Great Britain.[2] More than half of these patients presenting with dyspepsia have no detectable cause for their symptoms.[1] The common organic causes of dyspepsia are peptic ulcer, esophagitis and cancer.

Options for evaluating dyspeptic patients include therapeutic trials, testing for *Helicobacter pylori*, upper gastrointestinal (UGI) radiography, and endoscopy.[3–5] Once the decision has been made to investigate, the diagnostic test of choice is endoscopy.[1] Patients in whom investigations have revealed no organic cause are classified as having functional dyspepsia or ''non-ulcer dyspepsia''.[6]

Cancer of the UGI tract is usually advanced at the time of diagnosis but a low threshold of suspicion for gastric malignancy in dyspeptic patients may result in earlier diagnosis and improved survival. However cancer accounts for only 1–2% of diagnoses at UGI tract and less in patients under the age of 50 years.[7] Age specific thresholds to trigger endoscopic evaluation may differ by gender, availability of resources and regional disease specific risks.[8]

This study was undertaken to determine the prevalence of significant endoscopic lesions in Egyptian patients presenting with dyspepsia in relation to age.

2. Materials and methods

This was a retrospective study carried out at Bolak Eldakror Hospital over a 13-year period from January 2000 to January 2013. Bolak Eldakror Hospital is a secondary-care governmental hospital in Giza, Egypt. The hospital serves an area of nearly one million population. The gastrointestinal endoscopy unit was set up in 1999. The endoscopy unit provides an open-access service and receives patients from outpatient clinics and other hospitals in the area. Patients are from a lower socioeconomic background. All patients presenting with dyspepsia were included in the study. Ten gastroenterologists performed all endoscopies. Two UGI fiberscopes and two videoscopes (Olympus GIF-E and GIF-Q230) were used. Endoscopic biopsy was done at the discretion of the endoscopist. Pathological examination was performed by two expert pathologists.

2.1. Definitions

Dyspepsia was defined as epigastric discomfort, burning sensation or pain persisting for more than three months.[9] Heartburn is not included in the diagnostic symptom criteria for dyspepsia. It is thought to arise primarily from the esophagus being caused by gastro-esophageal reflux disease although it may occur concomitantly with dyspeptic symptoms.[8]

Significant endoscopic findings in the UGI tract were defined as those benefiting from specific treatment or those that are life threatening.[10] The presence of any of the following lesions was considered as a significant finding in UGI endoscopy: peptic ulcer, esophagitis (with or without hiatal hernia), erosive gastritis or duodenitis, stricture, Barrett's esophagus, esophageal candidiasis, neoplasm, mass and polyps.

Reflux esophagitis was graded according to the Savary–Miller grading.[11,12] Stage I: Erythematous or erythemato-exudative erosion (alone or multiple, not confluent). Stage II: confluent but not circumferential erosion. Stage III: circumferential erosive and exudative lesions. Stage IV: chronic lesions (ulcer, stenosis). The presence of any of the following lesions was considered as an irrelevant endoscopic finding: erythematous gastritis, atrophic gastritis and incidental miscellaneous abnormalities (varices, portal hypertensive gastropathy, hiatal hernia without esophagitis and vascular ectasia).

2.2. Patients and exclusions

A total of 4477 patients underwent UGI endoscopy between January 2000 and January 2013. Data on patients presenting with dyspepsia and scheduled for UGI endoscopy were collected. Patients who underwent UGI endoscopy for reasons other than dyspepsia such as dysphagia, UGI bleeding, or strong suspicion of cancer were excluded from the study. Patients with prior peptic ulcer were also excluded. Those whose procedures were not completed were excluded subsequently.

2.3. Data recording and statistics

Patients were stratified into three groups according to their age: less than 30 years (group 1), 30–50 years (group 2) and more than 50 years (group 3).[1]

A standardized data collection form (sheet) was completed for each patient. Recorded information included demographic data (age and gender), smoking history, drugs used (aspirin and non-steroidal anti-inflammatory) alcohol consumption, associated heartburn, endoscopic findings and histopathology. Data were analyzed to assess a statistically significant difference between the age groups for various gastrointestinal lesions. The data from the patients were registered, tabulated and statistically analyzed using the Statistical Package for Social Sciences (SPSS) program version 15 to calculate frequencies and the χ^2 test. P value was taken as significant at a level less than 0.05.