Basrah Journal of Surgery Review Article

ENDOSCOPY IN THE EVALUATION OF PATIENTS WITH UPPER GASTROINTESTINAL SYMPTOMS (DYSPEPSIA).

DOI: 10.33762/bsurg.2022.174669

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Abstract

A Retrospective study includes records of 1832 patients with dyspeptic symptoms who underwent endoscopic examination in Al-Mawani Teaching Hospital during the period from October 2015 - October 2019 were analyzed. 942 (51.4%) were males and 890(48.6%) were females, 794 (43.3%) had no endoscopic abnormalities,1038 (56.7%) had endoscopic finding.

Oesophagitis was seen in 149 (8.1%) patients , gastritis was seen in 603 (32.9%) patients, duodenal ulcer was seen in 257(14%) patients with male to female ratio (1.8:1) and peak age group between (20-40) years.

Gastric ulcer was seen in 47 (2.5%) patients with male to female ratio (1.2:1)and peak age group between (40-60) yrs, and ratio of duodenal to gastric ulcer was (5.5-1).

Combined duodenal and gastric ulcer was found in 4(0.2%) patients, gastric cancer was found in 10 (0.54%) patients with peak age group between (50-70) years.

It is concluded that endoscopy is golden standard test for diagnosis of gastroduodinal pathology.

Keywords: Dyspepsia, Endoscopy, Upper Gastrointestinal Symptoms, Gastric ulcer, duodenal ulcer, gastritis.

Introduction

Dyspepsia is defined as a constellation of symptoms that includes upper abdominal pain or discomfort , which is intermittent or constant and may be associated with additional symptoms of nausea, vomiting, bloating, and retrosternal chest pain.

Although these symptoms may be associated with wide range of special clinical diagnoses including hiatus hernia, oesophagitis, gastritis, gastric ulcer, gastric cancer, duodenal ulcer and duodinitis.

Except for hiatus hernia, these conditions are strongly associated with Helicobacter pylori infection.

Functional dyspepsia (non-ulcer dyspepsia) refer to dyspepsia with no clinical, biochemical, or endoscopic evidence of any organic disease that would account for symptoms [1,2].

Rome II diagnostic criteria for functional dyspepsia: patient meets the following criteria for at least (12) weeks. (which do not need to be consecutive) within the preceding (12) months :-

-Persistent or recurrent symptoms (pain or discomfort centered in the upper abdomen).

-No evidence of gastric disease (including an upper endoscope) that is likely explain the symptoms.

-No evidence that dyspepsia is relieved exclusively by defecation or associated with the onset of change in stool frequency or stool form (i.e not irritable bowel syndrome) [3, 4].

High risk patients presented with additional signs and symptoms, so called organic causes"alarm symptoms" suggestive of more significant [1, 5].

These high risk patients include the following:-

1. Patient over 50 years old with new onset dyspepsia.
2. Those with dyspepsia associated with dysphagia and / or weight loss.
3. Those with evidence of gastrointestinal bleeding (occult blood, anemia, hematemesis and malena).
4. Those who did not respond to an appropriate trial of empiric therapy.
5. Those patients using non steroidal anti-inflammatory drugs or other ulcerogenic drugs.
6. Those with signs and symptoms of upper gastrointestinal tract obstruction (vomiting and early satiety).
7. Those whose ethnic or racial background is associated with increased risk of UGI malignancies or other significant disease states.

In the absence of such ''alarm symptoms'' provisional diagnosis based on history and physical examination alone are often inaccurate leading to inappropriate management plans and delay in establishing the correct diagnosis [6, 7].

Endoscopic examination of upper gastrointestinal tract (UGI) remain the ''golden standard'' for establishing or excluding peptic ulcer disease and other significant organic disease or upper gastrointestinal tract pathologies.

Endoscopy is the procedures of choice for the diagnostic evaluation of UGI tract because of its ease, reliability, diagnostic superiority and the ability it gives the endoscopiste to perform biopsies and therapeutic intervention.

This is especially true for patient presented with dyspepsia and patients who are at high risk based on the presence of additional symptoms, physical sign or both. In the absence of high risk signs and symptoms, alternative non endoscopic strategies for initial management of patient with dyspeptic symptoms have been advocated by some [8]. These strategies includ

1- Empiric therapy with acid suppression or prokinetic agent

2- An empiric H. pylori testing and treating strategy.

In patients less than 55 years of age with uncomplicated dyspepsia non invasive for H. pylori is as effective and safe as endoscopy. Non invasive testing for H. pylori is as reassuring to the patients as endoscopy and is less un comfortable and distressing. Also its substantially cheaper than endoscopy.

The prevalence of dyspepsia: The annual prevalence of dyspepsia in western countries is approximately 25% and the condition account for 2-5% of all general practice consultation. Less than half of patients suffering from dyspepsia in Europe and USA seek medical help for their complaint, yet it is a major cause of morbidity and economic loss in community and can have significant impact on patient quality of life [9].

The role Helicobacter pylori in dyspeptic disease

H. pylori gram negative spiral organism, it is predominantly acquired in childhood and associated with life long gastritis and other gastroduodenal disorders, H. pylori is found in about half of people with non ulcer dyspepsia. H.pylori infection is a recognized factor in the development of duodenal and gastric ulceration and about 15% of people with H.pylori will develop peptic ulcer. The eradication of H.pylori dramatically reduce the recurrence rate in peptic ulcer. H.pylori infection associated with B-cell lymphoma and distal gastric cancer . About 1% of people with H.pylori will develop gastric cancer during their life [1, 10].

Studies have shown that gastric atrophy and intestinal metaplesia may partially regress after H.pylori eradication , and there is some evidence that erradicating H.pylori help to prevent gastric cancer [10].

Infection with H.pylori may be the most common human infection. The incidence of infection within a population increase with age and in many population infection rate of 80-90% are not unusual. It appears that most infection is acquired in childhood and the possibility of infection is inversely related to socio-economic group [11].

Aim Of Study

To evaluate the role of upper gastroduodenoscopy in the patients complaining from dyspepsia and to analyze the finding of endoscopic examination in order to estimate the prevalence of upper gastrointestinal disease in the examined patients.

Patients & Methods

A retrospective study include records of 1832 patients with dyspeptic symptoms who underwent endoscopic examination in Al-Mawani hospital during the period from October 2015 to October 2019 were analyzed. All the examined patients were referred from out patients department, private clinics, medical and surgical wards. The type of endoscope used was Olympus type GIF XQ23. All patients examined were over night fasting and received lignocain spray or jelly and sometime midazolam may be used. All suspicious mucosal lesions recorded were biopsied for histopathological examination and for diagnosis of H. pylori infection. Criteria for endoscopic diagnosis, clinical and demographic characteristics were recorded by one endoscopist.

Results

Out of the 1832 cases endoscoped, 942 (51.4%) were males and 890(48.6%) were females. 794 (43.3%) had no endoscopic abnormalities. 1038 (56.7%) had endoscopic finding.

STOMACH: The most common abnormality was gastritis seen in 603 (32.9%) patients. table(2).

Benign gastric ulcer was seen in 47 (2.5%) patients . The most common site for these ulcer was in the body and the antrum of the stomach . Gastric

tumors were seen in 10 (0.45%) patients and provide to be adinocarcinoma by histopathological examination.

Table 1: Analysis of the endoscopic findings

Endoscopic findings	Patients
Normal endoscopies	794 (43.3%)
Oesophigitis	149 (8.1%)
Hiatus hernia	209 (11.4%)
Gastritis	603 (32.9%)
Gastric ulcer	47 (2.5%)
Gastric cancer	10 (0.54%)
Duodinitis	115 (6.2%)
Duodinal ulcer	257 (14%)
Combined Gastric and Duodinal ulcer	4 (0.2%)
Total	1832 (100%)

Table 2: Endoscopic finding of the stomach

Findings	No. of patients	Percentage of patients	Male	Female	Age	Site
Gastritis	603	32.9 %	346 (57.3 %)	257 (42.6%)	18 - 80 years	Mainly Antrum
Benign Ulcer	47	2.5 %	26 (55.3%)	21 (44.6%)	28 - 70 years	Body 18 (38.3%) Antrum 29 (61.7%)
Tumor	10	0.54 %	5 (50%)	5 (50%)	50 - 70 years	Body 7 (70%) Antrum 3 (30%)

DUODENUM: Endoscopic finding in the duodenum was shown in table (3). The most common abnormality was duodenal ulcer seen in 257 (14%) patients . Duodinitis was seen in 115 (6.2%) patients .Combined duodenal and gastric ulcer was found in 4 patients (0.2%.)

Table 3: Endoscopic finding of the duodenum.

Findings	No. of patients	Percentage of patients	Male	Female	Age
Duodenal ulcer	257	14 %	146 (63.8%)	93 (63.1%)	18 - 70 years
Duodenitis	115	6.2 %	75 (65.2%)	40 (34.7%)	10 - 50 years

OESOPHAGUS: The most common abnormality was hiatus hernia 209(11.4%)patients. Reflux oesophigitis seen in 149(8.1%) patients . table(4).

Table 4: Endoscopic finding of the esophagus..

Findings	No. of patients	Percentage of patients	Male	Female	Age
hiatus hernia	209	11.4 %	128 (61.2%)	81 (38.8%)	15 - 80 years
Esophigitis	149	8.1 %	94 (61.1%)	55 (36.9%)	20 - 70 years

Table 5: Comparism between duodenal and gastric ulcer regard sex and age group

Findings	No. of patients	% of patients	Male	Female	20-40 years	40-60 years	> 60 years
Duodenal ulcer	257	14 %	146 (63.8%)	93 (63.1%)	121 (47.1%)	92 (35.8%)	44 (17.1%)
Gastric ulcer	47	2.5 %	26 (55.3%)	21 (44.6%)	12 (25.5%)	23 (48.9%)	12 (25.5%)

Table 6: Comparism with other studies

Endoscopic findings	our results	previous local study (95-99) [12]	international study (bsg) [13, 14]
Gastritis	32.9%	2.6%	30%
Duodinitis	6.2%	6.7%	
Hiatus hernia	11.4%	3.8%	
Gastric ulcer	2.5%	0.8%	5-10%
Malignant tumor	0.54%	0.3%	2%
Duodinal ulcer	14%	22.8%	10-15%
Oesophigitis	8.1%	11.7%	10-17%
Normal endoscopies	43.3%	41%	38%

Discussion

The most common lesion encountered in the recorded cases were gastritis which is about (32.9)% as compared with previous local study [12] and international study [13-14], which may be explain by an uncontrolled use of NSAID in our community which is used for wide spectrum of medical and surgical condition including arthritis, renal disease, gall bladder disease, postoperative patients…….etc.

The other important etiological factor in acute and chronic gastritis is chronic infection with H.pylori and unfortunately we did not find a results for Hpylori test in the patients records.

The increased incidence of gastric ulcer (2.5)% as compared with previous local agents which (0.8)% may be explained by the empirical use of antisecretory [12] study produce alkaline media in the body of

the stomach and favored the colonization of bacterial induced peptic ulcer disease (H.pylori). Pharmacological inhibition of acid secretion in infected subject lead to redistribution of the infection and its associated gastritis from an antral to corpus predominant pattern. Thus lack of gastric acid extend area of colonization and also maximizes tissue damage resulting from this colonization [15].

There is decreasing in the incidence of duodenal ulcer (14)% compared with previous local study [12] (22.8)% which may explain by wide prescription of eradication treatment of H.pylori given for the patients complaining of peptic ulcer symptoms which is proved by endoscopy or without endoscopic examination. The increased incidence of gastric cancer (0.54)% compared with previous study [12] (0.3)% may be due to exposure of our population to carcinogenic agents during war time ,change in type of diet and smoking. The site of gastric cancer found mainly in the body of stomach and equally distributed between males and females.

The incidence of duodenal ulcer (14)% is still higher than gastric ulcer (2.5)% and is higher in male patients than in female and it is higher in age group between (20-40) years which is (47.1).

In west dyspeptic patient s presented with duodenal ulcer at endoscopy are uncommon, this may be related to wide spread use of proton pump inhibitors and eradication therapy for patients with dyspepsia [11]. The high percentage of normal endoscopic examination in our study (43.3)% which is higher than previous local study [12] (41)% and higher than international study [13, 14] (38)%, the high percentage of normal endoscopies may reflect that the patients became more worried for their complaint with early consultation of doctors and also the patients may became less afraid of endoscopic examination and insist for this examination . Also the physician became more oriented toward newly discovered dyspepsia and upper gastrointestinal symptoms for early detection of expected malignant disease or peptic ulcer disease.

Conclusion

Endoscopy is the golden standard test for diagnosis of gastoduodenal ulcer, reflex esophigitis and upper gastrointestinal cancer. Early endoscopic detection of upper gastrointestinal cancer is associated with improved out come. Endoscopy is an easy and cheap procedure with high diagnostic value, so it is recommended as procedure of choice to investigate gastrointestinal symptoms.

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