

Clinical and endoscopic evaluation of a sample of Iraqi patients with symptoms of gastroesophageal reflux disease.

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Abstract:

Gastroesophageal reflux disease (GERD) is a chronic disorder related to retrograde flow of gastroduodenal contents into the esophagus and or adjacent organs resulting in a variable spectrum of symptoms, with or without tissue damage. Reflux esophagitis describes a condition experienced by subset of patient with GERD with histologically demonstrable changes in mucosa. Investigators find that 48%-79% of patients with GERD have esophagitis. The majority of individuals with symptomatic GERD do not have erosive disease (ERD). This group has been referred to a non-erosive reflux disease (NERD).

Objective: The aim of the study is to evaluate the clinical and endoscopic comparison of referred patients to GIT center with symptoms of GERD.

Design: Prospective, descriptive cases study.

Setting: Center of Gastrointestinal Disease in Baghdad.

During the study period (July 2001-January 2002) patients with typical symptoms of GERD were endoscoped after clinical evaluation.

Modified Savary-Miller grading system were followed. Biopsy was taken every 2cm, starting at 2cm above gastroesophageal junction

Result:

Fifty patients were included male /female 2.1:1, mean age 47 years, with mean duration of illness of 6.1 years, 88% were erosive reflux disease with 68% grade I & II. Hiatus hernia was seen in 18/50 (36%), stricture 3/50 (36%) and ulcer 2/50 (4%). Most of the patients (88%) who were included in study were of erosive esophagitis with longest duration of illness. *In conclusion* long duration of symptoms suggestive of GERD is important factor for erosive changes in the esophagus leading to documented complication, emphasising the importance of endoscopic evaluation follow up of such group of patients

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Introduction:

Gastroesophageal reflux disease (GERD) is a chronic disorder related to retrograde flow of gastroduodenal contents into the esophagus and or adjacent organs resulting in a variable spectrum of symptoms, with or without tissue damage ⁽¹⁾.

The characteristic and specific symptoms of GERD are heart burn (pyrosis) and acid regurgitation ⁽²⁾. Dysphagia is symptom in more than 30% of individuals with GERD it can be caused by peptic stricture, Schatzki ring, or a peristaltic dysfunction, other symptoms of disease include chest pain, water brash, globus sensation, and rarely odynophagia ^(3, 4, 5).

Symptoms consistent with GERD occur in more than one third of adult American on monthly basis and weekly in as many as 10%. ⁽⁶⁾

In recent Iraqi study which interviewed 588 Iraqi healthy person, showed that 40.6% subjects reported to have heart burn of at least once or more in their life, 30.6% reported the symptom at least on monthly basis, 11% subjects twice weekly, 8.3% on daily basis and 6.2% fulfilled the criteria of EPAGE ⁽⁷⁾. In western countries, GERD is becoming even more common, so that the incidence of Barrett's esophagus (BE) is also on the increase in common with dysplasia and carcinomas developing in BE ^(8,9,10,11).

Reflux symptoms are common in elderly, but it is unclear whether aging causes a change in severity of GERD. Triada Filopoulos and Sharma found no difference in esophagitis severity. However, old patients with BE had less severe reflux symptoms than younger patients, suggesting that threshold for screening these patients for BE may need to be adjusted accordingly. ⁽¹²⁾ Most individuals with symptoms compatible with gastroesophageal reflux disease who undergo endoscopy will not show evidence of erosive esophagitis. This group has been referred to as Non-erosive or negative endoscopy reflux disease, „NERD,,

NERD is not a minor issue, may account for up to 70% of patient with GERD in community ⁽¹³⁾.

The aim of the study is to evaluate the clinical and endoscopic comparison of referred patients to GIT center with symptoms of GERD.

Patients and Methods:

During the six months period (July 2001 to January 2002) fifty patients (34 male and 16 female) with typical symptoms of GERD (heart burn and or regurgitation after meal, aggravated by recumbency or bending and relieved by antacids, symptoms must be present twice a weekly for at least 3 months), ⁽¹⁴⁾ who were pretreated sufficiently with acid suppression therapy for at least six weeks, were included in this study. An upper endoscopy was carried for every patient using Olympus video E GEXQ 230scop. The procedure was carried under local anesthesia (Xylocaine 10% oral spray) taking care to record distances using centimeter markings on the endoscopic shaft. With respect to esophagus a careful assessment was made at endoscopic procedure of the following points:

- 1- Distance of squamocolumnar junction (SCJ) and gastroesophageal junction from incisor teeth.
- 2 - The presence and length of hiatus hernia.
- 3 - The presence and grading of esophagitis.
- 4- Endoscopic complication of GERD (stricture, ulcer)

1. The gastroesophageal junction [GEJ] was defined by expansion of tubular esophagus into the stomach and by the upper margin of gastric mucosal folds. This site should be determined with esophageal lumen minimally distended and during the absence of active peristaltic activity. The junction of the squamous epithelium (pearly pink) and columnar epithelium (orange – red) appears after minimum inflation as a slightly irregular or undulating line called Z line. ^(14,15)

2 . After the SCJ is identified the next step is endoscopic diagnosis of hiatus hernia (an anatomic abnormality characterized by displacement of SCJ 2cm. above the diaphragmatic hiatus)⁽¹⁶⁾.

Endoscopic diagnosis of size and length of hiatus hernia is carried by following the important points :

a.Idetification of gastroesophageal junction by transition from tubular esophagus to saccular stomach or by upper margin of gastric folds.

b.Determination of the level of diaphragmatic hiatus.

c .The length of hiatus hernia is recorded as the distance from gastroesophageal junction to the diaphragmatic hiatus.

3 – The extent and severity of esophagitis are assessed using modified Savary-Miller classification of esophagitis⁽¹⁷⁾.

Grade I : Single or multiple erosion, on a signal fold : erosion may be erythematous or erythematous-exudative.

Grade II : Multiple erosion affecting more than one longitudinal fold : erosion may be confluent.

Grade III : Circumferential erosion.

Grade IV : Ulcer(s), stricture(s).

4-Endoscopic complication of GERD including,ulcer, stricture,permanent narrowing of the,(used for a short less than I cm) non-distendible segment in tubular organ.⁽¹⁵⁾

male.Somking was reported by 22/50 (19 male and 3 female)

Endoscopy divided the group into two subset:

I-Erosive Reflux Disease “ERD” 44/50 (88%)

2-Non Erosive Reflux Disease NERD 6/50 (12%)

According to modified Savary –Miller classification it was found that 9 patients had Grade I,21 Grade II,10 Grade III, and 4 patients with grade IV. Hiatus hernia (sliding) was seen in 18/50 (M/F 16:2),Seventeen of them were associated with ERD .Three patients demonstrated stricture at level of gastroesophageal junction and ulcer in two patients and 4 had endoscopic feature of BE. table (1)

Table (2) demonstrates comparison between the variable of NERD and ERD. It shows that the only statistical significant difference is demonstrated in duration of illness (l.e the longest duration of illness the severest degree of esophagitis).

Results:

During the study period, 50 patients fulfilled the criteria of patient selection 34 male and 16 female (M/F 2.1:1) of age range 14-80 years (mean 47 years) . The shortest duration of illness was 3 month and longest 12 year(mean 6.1ye.). More then two third had heart burn as main problem, followed by epigastric pain 28%, regurgitation 24% , dysphagia 18% and belching 10% . Alcohol drinking was reported by four males and NASID intake by three female and one

Table (1) – Endoscopic Finding of Study Group

Endoscopic Finding	No	Age Mean	Sex M/F	Alcohol drinking	Smoking	NSAID	Cholecystectomy
Nonerosive esophagitis	6	48.3	1:1	-	3	1	-
Erosive esophagitis	44	46.3	2.6:1	4	19	3	3
Grade I RE	9	48	1.2:1	-	-	1	-
Grade II RE	21	51	4:1	2	10	2	3
Grade III RE	10	41	2.3:1	2	6	-	-
Grade IV RE	4	58	3:1	-	3	-	-
Stricture	3	46	1:2	-	2	-	-
Ulcer	2	57	1:1	-	2	-	-
H.H	18						

Table (2) – Comparison Between Variable of Erosive & Nonerosive Reflux Disease Subgroups

Variables		Erosive		Nonerosive		P-value
		NO	%	NO	%	
Age (Mean)		46.3	17.3%	48.3	18.3%	
Sex	F	12	27%	3	50%	
	M	32	73%	3	50%	
Alcoholic	Yes	4	9%	0	0%	
	No	40	91%	6	100%	
Smoker	Yes	19	43%	3	50%	
	No	25	57%	3	50%	
Duration of illness	<24 m.	13	30%	5	83%	Significant P <0.05
	>24 m.	31	70%	1	17%	
Duration of Tt	<12 w	28	64%	2	33%	
	>12 w	16	36%	4	67%	
NSAID	Yes	3	7%	1	17%	
	No	41	93%	5	83%	
H.H	Yes	17	39%	1	17%	
	No	27	61%	5	83%	

Discussion:

During the study period most patients who were included in the study were of erosive and complicated GERD. This is explained on the basis that the study carried in a tertiary referral center. Similar findings were reported by Kassir and Al-karboli⁽¹⁸⁾. Most of the patients are male adults, which is comparable to finding in European, American and Asian study.^(19,20,21)

The most common symptoms associated with heart burn were epigastric pain, regurgitation, dysphagia and belching 28%, 24%, and 10% respectively, which is similarly described in European and American literature^(3,4,5). Smoking were significantly correlated with severity of endoscopic grading⁽¹⁾ (table 1) ($P > 0.05$). The endoscopic grading of ERD group demonstrated that total number of (grade) I & II is 30 and IV is 14.

These results are in contrast to Italian work by G. Manes. Et al, who studied fifty consecutive out patient (28 male, 22 female mean age 54 year) , with typical GERD symptoms for at least six month ; where they demonstrated that (48%) of them were non erosive, (52%) erosive, with 50% of grade 1 & 2 erosive esophagitis.⁽²²⁾

Variable percentage of H.H were reported by different studies, among Patients undergoing endoscopy for a variety of upper gastrointestinal symptoms, Yeh-C et al in Taiwan studied the frequency of erosive esophagitis of 464 consecutive self referred Chinese patients for upper endoscopy and found (14.5%) erosive esophagitis, (2%) BE and only (7%) of H.H⁽²¹⁾. In contrast Alan Cameron at Mayo clinic in his study the prevalence and size of H.H associated with BE compared to (71%) of control group with esophagitis and, 29% in control group with no esophagitis and 96% with BE⁽¹⁾, having in mind, 30% of normal population over fifty years had H.H.⁽²³⁾

Our results are mid way between these two western and eastern results; in which we reported H.H in 36% of total study group with

high prevalence of 54.5% in BE subgroup. This confirmed the observation that H.H which is seen more with BE, on the other hand, Weston, et al, concluded that absence of H.H was noted to be the most important factor associated with BE regression.⁽²⁴⁾

One of the major complication of esophagitis is stricture, which was reported in 6% in our data, and that of ulceration in 4%. Wienbeck, et al reported in patients with esophagitis, prevalence of peptic stricture ranges from (8-12%) and that of ulceration is (5%). Kim-SI et al studied seventy-nine patients referred for endoscopy for GERD symptoms in Emory university school of Medicine, USA. , they found that forty-six patients with stricture and twenty-eight patients with peptic stricture and five patients had H.H.⁽²⁵⁾

H.H was demonstrated in two cases out of three with peptic stricture in our data: Line, et al, reported that nearly all the patients with complicated reflux have H.H⁽²⁶⁾. *In conclusion* long duration of symptoms suggestive of GERD is important factor for erosive changes in the esophagus leading to documented complication, emphasising the importance of endoscopic evaluation follow up of such group of patients.

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