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A STUDY OF CLINICAL AND ENDOSCOPIC ASPECTS OF GERD IN BABYLON'S TEACHING HOSPITAL

Dr.OmranEssaObaid

Al - Hilla teaching Hospital Babil ,Iraq.

M.B.CH.B,F.I.C.M.S(General surgery).

Abstract:

Background: gastro endoscopic reflux disease (GERD) is one of the most prevalent gastrointestinal disorders, up to 155 of individuals have heartburn and\or regurgitation at least once a week, and 7% have symptoms daily. GERD is defined as chronic symptoms of mucosal damage produced by the abnormal reflex in the esophagus.

Patients and methods: 180 (106 males and 74 females) patients were included in the study. These patients were presented to outpatient clinic complaining from symptoms of GERD like heartburn, dyspepsia, regurgitation and dysphagia. Data collected from all patients including: age, residence, occupation , smoking dietary habit alcohol consumption systemic diseases frequency and duration of symptomsrelieving and aggravation factors and treatment received. All patients were subjected to upper GIT endoscopic. Esophagus biopsy was performed in 50 patients as indicated.

Results: the total number of the patients was 180. 106 males and 74 females (male to female ratio 1:3:1) their ages ranged from 22-28 years with the mean age was 42.3 years. Cigarettes smoking was found in 99 patients (82 males and 17 female) alcohol consumption was found in 14 male patients .heartburn was the most common presenting symptom present in 118 (64.4 %) patients. Endoscopic finding were normal in 33 (18.4%) patients while grade I (savary-Miller system) was the most common grade present in 72 (40%) patients. Smoking and alcohol consumption were associated with higher grade of esophagitis. Antral gastritis and duodenitis were the most (74 patients (41%) associated gastro esophageal finding were normal in 33 (18.4%) patient while grade I (Savary-Miller system) was the most common grade present in (72(40%) patients.

Conclusion: GERD are common disease affecting various age group specially older ages and both sexes predominantly males. Smoking and alcohol consumption are associated with higher endoscopic grade of esophagitis, esophagogastroduodenoscopy is an important tool in diagnosing GERD.

Key words: GERD, Smoking, esophagitis and patients.

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Introduction:

Gastroesophageal reflux disease (GERD) is a pathologic condition of injury to the esophagus caused by regurgitation of gastric or gastroduodenal contents into the lumen of the esophagus(1). Histopathology of the esophageal mucosa may or may not be present. Gastroesophageal reflux of acid and gastric contents often causes a condition commonly referred to as heartburn. This is characterized as a retro-sternal burning sensation that radiates to the throat and interscapular region. It may be confused, even in the emergency room, with anginal pain or the onset of myocardial infarction; therefore its rapid diagnosis is important. In many patients GERD should be considered a chronic and lifelong illness and maintenance therapy is often needed(2). Repeated exposure of the esophagus to stomach contents leads to esophagitis. In severe cases, this can actually erode esophageal tissue (erosive esophagitis). In the last five to seven years several new treatment options for GERD have become available. These include antise-cretory agents such as the proton pump inhibitors, and new surgical techniques that have improved Nissen fundoplication safety and efficacy rates(3-4). Clinicians caring for patients with this common disorder need to understand the pathology behind GERD, its common (and uncommon) clinical manifestations, and current treatment options as recommended by the American College of Gastroenterology(2).

EPIDEMIOLOGY:

Gastroesophageal reflux is a common ailment involving 7-10 percent of the population in the United States (5). An estimated 15 million physician visits occur yearly in the U.S. for GERD, mostly in primary care settings. More than 60 million American adults experience GERD and heartburn at least once a month, and about 25 million adults suffer daily from heartburn. It is estimated that 30-70 percent of patients with GERD have esophagitis, with about 10 percent of those patients having severe erosive esophagitis (6). Twenty-five percent of pregnant women experience daily heartburn, and more than 50 percent have occasional distress (5). Recent studies show that GERD in infants and children is more common than previously recognized and may produce recurrent vomiting, coughing, other respiratory problems, or failure to thrive. Many patients do not seek physician consultation for symptoms. In fact, overthe-counter medications are the most common treatments used by GERD patients; thus, heartburn is one of the most common reasons for pharmacist consultation (7). Prevalence increases over age 40, and the disease is much more common in men than in non-pregnant women. The majority of patients with GERD will require pharmacotherapy for symptom alleviation, but up to 46 percent of patients with mild disease are successfully managed with self-treatment (2).

PATHOLOGY:

The lower esophageal sphincter (LES) is an area of high intraluminal pressure present near the esophagogastric junction. The LES allows food to pass into the stomach and prevents food and acidic stomach juices from flowing back into the esophagus. Gastroesophageal reflux occurs when the LES is weak or relaxes inappropriately, allowing the stomach's contents to flow up into the esophagus leading to the symptoms of GERD (1). These symptoms may last as long as two hours, and are often worse after eating a large meal. Transient lower esophageal sphincter relaxations, which occur in the absence of peristalsis are responsible for the majority of GERD symptoms (8). These relaxations are vagally mediated, but the reflex arc that produces them can

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be affected by stimulation of other receptors. The severity of GERD depends on LES dysfunction as well as the type and amount of fluid brought up from the stomach and the neutralizing effect of saliva. The main pathophysiologic mechanism in GERD is due to ineffective clearance of intraluminal contents and a defective gastroesophageal barrier(9). There are two factors that determine defective clearance: the first is a lack of normal secondary peristalsis to remove the injurious material from the esophagus, and the second, the presence of gastro-paresis, or defective gastric emptying can lead to a greater than normal volume of material in the stomach which increases the risk of reflux. The LES is not an anatomical valve but an area of higher pressure separating the esophagus from the gastric fundus. This zone of high pressure is two to four centimeters long and maintains a resting tone of 10-30 mmHg. LES tone decreases during swallowing to allow evacuation of material but otherwise prevents material passing in either direction. When LES pressure is reduced to less than six mmHg, regurgitation may occur (10). The aim of study that evaluate the prevalence of GERD symptoms in relation to age. Sex, smoking and alcohol consumption.

Patients and methods:

180 (106 males and 74 females) patients were included in the study. These patients were presented to outpatient clinic complaining from symptoms of GERD like heartburn, dyspepsia, regurgitation and dysphagia. Data collected from all patients including: age, residence, occupation , smoking dietary habit alcohol consumption systemic diseases frequency and duration of symptoms relieving and aggravation factors and treatment received. All patients were subjected to upper GIT endoscopic. Esophagus biopsy was performed in 50 patients as indicated.

All patients were subjected to upper GIT endoscopy using video endoscopy (Olympus GEXQ 230). The procedure done under local anesthesia and sedation in some patients. Structure and mucosal details of the esophagus, stomach and duodenum down to it second part are records. The extent and severity of esophagitis are assessed using Savary-Miller classification as follow:

Grade 0: normal mucosa

Grade I: single or multiple erosion on a single fold.

Grade II: Multiple erosions affecting more than one longitudinal folds but not circumferential.

Grade III: circumferential erosions.

Grade IV: Ulceration with or without stricture.

Results:

The total number of the patients was 180. 106 males and 74 females (male to female ratio 1:3:1) their ages ranged from 22-28 years with the mean age was 42.3 years. Cigarettes smoking was found in 99 patients (82 males and 17 female) alcohol consumption was found in 14 male patients .heartburn was the most common presenting symptom present in 118 (64.4 %) patients. Endoscopic finding were normal in 33 (18.4%) patients while grade I (savary-Miller system) was the most common grade present in 72 (40%) patients. Smoking and alcohol consumption were

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associated with higher grade of esophagitis. Antral gastritis and duodenitis were the most (74 patients (41%) associated gastro esophageal finding were normal in 33 (18.4%) patient while grade I (Savary-Miller system) was the most common grade present in (72(40%) patients.

Demographic feature	No. of patients	%
Male	**106**	**58.8**
Female	**74**	**41.2**
Smoking	**99**	**55**
Alcohol consumption	**14**	**7.8**

Table (2): distribution of symptoms:

Clinical features	No. of patients	%
Heartburn	116	64.4
Chronic dyspepsia	89	49.5
Regurgitation	72	40
Epigastric pain	57	31.7
Dysphagia	13	7.2
Hematemesis and or melena	2	1.1

Table (3): endoscopic grading of esophagitis according to Savary-Milleclassification

Grade	No. of patients	%
Grade 0	33	18.4
Grade I	72	40
Grade II	44	24.4
Grade III	24	13.4
Grade IV	7	3.8
total	180	100

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Table (4) smoking and alcohol consumption in relation to grade of (GERD)

	Grade	Grade	Grade	Grade	Grade	Total
Smoking	7 (7%)	26 (26%)	39 (39%)	21 (21%)	6 (6%)	99
Alcohol	2(14.2%)	2(14.2%)	2(14.2%)	5(35.8%)	3 (21.6)	14

Discussion:

Gastrointestinal reflux disease (GERD) is one of the most prevalent gastrointestinal disorders, up to 155 of individuals have heartburn and\or regurgitation at least once a week, and 7% have symptoms daily. GERD is defined as chronic symptoms of mucosal damage produced by the abnormal reflex in the esophagus.(10,11)

There are three main causes of increase esophageal exposure to gastric juice in patients with GERD. The first is mechanically defective lower esophageal sphincter the other two causes are inefficient esophageal clearance of refluxed gastric juice and abnormalities of gastric reservoir that augment the physiological reflux.(12,13)

Abnormalities of gastric reservoir that increase esophageal exposure to gastric juice includes, gastric dilation, increase intragastric pressure and increase gastric acid secretion. The effect of gastric dilation is to shorter the overall length of lower esophageal sphincter (12,14,15).

Delated gastric empty increase the exposure of the esophageal to gastric juice by accentuating the physiological reflux by the persistent gastric reservoir, it can be caused by gastric atony, secondary to their myogenic abnormalities from diffused neuromuscular disorder e.g. diabetes, anticholinergic drugs (frequently taken by those patients to relieve their sympotoms) and post-viral infections (16,17, 18).

Non myogenic causes like vagotomy, antropyloric dysfunction and duodenal dysmotility syndrome which may bably affect the acid clearance by the antral pump (19,20).

Conclusion:GERD are common disease affecting various age group specially older ages and both sexes predominantly males. Smoking and alcohol consumption are associated with higher endoscopic grade of esophagitis, esophagogastroduodenoscopy is an important tool in diagnosing GERD.

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