

Determination of the Frequency of Laryngopharyngeal Mucosal Lesions in Patients Undergoing Upper Gastrointestinal Endoscopy for Symptoms of GERD

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ABSTRACT

Introduction: Gastroesophageal reflux disease (GERD) is one of the most common health problems affecting as much as 20%-36% of the population. It is an important public health issue due to utilization of considerable health care resources for its management. **Objective:** The objective of this study is to determine the frequency of laryngopharyngeal mucosal lesions in patients undergoing upper gastrointestinal endoscopy for symptoms of GERD. **Methodology:** This is Cross-sectional study conducted at Gastroenterology-Hepatology Department, Shaikh Zayed Medical Complex, Lahore, from June 2012 to June 2014. 140 patients with symptoms of gastroesophageal reflux disease and fulfilling the inclusion criteria were selected from Gastroenterology-Hepatology outdoor of Shaikh Zayed Medical Complex. An informed consent was obtained for examining them by esophagogastrosopy and using their data in my study. Patients were examined through video esophagogastrosopy for posterior pharyngeal wall cobblestoning, interarytenoid bar erythema, posterior commissure erythema/edema, posterior cricoid wall erythema/edema, arytenoids edema. Data was analyzed through SPSS software. **Results:** A total 140 patients were included in the study. It included 75 male patients (53.6%) and 65 female patients (46.4%). Mean age of patients was 38 years. Out of 140 patients 72 patients (51.4%) had posterior pharyngeal wall cobblestoning, 22 patients (15.7%) had interarytenoid bar erythema. 43 patients (30.7%) were found to have posterior commissure erythema. Only 19 patients (13.6%) had posterior cricoids wall erythema and 29 patients (20.7%) had arytenoids edema. **Conclusion:** Posterior commissure wall cobblestoning was the most common mucosal lesion on upper GI endoscopy. The second common most mucosal lesion was posterior commissure erythema.

Key Words: GERD, LPR, Laryngo-pharyngeal mucosal lesions.

INTRODUCTION

Gastroesophageal reflux disease (GERD) is one of the most common health problems affecting as much as 20%-36% of the population. It is an important public health issue due to utilization of considerable health care resources for its management.¹

Gastroesophageal reflux disease (GERD) is

defined as the presence of esophageal mucosal breaks leading to esophageal and extra-esophageal symptoms severe enough to impair quality of life, caused by abnormal reflux of gastric contents into esophagus.² The transient relaxation of lower esophageal sphincter with reflux of gastric contents into esophagus, pharynx and larynx constitutes the most important mechanism of reflux resulting in esophageal and extra-esophageal (laryngopharyngeal) manifestations.³

Clinical features of GERD are heartburn (a burning feeling arising from the stomach or lower part of the chest up- towards the neck) 30%, acid regurgitation (flow of sour or bitter fluid into the mouth) 32%, non-cardiac chest discomfort 20%, esophageal stricture and Barrett's esophagus.^{4,5,11} Laryngopharyngeal form of gastroesophageal reflux disease (LP-GERD) is a frequent manifestation of extra-esophageal GERD symptoms affecting up to 10% of patients who consult an ENT specialist.^{6,7} The symptoms and signs of laryngopharyngeal form of gastro-esophageal reflux are chronic cough, excessive throat clearing, sore throat, hoarseness of voice, globus, erythema, edema, presence of posterior commissure bar (interarytenoid bar), posterior pharyngeal wall cobblestoning, contact ulcers in larynx, polyps, nodules and leukoplakia.⁸ The magnitude of laryngopharyngeal mucosal lesions are posterior pharyngeal wall cobblestoning 45%, arytenoid edema 17%, interarytenoid bar erythema 12%, posterior commissure erythema/edema 26%, posterior cricoid wall erythema/edema 10%.¹¹

Most of the above mentioned upper respiratory symptoms produced mainly by laryngopharyngeal form of GERD are masked and wrongly treated by ENT surgeons, pulmonologists and physicians.⁸ If these patients are properly investigated with the help of upper gastrointestinal endoscopy to see the presence or absence of GERD, exact management would be possible.¹¹

MATERIAL AND METHODS

This is Cross-sectional study conducted at Gastroenterology-Hepatology Department, Shaikh Zayed Medical Complex, Lahore from June 2012 to June 2014.

140 patients with symptoms of gastroesophageal reflux disease were selected from Gastroenterology-Hepatology outdoor of Shaikh Zayed Medical Complex. An informed consent was obtained for examining them by esophagogastrosocopy. Patients were examined through video esophagogastrosocopy for posterior pharyngeal wall cobblestoning, interarytenoid bar erythema, posterior commissure erythema/edema, posterior cricoid wall erythema/edema, arytenoids

edema.

Adult patients of both sex between 30-60 years undergoing upper gastrointestinal endoscopy for symptomatic gastroesophageal reflux disease were included. Patients who were history of allergy, asthma, respiratory tract infection in the last 4 weeks, recurrent sinusitis and COAD were excluded.

RESULT

A total of 140 patients were included in the study. 140 upper gastrointestinal endoscopies were done for diagnosis of GERD. During Endoscopic procedure larynx and pharynx were also examined for laryngopharyngeal mucosal lesions. The study included 75 male patients (53.6%) and 65 female patients (46.4%) (Fig. 1). Mean age of patients was 38 ± 9.983 years. Minimum age of patients enrolled in the study was 30 years and the maximum age of the patient undergoing endoscopy was 60 years. Out of 140 patients 72 patients (51.4%) had posterior pharyngeal wall cobblestoning. 22 patients (15.7%) were found to have interarytenoid bar erythema . 43 patients (30.7%) were found to have posterior commissure erythema and edema. Only 19 patients (13.6%) had posterior cricoids wall erythema / edema. 29 patients (20.7%) had arytenoids edema (Table 1).

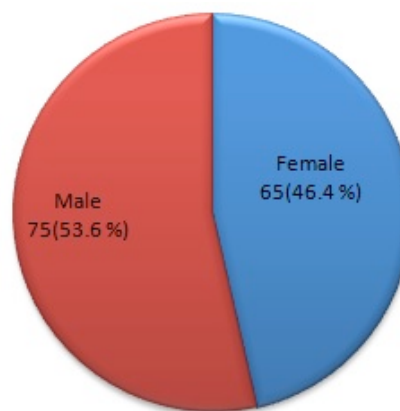


Fig. 1. Gender distribution.

DISCUSSION

Gastroesophageal reflux disease (GERD) is defined by esophageal symptoms or mucosal

damage produced by abnormal reflux of gastric contents into the esophagus¹². There has been an increasing number of reports describing laryngopharyngeal mucosal changes secondary to GERD^{13,14}. There have been conflicting reports on the frequency of these associations. GERD occurs in 35–40% of the population in the western world on a daily or monthly basis. In Pakistan incidence of GERD has been found to be 32%. While 39.7% of COPD patients had GERD.

Table 1: Endoscopic findings (n=140).

Endoscopic Findings	No. of patients	Percentage
Posterior pharyngeal wall cobblestoning		
Absent	68	48.6%
Present	72	51.4%
Interarytenoid bar erythema		
Absent	118	84.3%
Present	22	15.7%
Posterior commissure erythema / edema		
Absent	97	69.3%
Present	43	30.7%
Arytenoids Edema		
Absent	111	79.3%
Present	29	20.7%

At least 4–10% of patients seeking help from ENT physicians are perceived as suffering from acid-based complaints¹⁵. GERD is the third leading cause of chronic cough, after sinus problems and asthma, accounting for 20% of cases¹⁶. Chronic laryngitis and a difficult-to-treat sore throat are associated with acid reflux in as many as 60% of patients^{15,17}. During upper gastrointestinal endoscopy, routine laryngopharyngeal examination often reveals findings thought to result from gastroesophageal reflux. The direct association between these mucosal findings and GERD, however, is not well established. Most ENT specialists treat patients with suspected GERD related complaints and associated signs in the larynx and pharynx region with an empiric therapy using proton pump inhibitors (PPIs).

The results of one of the study document a

high prevalence of several changes in the ENT region in patients undergoing upper GI endoscopy. Until recently, these signs have been considered pathognomonic for GERD-related laryngeal and pharyngeal lesions. We found the same frequency of most laryngopharyngeal lesions assumed to be related to GERD in patients. In other studies the prevalence of lesions in the laryngopharyngeal area attributed to GERD was as high as 78–87%. Koufmann studied 46 patients with suspected reflux laryngitis and found that edema and erythema of the larynx contributed to 89% and 87% of the abnormal findings, respectively¹⁸. More recently, in a study surveying 415 patients, the most commonly associated laryngoscopic signs of reflux were erythema or edema of the arytenoids or the vocal cords¹⁹.

This study was carried out to determine the frequency of laryngopharyngeal mucosal lesions in patients undergoing upper gastrointestinal endoscopy for symptoms of GERD. A total 140 patients were included in the study. It included 75 male patients (53.6%) and 65 female patients (46.4%). Mean age of patients was 38 years. Out of 140 patients 72 patients (51.4%) had posterior pharyngeal wall cobblestoning, 22 patients (15.7%) had interarytenoid bar erythema. 43 patients (30.7%) were found to have posterior commissure erythema. Only 19 patients (13.6%) had posterior cricoids wall erythema and 29 patients (20.7%) had arytenoids edema.

CONCLUSION

Our research has found that careful examination of the laryngopharyngeal area is possible during most routine endoscopies and may provide significant clinical findings. Therefore, in the majority of upper gastrointestinal endoscopies, performed with appropriate sedation, visualization of the laryngopharyngeal area is possible without additional patient discomfort, and little additional time is required to complete the whole examination. Gastroscopy is one to the most frequent diagnostic procedures performed. Therefore, with the little extra time needed at no extra cost and the negligible risk and discomfort, a screening examination of the

laryngopharyngeal area should be an integral part of every upper oesophago-gastro-duodenoscopy.

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To investigate the potential correlation between GEFV grading and reflux finding score (RFS) in patients with laryngopharyngeal reflux disease (LPRD), 225 consecutive Patients with suspected LPRD who underwent both routine upper gastrointestinal endoscopy and laryngoscope were enrolled in our study. Patients with a RFS of more than 7 were diagnosed with LPRD. Endoscopic grading of GEFV is well correlated with reflux finding score in patients with LPRD. This is a simple and useful technique that provides valuable diagnostic information of LPRD. GEFV by Hill's Classification. Esophagogastroduodenoscopy or Upper Gastrointestinal (G.I.) Endoscopy gives excellent revelation of the esophagus, stomach and proximal duodenum mucosa. Since its invention in 1958, it has been successfully used to inspect the insides of body cavities [1]. Rudolph Schindler, along with George Wolf, introduced the Wolf-Schindler semiflexible gastroscopy in 1932 [2]. Since its conception, upper G. I. endoscopy has improved dramatically, transforming from a simple visualization tool into one with both vast diagnostic and therapeutic significance. audit gauged the frequency of positive endoscopic findings in patients with gastrointestinal symptoms compared to those with negative findings. UGI, upper gastrointestinal; ENT, ear, nose, and throat; MAPS, management of patients with precancerous conditions and lesions of the stomach. Bisschops Raf et al. Performance measures for UGI endoscopy. Inspection time in the stomach (≈ 90 %). Inspection time in Barrett's esophagus (≈ 90 %). Lugol staining in the esophagus for patients at risk of SCC (≈ 90 %). Proportion using a biopsy protocol according to MAPS guidelines (≈ 90 %). Proportion of Barrett's patients entered into a registry to monitor the incidence of dysplasia (≈ 85 %). Fig. 1 The domains and performance measures chosen by the working group (MAPS, management of precancerous conditions and lesions in the stomach; SCC, squamous cell carcinoma). monitoring any performance measures. In contrast, patients with erosive esophagitis have mucosal breaks in the lower esophagus, as seen by endoscopy. The prevalence of erosive esophagitis among. In addition, venous blood was drawn before endoscopy for determination of blood sugar, triglyceride, total cholesterol, low-density lipoprotein (LDL), and high-density lipoprotein (HDL) levels. From January 2008 to May 2009, 2040 consecutive subjects who underwent upper gastrointestinal endoscopy during their annual self-paid health check-ups at the Kaohsiung Veterans General Hospital, Taiwan were enrolled in this study. The prevalence of gastro-oesophageal reflux symptoms in a UK population and the consultation behaviour of patients with these symptoms. Gastroesophageal Reflux Disease (GERD) - Etiology, pathophysiology, symptoms, signs, diagnosis & prognosis from the MSD Manuals - Medical Professional Version. Patients with typical symptoms of GERD may be given a trial of acid-suppressing therapy. Patients who do not improve, or have long-standing symptoms or symptoms of complications, should undergo further testing. Endoscopy, with cytologic washings and/or biopsy of abnormal areas, is the test of choice. Endoscopic biopsy is the only test that consistently detects the columnar mucosal changes of Barrett esophagus. Patients with unremarkable endoscopy findings who have typical symptoms despite treatment with proton pump inhibitors should undergo 24-hour pH testing.