OTOLARYNGOLOGIC MANIFESTATIONS OF GASTROESOPHAGEAL REFLUX DISEASE

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ABSTRACT

Objective: To determine frequency of endoscopic oesophagitis in the patients who complain the chronic laryngopharyngeal disorders in the absence of typical gastroesophageal Reflux Disease (GERD) symptoms.

Design: Descriptive study

Place & Duration of the Study: The study was carried out in the department of E.N.T at Nawabshah Medical Centre, Nawabshah over the period of two years (2004 to 2006).

Patients & Methods: One hundred patients of either sex and in the age group between 25-79 years with symptoms of chronic laryngopharyngeal disorders were selected for study. All patients had physical examination of upper aero digestive tract. Direct laryngoscopy was done to evaluate the status of larynx, however rigid esophagoscopy was done to evaluate the status of esophageal mucosa and biopsies from lower part of esophagus were taken in all patients.

Results: Eighty percent of patients with symptoms of chronic laryrigopharyngitis were also suffering from microscopic Oesophagitis. Among the 80% patients 87.5% were having non-erosive oesophagitis while 12.5% were having erosive oesophagitis.

Conclusion: In significant number of patients with chronic upper respiratory symptoms resistant to the treatment, there was co existing gastroesophageal disease which could be the cause of the symptoms.

Keywords: Otolaryngeal manifestation, gastroesophageal reflux disease (GERD)

INTRODUCTION

The prevalence of gastroesophageal reflux disease (GERD) has significantly increased over the last 30 years [1]. It is a common disorder caused by the abnormal exposure of the esophageal mucosa to the refluxed gastric contents [2]. The aspiration of acid and pepsin can cause chronic laryngeal and pharyngeal disorders such as globus pharyngeus, throat clearing and hoarseness of voice, granular pharyngitis, asthma, sleep apnoea and rhinitis. Over the last two decades, much evidence has implicated refluxed gastric acid as contributory factor in the development of chronic laryngeal and pharyngeal disorders [4-5]. It is not uncommon for the patient with these symptoms to be completely unaware of the etiology and many are repeatedly seen and investigated by the specialists other then otolaryngologists and are ascribed non specific diagnosis and receive symptomatic treatment [6].

Aim of the present study was to determine the frequency of endoscopic oesophagitis in a group of patients who presented to our department, complaining of chronic laryngo pharyngeal disorders in the absence of typical GERD symptoms.

PATIENTS & METHODS

This descriptive study was conducted at the department of Otorhinolaryngology of the Nawabshah Medical College Hospital

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Nawabshah, between 2004 and 2006. One hundred patients were selected.

Inclusion criteria were; absence of current or previous typical symptoms of GERD and chronic complaints of at least one or more upper respiratory symptoms, such as; sensation of globuspharyngeous, hoarseness of voice, sore throat, cough or voice fatigue that were assumed might possibly be attributable to asymptomatic GERD.

Exclusion criteria were; the patients with typical symptoms of GERD, use of H2-receptor antagonists and promotility agents within 30 days before endoscopy, patients with esophageal chronic disorders like Barrettes' esophagus, hiatus hernia, or known esophageal ulcers, and patients with known Helicobacter pylori status.

Informed written consent was obtained from all participants. Each patient was subjected to a complete examination of the head and neck. Inflammatory disorders of neck and paranasal sinuses were evaluated by nasal endoscopy and computed tomography (CT) scan respectively. Rigid laryngoscopy and eosophagoscopy was performed in all the patients with standard instruments, however at present, now a days the role of rigid endoscopes in evaluating the GERD disorders is no more in practice and has been replaced by using flexible endoscopes under local anesthesia, but the facilities of flexible endoscopy are not available in our institute yet, so the old method of rigid endoscopy was applied. Barium swallow x-rays were taken in all the patients. The presence and grading of endoscopic oesophagits was recorded using the criteria of Hetzel et al [7] grade 0, normal mucosa or no abnormality; grade 1, erythema or hyperemia of esophageal mucosa with no macroscopic erosions; grade 02, superficial ulceration or erosion of esophageal mucosa near gastroesophageal junction; grade 03, deep ulcerations anywhere in esophagus. The patients with less then grade 02 oesophagits were considered to have non erosive oesophagits, where as patients with an oesophagits of grade more then 02 were considered to have erosive oesophagits. The biopsies were taken in all the patients and specimen were obtained with standard biopsy forceps from distal part of esophagus up to four centimeters above the gastroesophageal junction which is said to be the commonest site of involvement in GERD [8].

All biopsy specimens were fixed in 10 percent formalin. After both heamotoxylin and eosin and modified giemsa staining biopsies were graded by the pathologist for microscopic oesophagits which was defined as papillae extending upwards for two thirds or more of the thickness of esophageal epithelium, with or without infiltration of the of the epithelium by inflammatory cells [9].

RESULTS

One hundred patients were included in the study of whom 70 were males and 30 were females vaging in age from 25 to 79 years with mean age of 55.4 years. This group of patients presented with chronic complaints of laryngo pharynx (table-1), commonest symptom was globus pharyngeous (48%) followed by dysphonia and hoarseness of voice (31%). All patients had barium swallow x-rays, although this investigation did not reveal any abnormality in any patient. Rigid direct laryngoscopy revealed signs of laryngitis such as arytenoid erythema, infraglottic odema and interarytenoid swelling (table-2), commonest finding being arytenoid erythema (50%).

Rigid eosophagoscopy reveled normal esophagus in 20 (20%) patients although the endoscopic esophagits in grade I and II were established in 70 (70%) and 10 (10%) patients respectively (table-3).

Histopathology revealed normal esophageal mucosa in 20% of the patients although the microscopic oesophagitis was detected in 80% of the patients (table-4). Among 80 patients with microscopic

oesophagitis 70 (87.5%) patients were having non erosive oesophagitis, while 10 (12.5%) patients were having microscopic erosive oesophagitis (table-5).

Table-1: Laryngeal symptoms (n=100)

Symptoms	Patients
Globus pharyngeus	48
Cough & throat clearing	09
Dysphonia & hoarseness	31
Tongue burning	12
Total	100

Table-2: Direct laryngoscopy findings (n=100)

Findings	Patients
Arytenoid erythema	50
Infraglottic oedema	30
Inter arytenoid swelling	20
Total	100

Table-3: Findings of rigid eosophagoscopy (n=100)

Findings	Patients
Normal esophagus	20
Oesophagits grade-I	70
Oesophagits grade-II	10
Total	100

Table-4: Histopathological findings (n=100)

Findings	Patients
Normal esophagus	20
Microscopic esophagitis	80
Total	100

Table-5: Histopathological findings (n=80)

Findings	Patients	Percentage
Non erosive microscopic Oesophagitis	70	87.5%
Microscopic erosive Oesophagitis	10	12.5%
Total	80	100%

DISCUSSION

It is evident from the review of literature that gastro-esophageal reflux can lead to the symptoms in laryngopharyngeal region [10]. It has been postulated that approximately 10% of patients with otolaryngological symptoms also have the symptoms of reflux [11]. Koufman suggested that 50% of patients with laryngopharyngeal reflux present to their doctor mainly with hoarseness and chronic cough [12]. In general survey carried out in order to assess the prevalence of GERD in the general population, it was found that among patients with symptoms of heart burn and regurgitation about 23% experienced unexplained chest pain, 09% reported asthma, 20% bronchitis and 15% hoarseness [13]. On the other hand, other investigations reported that approximately 40% patients with extra esophageal symptoms did not experience heart burn or regurgitation [14].

Based on this evidence, the subjects of present study were selected on the basis of their chronic upper air way disorders and not GERD symptoms.

The present study demonstrated that subjects with asymptomatic GERD and chronic upper respiratory disorders have a significantly higher percentage (80%) of microscopic oesophagitis.

These findings suggest that in many patients suffering from chronic upper airway disturbances, resistant to the treatment, and asymptomatic GERD, occult gastro esophageal diseases are frequently present. This higher Oesophagitis percentage supports an association of upper airway symptoms with GERD, although the mechanism underlying the occurrence of these disorders remain to be elucidated.

CONCLUSION

In significant number of patients with chronic upper respiratory symptoms resistant to the treatment there is co existing gastro esophageal disease which could be the causes of these symptoms, although well designed controlled clinical studies and the development of better diagnostic techniques are required in order to determine reliably, which markers can predict the definite cause and effect relationship between acid reflux and pharyngolaryngeal disorders.

However, these types of patients with chronic laryngopharyngeal disorders should be evaluated for GERD and must be treated accordingly.

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