

## Some ORL' Manifestations of Liver Biliary and Gastroesophageal Reflux Disease (GERD)

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### Abstract

**Introduction:** Gastroesophageal reflux disease (GERD) includes all consequences of reflux acid or other irritants (pepsin, duodenal contents in liver biliary diseases) from the stomach into the esophagus. The main cause of gastroesophageal and duodenogastral reflux is incompetence of the antireflux barriers at the esophagogastric junction.

**Object:** To determine the prevalence of ORL' symptoms in patients with liver biliary and gastro-esophageal reflux disease (GERD).

**Material and Methods:** The orodental and laryngopharyngeal status of 115 patients with upper gastrointestinal symptoms was examined. For all patients were made: standard ORL' examination; examinations of gastro-digestive tract: upper endoscopy, X- Ray of esophagus and stomach; abdominal ultrasonography, pH test. Patients with erosive esophagitis were classified according to the criteria of Los Angeles 2003. The results were evaluated in the SPSS program, version 10.0, and we carried out frequencies evaluation, central tendency and standard deviation measurements and association test (chi-square).

**Results:** Patients with typical symptoms of gastroesophageal reflux accounted for 59 (51.3%), with atypical symptoms – 56 (48.7%). In 63 (54.8%) patients, the underlying pathosis was associated with increased acid output in the stomach (reflux esophagitis or duodenal ulcer), while in 52 (45.2%) patients who underwent cholecystectomy and other liver biliary diseases, the duodenogastric reflux was alkaline. Fifty one (80.9%) patients with ORL' symptoms were found of the group of 63 patients with reflux esophagitis or duodenal ulcer and 47 (90.4%) - of the group of 52 patients with duodenogastral reflux.

**Conclusion:** Liver-Biliary and gastrointestinal diseases occurring with reflux of gastric or duodenal contents are a risk factor for orodental and laryngopharyngeal injury. The finding emphasizes the need for accurate diagnosis and appropriate treatment of patients with upper gastrointestinal symptoms in order to avoid irreversible ORL' symptoms.

**Key words:** Liver Biliary Diseases, GERD, Oral Cavity and Laryngo-Pharyngeal Symptoms

### Introduction

Gastroesophageal reflux disease (GERD) includes all consequences of reflux acid or other irritants (pepsin, duodenal contents in liver biliary diseases) from the stomach into the esophagus. The main factors of gastroesophageal and duodenogastral reflux are incompetence of the antireflux barriers at the esophagogastric junction. GERD is defined as a chronic affection in the esophagus and/or adjacent organs (pharynx, larynx, bronchia), causing a variable spectrum of esophageal and/or extra-esophageal signs and symptoms associated or not to tissue lesions. It is the high prevalence of a public health problem, recurrent and impairing daily activities (1). Laryngopharyngeal reflux (LPR), defined as being the result of retrograde gastric contents into the larynx, when, it comes in contact with the upper aerodigestive tract (4). The association between GERD and laryngeal disorders has been discussed since 1960 (2). Most patients with LPR do not present classic symptoms of GERD such as heartburn and regurgitation (5). It is postulated that approximately 50-60% of chronic laryngitis are unwieldy compared with GERD (2).

### Object

To determine the manifestations of ORL' symptoms in patients with liver biliary and gastro-esophageal reflux disease (GERD).

## **Material and Methods**

The orodental and laryngopharyngeal symptoms of 115 patients with upper gastrointestinal injuries was examined -71 were male (61.7%) and 44 females (38.3%). The mean age was 47.3 years, ranging between 22 and 65 years. For all patients were made: standard ORL' examination; examinations of gastro-digestive tract: upper endoscopy (Gastroscope Fujinon EG-250WR5) (Fig. № 1), X- Ray of esophagus and stomach (Fig. № 5); abdominal ultrasonography (Honda Electronics 2000) (Fig. №2), pH test. Patients with erosive esophagitis were classified according to the criteria of Los Angeles 2003 (Table 1). The results were evaluated in the SPSS program, version 10.0 and we carried out frequencies evaluation, central tendency and standard deviation measurements and association test (chi-square). The significance level adopted was less than 5% ( $p < 0.05$ ). After the patients were informed of the purpose of the study all gave their written consent.

## **Results**

The patients with ORL' manifestations of the laryngo-pharyngeal reflux (LPR) infrequently have significant heartburn, and most commonly present with symptoms such as hoarseness, globus sensation, throat clearing, sensation of postnasal drip, difficulty swallowing, chronic cough, and laryngospasm (Table № 2) Patients with typical symptoms of gastroesophageal reflux accounted for 59 (51.3%), with atypical symptoms – 56 (48.7%). In 63 (54.8%) patients, the underlying pathosis was associated with increased acid output in the stomach (reflux esophagitis or duodenal ulcer) (Fig. № 3), while in 52 (45.2%) patients who underwent cholecystectomy and other liver biliary diseases, the duodenogastric reflux was alkaline (Fig. № 4). Fifty one (80.9%) patients with ORL' symptoms were found of the group of 63 patients with reflux esophagitis or duodenal ulcer and 47 (90.4%) - of the group of 52 patients with duodenogastral reflux.

## **Discussion**

According to the American Bronchoesophagological Association, the most common symptoms of LPR are hoarseness (97%), globus pharyngeus (95%) and chronic cough (95%) (9). Koufman (10) was the first to distinguish GERD LPR, in his study with 899 patients found that hoarseness was found in 87% of patients with LPR and only 3% of patients with GERD, heartburn was already present in 83% of patients with GERD, whereas only 20% occurred in patients with LPR. Endoscopic findings generally show nonspecific signs, however, suggestive of LPR: hyperemia, edema and narrowing mainly concentrated in the posterior larynx (posterior laryngitis). The endoscopic examination should be performed in all patients suspected of LPR (6). In a study published by Ylitalo (11), 74% of symptom crack voice of laryngeal contact granulomas were related to LPR. In a study by Toros et al (5), only 11% of patients with LPR symptoms showed changes consistent with GERD and endoscopy.

We conducted a literature review to identify elements of duodenogastroesophageal reflux (DGER)-namely pancreatic fluids, hydrochloric acid, pepsin, and bile - as to the effects each has when refluxed to the extraesophageal structures. Further, we wished to acquaint clinicians with the possibilities that, in addition to hydrochloric acid, the other components of DGER are likewise contributing to disease in the extraesophageal areas. Our review included studies that have indicated reflux of the above mentioned components of DGER to the pharynx, larynx, tracheobronchial tree, oral cavity, nasopharynx, nose and sinuses, eustachian tube, and middle ear. Our results suggested some of mentions symptoms (Table № 2). Findings demonstrate that injury to the upper aerodigestive tract can occur from a variety of substances secreted from the stomach and duodenum. Treatment for DGER is nonspecific (7). We conclude that patients with an incomplete response to acid suppression may have significant involvement of pepsin, bile, or both. Future studies are needed to clarify the importance of these elements and to suggest more precise treatments.

As occurs with GERD, the response to the treatment of laryngopharyngeal reflux (LPR) with proton pump inhibitors (PPIs) has been described as highly variable (6). Unlike GERD, treatment for LPR, in many cases, is more aggressive and prolonged in order to achieve full resolution (8). If after three months of treatment with appropriate changes in lifestyle and appropriate doses of PPIs there is no response, no need for additional tests to confirm diagnosis. When the doctor fails to recognize LPR, patients may have prolonged symptoms and delayed healing of injuries, as well as being subjected to unnecessary costs, often high by inadequate diagnosis (2).

## Conclusion

Liver-Biliary and gastrointestinal diseases occurring with reflux of gastric or duodenal contents are a risk factor for orodental and laryngopharyngeal injury. The finding emphasizes the need for accurate diagnosis and appropriate treatment of patients with upper gastrointestinal symptoms in order to avoid irreversible ORL symptoms.

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**Table № 1 Los Angeles Endoscopic Grading Scheme for Esophagitis Severity:**

<b>Los Angeles Endoscopic Grading Scheme for Esophagitis Severity</b>
<b>Grade A</b>
One (or more) mucosal breaks no longer than 5 mm that do not extend between the tops of two mucosal folds.
<b>Grade B</b>
One (or more) mucosal breaks more than 5 mm long that do not extend between the tops of two mucosal folds.
<b>Grade C</b>
One (or more) mucosal breaks that are continuous between the tops of two or more mucosal folds but involve lesser than 75% of the circumference.
<b>Grade D</b>
One (or more) mucosal breaks that involve at least 75% of the esophageal circumference.

**Table № 2 Disturbance of GERD Symptoms of the Patients**

Symptoms	Crack Voice	Mouth Burning	Bitter Taste	Globus Pharyngeus	Eustachian tube dysfunction	Dry Cough	Teeth Erosion
Patients 115 (100%)	100 (87%)	97 (85%)	88 (77%)	86 (75%)	68 (59%)	92 (81%)	78 (68%)

Fig. № 1 Upper Endoscopy of Esophagus

Fig. № 2 Abdominal Ultrasonography

Fig. № 3 Upper Endoscopy Reflux Esophagitis Grade C-D

Fig. № 4 Abdominal Ultrasonography – Biliary Diskynesia

Fig. № 5 Contrast Ro-Gragphy of Esophagus in GERD

