

Reflux laryngitis: a Gastroenterologist's perspective

Albis Cecilia Hani de Ardila, MD,¹ Gerardo Andrés Guzmán Rojas, MD.²

¹ Specialist in Internal Medicine and Gastroenterologist at Hospital San Ignacio and Clínica Reina Sofía, Tenured Professor at Universidad Javeriana, Bogotá, Colombia

² Specialist in Internal Medicine and Gastroenterology Fellow at Universidad Javeriana. Hospital San Ignacio, Bogotá, Colombia

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Abstract

Gastroesophageal reflux disease (GERD) is a frequent cause of consultations with gastroenterologists. Extradigestive symptoms such as chronic coughing, laryngitis and chest pain are frequently associated with GERD. Chronic laryngitis is one of the symptoms most often associated with GERD, yet various studies which have used monitoring esophageal pH as a diagnostic tool have not found any clear association between chronic laryngitis and reflux. Moreover, studies which have treated patients suspected of having chronic laryngitis caused by reflux with proton pump inhibitors (PPIs) have had had rates of therapeutic failures. Symptoms continue to persist in these patients despite adequate inhibition of acid secretion. To date, no evidence exists of the association between chronic laryngitis and GERD, much less evidence of a causal relation. We consider that, although GERD may be responsible for some episodes of chronic laryngitis, it is not the illness most frequently associated with it, and in the many cases in which GERD has been reasonably ruled out, other potential causes must be investigated.

Keywords

Gastroesophageal reflux disease (GERD), chronic laryngitis, esophageal pH monitoring, proton pump inhibitor (PPIs).

Gastroesophageal reflux disease (GERD) is defined as a condition in which reflux of the stomach's contents causes symptoms and/or complications (1). Its primary manifestations are heartburn and regurgitation which is what we call typical GERD. However it is also known that GERD may have atypical presentations which the Montreal classification has named atypical syndrome. This includes reflux cough syndrome, reflux asthma syndrome and reflux laryngitis syndrome (2).

Chronic laryngitis is a frequently diagnosed disorder with which GERD has been associated as a causal factor. Typical symptoms of chronic laryngitis include hoarseness, globus sensation, sore throats, constant need for throat clearing, excessive phlegm, difficulty swallowing, heartburn and vocal fatigue. It is often difficult to establish a clear association between symptoms of laryngitis and reflux episo-

des as the results of diagnostic tests used are contradictory.³ Esophageal pH monitoring does not clearly show any association between GERD and chronic laryngitis, and the fact that most patients do not respond to treatment with drugs such as proton pump inhibitors (PPIs) that reduce stomach acid secretions leads us to wonder whether this association exists in cases diagnosed by otolaryngologists.

The two methods most frequently used to diagnose the causes of chronic laryngitis are laryngoscopy and 24 hour esophageal pH monitoring. Many findings from laryngoscopies are attributed to chronic reflux laryngitis. Nevertheless, a study of the prevalence of hypopharynx associated with gastroesophageal reflux by Hicks et al (4) found that these associations were non-specific and are also observed in healthy individuals. Moreover they found high levels of interobserver variability (3).

24 hour esophageal pH monitoring is the study to perform for evaluation of these patients when attempting to demonstrate an association between chronic laryngitis and laryngeal symptoms. However, the evidence from studies calls into question the usefulness of esophageal pH monitoring for establishing an association between reflux events and symptoms of chronic laryngitis. For example, 15 different series of patients whose pH levels were monitored with hypopharyngeal sensors found a prevalence of abnormal findings of only 38% (5). Joniau et al (6) evaluated the prevalence of reflux laryngitis among individuals in a control group and among patients who had been diagnosed with laryngitis associated with GERD. 24 hour esophageal pH monitoring with dual sensors (pharyngeal and esophageal) was used in this study. It found no differences ($P = 0.07$) in the prevalence of abnormal findings between the group of patients with chronic reflux laryngitis and control group individuals.

In recent years the use of impedanciometry combined with pH measurement has been suggested for detecting the responsibility of non-acid reflux for the failure of chronic laryngitis symptoms to respond to PPI treatment.

Malhotra et al (7) conducted a retrospective study of 50 patients who underwent pH-measurement combined with impedance analysis for extra-digestive manifestations of gastroesophageal reflux. The study included patients with chronic laryngitis symptoms refractory to treatment with proton pump inhibitors. It demonstrated that among patients with chronic laryngitis symptoms there was a 14.2% association with acid reflux and a 14.2% association with non-acid reflux. No associations with any type of reflux were found for 64.2% of the patients. Very few of the studies published to date have been able to establish any association between reflux and chronic laryngitis, and no gold standard exists for establishing the diagnosis of chronic reflux laryngitis. The lack of association between chronic reflux laryngitis and GERD that has been reported in esophageal monitoring studies may indicate that a large number of the patients who undergo this test do not have the disease and that the reflux may in fact not be responsible for the symptoms.

Another important issue that suggests that chronic reflux laryngitis is an over diagnosed entity is its poor response to PPI treatment. Some experts⁸ recommend trial and error use of PPI twice daily for up to 6 months for patients suspected of having laryngitis due to reflux when the diagnosis is based on symptoms and physical examination even though there may be no clear indications for dosage and duration of therapy. Although this recommendation is frequently followed, including by physicians here in Colombia, there are no controlled studies that support it (9).

A meta-analysis of 8 controlled studies published by Qadeer et al (10) showed no significant benefit from PPIs for controlling symptoms of chronic reflux laryngitis. A recent study by Vaezi et al. (11) has shown that 40 mg daily of esomeprazole for 16 weeks was not superior to placebos for controlling symptoms of chronic reflux laryngitis. The results of these studies suggest that trial and error prescription of PPIs is not the most appropriate treatment for suspected chronic reflux laryngitis. The analysis of this situation should go beyond whether or not PPIs work for management of chronic reflux laryngitis to look at why none of the controlled studies conducted to date have shown any benefit from PPI treatment of these cases. One possibility is that neither dosage nor duration of treatment was satisfactory even though studies of esophageal pH monitoring have shown that a 40 mg daily dose administered for 6 months or less normalized esophageal acid exposure by up to 93% (12). On the other hand, if the acid reflux treatment has been conducted correctly, the fact that symptoms do not respond to treatment could be explained if the cause of laryngitis is non-acid reflux, or it could be explained by an incorrect diagnoses. If either or both of these turn out to be true, then most cases of chronic laryngitis have not been, and are not, due to gastroesophageal reflux.

In conclusion, there is no evidence to show an association between GERD and chronic laryngitis, especially not a causal relationship. Laryngoscopy is a nonspecific diagnostic method with high interobserver variability. The low prevalence of abnormal findings from 24 hour esophageal pH monitoring among patients with suspected chronic reflux laryngitis may be due primarily to over diagnosis of this disease based only on symptoms and physical examinations. PPI treatment for chronic reflux laryngitis is discouraging because most controlled studies have shown that this therapy has no greater benefits than does treatment with placebos. Nevertheless, it is clear that PPIs are the most effective therapy for normalizing esophageal exposure to acid. This leads us to consider the possibility that the vast majority of these patients may have non-acid reflux or have laryngitis without any association with GERD.

Finally, we consider that, although GERD may be responsible for some episodes of chronic laryngitis, GERD is not the disease that is most frequently associated with chronic laryngitis. For those patients who do not respond adequately to PPI treatment and for whom pH impedance analysis does not succeed in establishing an association, we must rule out other diseases before insisting on a diagnosis of GERD as the cause of the symptoms of chronic laryngitis.

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