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ORIGINAL

Clinical and therapeutic approach to chronic laryngitis associated with vocal abuse and gastroesophageal reflux

Abordaje clínico y terapéutico de la laringitis crónica asociada al abuso vocal y reflujo gastroesofágico

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ABSTRACT

Chronic laryngitis is a persistent inflammation of the larynx that affects vital functions such as phonation, respiration, and swallowing, causing symptoms like dysphonia, cough, throat discomfort, and vocal fatigue. This study focused on the analysis of a clinical case of a 44-year-old female patient with progressive dysphonia and chronic cough associated with a polypoid lesion on the right vocal cord. An integral approach was undertaken, including pharmacological therapy with corticosteroids, control of gastroesophageal reflux using proton pump inhibitors, microsurgical resection of the polyp, and specialized voice rehabilitation. Results showed significant improvement in voice quality, resolution of symptoms, and no recurrence in follow-up evaluations. Complementary literature review highlighted the importance of vocal abuse, reflux, and other environmental factors as key triggers of chronic laryngitis, emphasizing the need for a multidisciplinary approach for effective disease management. Education on vocal hygiene, habit modification, and continuous follow-up were stressed to prevent relapses and complications. Although the effectiveness of the integral treatment was demonstrated, the lack of recent epidemiological studies in Spanish-speaking populations limits the generalization of findings. In conclusion, chronic laryngitis requires personalized evaluation and treatment that consider patient-specific factors and etiological causes, thus ensuring optimal functional recovery and improved quality of life.

Keywords: chronic laryngitis; vocal abuse; gastroesophageal reflux; voice rehabilitation.

RESUMEN

La laringitis crónica es una inflamación persistente de la laringe que afecta funciones vitales como la fonación, la respiración y la deglución, generando síntomas como disfonía, tos, molestias laríngeas y fatiga vocal. Este estudio se centró en el análisis de un caso clínico de una paciente de 44 años con disfonía progresiva y tos crónica, asociada a una lesión polipoidea en la cuerda vocal derecha. Se llevó a cabo un abordaje integral que incluyó terapia farmacológica con corticosteroides, control del reflujo gastroesofágico mediante inhibidores de la bomba de protones, intervención microquirúrgica para la resección del pólipo y rehabilitación vocal especializada. Los resultados mostraron una mejoría significativa en la calidad vocal, resolución de la sintomatología y ausencia de recurrencia en controles posteriores. La revisión bibliográfica complementaria destacó la importancia del abuso vocal, el reflujo y otros factores ambientales como desencadenantes clave de la laringitis crónica, y subrayó la necesidad de un enfoque multidisciplinario para el manejo eficaz de la enfermedad. Se enfatizó la relevancia de la educación en higiene vocal, la modificación de hábitos y el seguimiento continuo para prevenir recaídas y complicaciones. Aunque se evidenció la efectividad del tratamiento integral, también se identificó la carencia de estudios epidemiológicos recientes en poblaciones hispanohablantes, lo que limita la generalización de los hallazgos. En conclusión, la laringitis crónica requiere una evaluación y tratamiento personalizados que consideren las particularidades del paciente y los factores etiológicos, garantizando así una recuperación funcional óptima y una mejor calidad de vida.

Palabras clave: laringitis crónica; abuso vocal; reflujo gastroesofágico; rehabilitación vocal.

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INTRODUCTION

Chronic laryngitis is a condition affecting the larynx, an organ essential for voice production and upper airway protection. Unlike acute laryngitis, which is usually transient, the chronic form is characterized by prolonged duration and recurrent nature, manifesting as persistent symptoms such as hoarseness, continuous cough, dysphagia, and a bothersome foreign body sensation in the throat, with a significant impact on the patient's communication and quality of life [1,2].

From a clinical perspective, the importance of this condition lies in the possibility that it may progress to severe complications, such as the development of polyps, nodules, or even precancerous lesions on the vocal cords, which may require specialized medical or surgical interventions [3,4]. These structural alterations not only impair vocal function but also increase the risk of long-term laryngeal dysfunction, underscoring the need for timely diagnosis and adequate management [5].

Several predisposing factors have been associated with chronic laryngitis. Among them, gastroesophageal reflux is prominent, causing constant irritation of the laryngeal mucosa due to stomach acid, as are vocal abuse or misuse, which are common in professionals with high vocal demands, such as singers, teachers, or announcers [6,7]. These underlying causes reinforce the importance of a complete and multidimensional clinical evaluation that considers not only symptoms but also lifestyle habits, gastrointestinal conditions, and environmental factors that may aggravate the disease [8].

Additional literature has also described the association between chronic dysphonia and laryngopharyngeal reflux, allergic sensitization, the timing of reflux episodes, Helicobacter pylori infection, and other alterations linked to laryngeal exposure or function [9-13]. Likewise, associations have been documented between vocal use and vocal disability, longitudinal gap, and organic pathology in patients with dysphonia [14,15].

Differential diagnosis may require evaluation of other vocal fold and airway disorders, as well as imaging studies when the clinical presentation warrants it [16-18]. Oropharyngeal effects associated with the use of inhaled corticosteroids and swallowing alterations in patients with laryngeal pathology have also been described; these aspects may be relevant during comprehensive evaluation [19,20].

Effective management of chronic laryngitis requires a comprehensive intervention that combines pharmacological therapies, such as anti-inflammatory agents and gastric acid-reducing agents, along with lifestyle modifications, including adequate hydration, reduced consumption of irritants such as tobacco and alcohol, and the adoption of proper vocal hygiene techniques. Phoniatric rehabilitation plays a crucial role in functional recovery, helping to restore vocal quality and prevent relapses [21]. In more complex cases, where laryngeal lesions are severe or persistent, surgical intervention may be necessary to remove polyps or nodules that affect the mobility and vibration of the vocal cords [22].

In the management of reflux associated with laryngeal symptoms, antireflux strategies, specific diagnostic criteria, and considerations regarding the use and discontinuation of proton pump inhibitors have also been described [23-25]. This evidence complements the understanding of the etiology and clinical presentation of chronic laryngitis [13]. Differential diagnosis of respiratory symptoms such as dyspnea also requires consideration of alternative causes during clinical assessment [26].

This review aims to provide a deeper understanding of the diagnostic and therapeutic aspects of chronic laryngitis, emphasizing the importance of a multidisciplinary approach that includes otolaryngologists, gastroenterologists, phoniatricians, and speech-language therapists to optimize clinical outcomes and improve patients' quality of life [27,28]. Likewise, the relevance of identifying and controlling triggering factors is highlighted, ensuring personalized and effective treatment that minimizes recurrence and long-term complications [29].

The assessment of laryngeal lesions must also consider the recommendations applicable to glottic diseases and the available institutional clinical information on the etiological factors and manifestations of laryngitis, especially when more severe conditions must be ruled out [30,31].

METHODS

This study adopted a descriptive approach based on 1 clinical case, complemented by an exhaustive review of the scientific literature to examine the clinical, etiological, diagnostic, and therapeutic aspects of chronic laryngitis. This design allows comprehensive analysis of the natural history and management of this condition, without experimental manipulation, with the aim of

providing valuable information for clinical practice and future research.

Selection and description of the clinical case

This study included 1 female patient, aged 44 years, with no significant medical history, who consulted for progressive dysphonia and persistent cough lasting more than 3 months. During clinical evaluation, findings such as hypertrophic tonsils, septal deviation, and a polypoid lesion on the right vocal cord were documented and confirmed by direct laryngoscopy. Clinical follow-up allowed description of the symptomatic presentation, progression, and response to treatment.

Literature review

A systematic search was conducted in recognized scientific databases, such as PubMed, Scopus, Web of Science, and SciELO, using terms related to "chronic laryngitis", "inappropriate voice use", "gastroesophageal reflux", "laryngitis treatment", and "polypoid lesions on the vocal cords". Original studies, systematic reviews, clinical guidelines, and book chapters published in English and Spanish within the last 15 years were selected, prioritizing those that addressed epidemiological, etiological, diagnostic, and therapeutic aspects of the disease. Articles with irrelevant information or inconsistent methodologies were excluded.

Data analysis and synthesis

Data extracted from the literature were analyzed to identify common patterns in the etiology, clinical presentation, and management of chronic laryngitis, as well as to compare different therapeutic strategies. Special attention was paid to the role of vocal abuse, gastroesophageal reflux, and habits such as smoking, and these factors were integrated into an explanatory model of the development and progression of the disease.

Therapeutic interventions and clinical management

The clinical case was managed according to a multidisciplinary plan that included pharmacological therapy with systemic corticosteroids to control laryngeal inflammation, antacid treatment with proton pump inhibitors to manage gastroesophageal reflux, and laryngeal microsurgery for resection of the detected vocal polyp. In addition, recommendations to modify vocal and environmental habits were incorporated, along with phoniatric rehabilitation.

Monitoring and evaluation

A clinical follow-up protocol was established with periodic visits to evaluate symptom progression, vocal function, and possible lesion recurrence. Treatment effectiveness was assessed by physical examination, control laryngoscopy, and vocal functional evaluation. In addition, potential adverse effects of medication and surgery were monitored.

Inclusion and exclusion criteria for the literature review

Inclusion: studies involving patients diagnosed with chronic laryngitis; research addressing vocal abuse, gastroesophageal reflux, and related environmental factors; publications with a detailed description of diagnosis and clinical management; and articles in English and Spanish.

Exclusion: studies with incomplete data, lack of methodological rigor, and publications that do not address chronic laryngitis in detail or are not relevant to the proposed clinical approach. Among the documents not pertinent to the main synthesis, literature from other clinical areas was identified, such as the topical use of honey in diabetic foot ulcers [32], which was not used as evidence on chronic laryngitis.

Ethical considerations

The case study complied with ethical principles for clinical research, ensuring confidentiality of the information and the patient's informed consent for the publication of anonymous data. The therapeutic approach was carried out in accordance with current clinical protocols and prioritized the patient's well-being and safety.

RESULTS

At initial evaluation, the 44-year-old female patient presented with progressive dysphonia

of 3 months' duration, accompanied by persistent cough and laryngeal discomfort. Physical examination revealed grade II hypertrophic palatine tonsils, nasal septal deviation, and signs of inflammation in the nasal mucosa. Rhinoscopy showed nasal congestion and hypertrophic turbinates, suggesting associated upper airway involvement.

Direct laryngoscopy confirmed a polypoid lesion in the anterior third of the right vocal cord, accompanied by inflammation and supraglottic edema. No abnormalities were observed in the epiglottis, and no signs of malignancy were found in the biopsies performed. Additionally, enlargement of the lingual tonsils was identified, which may have contributed to the symptoms.

Treatment with systemic corticosteroids (prednisone) was initiated to reduce laryngeal inflammation, and antacid treatment with proton pump inhibitors (omeprazole) was initiated to control gastroesophageal reflux identified as a contributing factor. In addition, laryngeal microsurgery was performed to resect the polypoid lesion, significantly improving vocal function and respiratory symptoms.

During the 3- and 6-month post-intervention follow-up visits, the patient showed substantial improvement in voice quality, with resolution of chronic cough and a decreased sensation of a foreign body in the throat. Follow-up laryngoscopy showed no recurrence of polyps and reduction in laryngeal edema. Vocal rehabilitation supported the optimization of functional recovery and the prevention of vocal abuse, a key factor in the etiology of the condition.

The literature review corroborated that inappropriate voice use and gastroesophageal reflux are frequent etiological factors in chronic laryngitis, consistent with the presentation of the case studied. The reviewed studies highlight the importance of a multidisciplinary approach that integrates pharmacological treatment, surgical interventions when necessary, and rehabilitation therapy to achieve optimal results [6,21-29].

In conclusion, the comprehensive management applied enabled symptom remission and functional restoration in the patient, demonstrating the effectiveness of combining personalized treatments and rigorous follow-up to minimize complications and improve quality of life.

DISCUSSION

Chronic laryngitis is a complex disease involving multiple etiological factors, among which vocal abuse and gastroesophageal reflux are prominent, as observed in the clinical case presented [1,2,6,9-13,23-25]. The persistence of laryngeal inflammation and the appearance of lesions such as vocal cord polyps significantly affect vocal function and the patient's quality of life, highlighting the need for early diagnosis and appropriate management [3-5].

The multidisciplinary approach adopted in this study was effective in controlling inflammation, eliminating lesions, and restoring vocal function. The combination of pharmacological treatment with corticosteroids, antacid therapy, and surgical intervention enabled considerable improvement in symptoms, confirming the importance of tailoring therapeutic strategies to the specific characteristics of each patient [19,22-25,27-29].

In addition, vocal rehabilitation was essential to prevent relapses, especially in patients whose lifestyle or profession requires intensive voice use. Education on vocal hygiene and control of vocal effort are indispensable elements for preventing progressive deterioration of the vocal cords [14,15,21].

The case also highlights the importance of considering associated factors, such as nasal anatomical abnormalities or the presence of tonsillar hypertrophy, which can contribute to the symptomatology and complicate the clinical picture. Therefore, a comprehensive evaluation should consider not only the larynx, but also the adjacent structures and the patient's overall condition [8,16-18,20,26].

Despite advances in knowledge and management of chronic laryngitis, challenges persist, such as the limited availability of epidemiological studies in Spanish-speaking populations and the lack of standardized treatment protocols, which hinders the generalizability of results. Therefore, it is necessary to promote research to better characterize this pathology in different contexts and to optimize therapeutic approaches.

In summary, successful management of chronic laryngitis requires a personalized, coordinated approach among specialists, considering risk factors, clinical status, and the individual needs of each patient, to improve vocal function and long-term quality of life [27-31].

Conclusions

Chronic laryngitis poses a significant clinical challenge due to its persistent, multifactorial nature, affecting both vocal function and patients' quality of life. This study, through detailed analysis of 1 clinical case and a comprehensive review of the scientific literature, demonstrates that the disease is influenced not only by direct factors such as vocal abuse and gastroesophageal reflux but also by anatomical and environmental conditions that can aggravate the laryngeal inflammatory condition.

The comprehensive therapeutic approach, which combines pharmacological treatment with corticosteroids, reflux control using proton pump inhibitors, surgical intervention in cases of polypoid lesions, and specialized vocal rehabilitation, was effective in reducing inflammation, eliminating lesions, and restoring vocal function in the studied patient. This multidisciplinary approach allows for not only treating symptoms but also addressing underlying causes and preventing long-term complications.

Similarly, education and continuous patient follow-up are fundamental to consolidate clinical outcomes and prevent recurrence, especially in individuals with high vocal demand or predisposing habits. Phoniatric therapy and lifestyle modifications, such as adequate hydration and the elimination of irritants, constitute essential pillars in the management of this condition.

However, this study also highlights the need for increased epidemiological and clinical research on chronic laryngitis, particularly in Spanish-speaking populations, where available information is limited. More precise data will allow the development of standardized protocols that optimize the diagnosis, treatment, and follow-up of this pathology, thereby contributing to improved outcomes in medical practice.

In conclusion, chronic laryngitis requires careful, personalized attention that considers the patient's individual characteristics and the etiological factors involved. Only through a comprehensive, coordinated approach among different specialists is it possible to achieve satisfactory functional recovery, minimize the risks of complications, and ensure a better quality of life for patients with this disease.

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Investigation: Génesis Milena Delgado Saltos.
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