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Case Report

A rare case of non-specific chronic supraglottic laryngitis in a young female: a comprehensive case report

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ABSTRACT

Chronic non-specific supraglottic laryngitis is a rare clinical condition characterized by chronic inflammation of the supraglottic structures without any evidence of infection, granulomatous disease, autoimmunity or malignancy. This is a case report of a young female presenting with a long-standing history of voice change and dysphagia. Laryngoscopy revealed diffuse inflammation of the supraglottis. Thorough workup, including radiological investigations, blood tests, bronchoscopy and biopsy, ruled out any known etiology. She was thus diagnosed with non-specific chronic supraglottic laryngitis. The patient responded well to the long-term use of oral corticosteroids and immunosuppressant drugs. This study summarizes the clinical presentation, comprehensive investigations and management of chronic, non-specific supraglottic laryngitis.

Keywords: Chronic laryngitis, Laryngoscopy, Corticosteroids

INTRODUCTION

Chronic supraglottic laryngitis is a rare disorder in which there is chronic inflammation of the supraglottic structures, the potential etiology of which includes infections, allergies, reflux, autoimmune diseases, granulomatous disorders, environmental factors and malignancy.[1-3] The patients usually present with non-specific symptoms like dysphagia, odynophagia, progressive dyspnea, change in voice and occasionally stridor in severe cases. Chronic non-specific supraglottic laryngitis is an even rarer condition that is diagnosed by the exclusion of all known causes after thorough investigations. Infections must be ruled out by blood microbial culture. Common granulomatous conditions like tuberculosis can be diagnosed by a culture of sputum or bronchial secretions. Autoimmune conditions like systemic lupus erythematosis can be ruled out by serological tests like anti-nuclear antibodies and immunohistochemistry. Radiological investigations and laryngeal mucosal biopsies may be required for diagnosing granulomatous conditions and malignancies. A history of acid reflux and smoking must be taken, as they can lead to chronic laryngitis. Only a few cases of chronic non-specific supraglottic laryngitis have been reported in the literature so far.[4-7] This case presents a rare instance of non-specific chronic supraglottic laryngitis in a young female.

CASE REPORT

An 18-year-old female presented with a three-month history of throat pain, voice change and dysphagia (predominantly for solids), which has worsened for one week. There was no history of fever, cough, breathing difficulty, acid reflux, joint pains, neck swelling or weight loss noted. A general physical examination and local examination of the ear, nose and throat were normal. Diagnostic video laryngoscopy revealed diffuse edema of the epiglottis, aryepiglottic folds, arytenoids and false cords, with normal true vocal cords and subglottis. The patient was admitted for further management. Routine blood tests, including complete blood count, C-reactive protein, erythrocyte

sedimentation rate, liver function tests and kidney function tests, were normal.

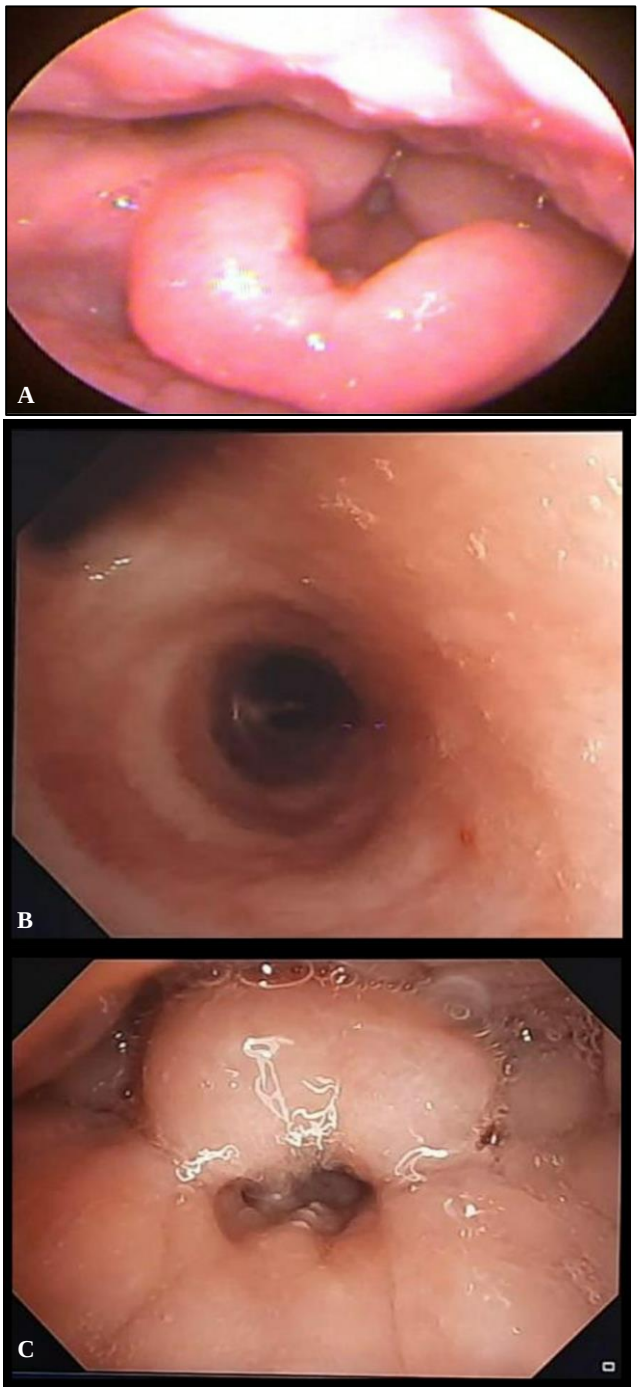

Figure 1 (A-C): Laryngoscopic image showing diffuse edema of epiglottis, aryepiglottic folds and false cords. Bronchoscopic images showing edematous, supraglottis and upper trachea.

Contrast enhanced computed tomography of the neck and chest showed diffuse thickening of the epiglottitis, aryepiglottis folds and arytenoids with normal vocal cords and subglottis. Bronchoscopy was done, which revealed mucosal inflammation of the supraglottic structures and upper part of the trachea (Figure 1). A biopsy was taken from posterior pharyngeal wall and epiglottis. Histopathological examination of the biopsied tissues ruled out granulomatous diseases and malignancies. Gene expert testing for tuberculosis was negative. Rheumatologist consultation was taken and antinuclear antibody profiling was done, which showed weak positive anti-PM Scl and anti-PCNA antibodies, indicating non-significant autoimmune activity.

The patient was thus diagnosed to have non-specific chronic supraglottic laryngitis and was treated with oral prednisolone for a week during the hospital stay. As the patient did not have any symptoms of airway compromise, tracheostomy or any other surgical intervention was not required. Once the patient had symptomatic improvement, she was discharged with the advice to continue the oral steroids for two months. After two months, pt was reviewed and her medication was changed from steroids to azathioprine, a non-steroidal immunosuppressant drug, to avoid any systemic side effects with long-term steroid usage. She was advised to continue the same medication for six months with a monthly follow up. The patient showed a significant reduction in supraglottic edema after six months of treatment, thus improving the airway (Figure 2).

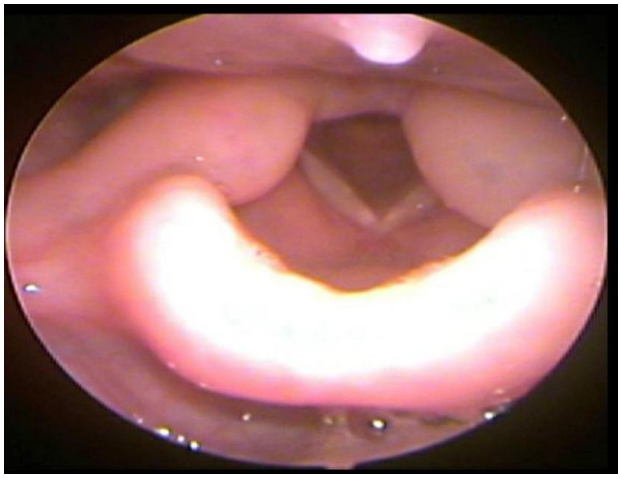

Figure 2: Six months post treatment laryngoscopic image.

DISCUSSION

Chronic non-specific laryngitis is a rare condition that poses a diagnostic challenge to otolaryngologists due to its non-specific symptomatology, clinical course and non-standardized treatment options. Patients have a reduced quality of life owing to delayed diagnosis and uncertainty in disease progression. The patients may also develop acute airway obstruction requiring intubation or a tracheostomy. Corticosteroids have been given as first-line treatment in patients with chronic laryngitis.[8] Due to the systemic side effects of prolonged steroid usage, non-steroidal immunosuppressive drugs like hydroxychloroquine and azathioprine are being preferred. Surgery (reduction of the epiglottis) can be done in

addition to medical management for chronic laryngitis.[9] The use of lasers in laryngeal surgeries such as laser supraglottoplasty and arytenoidectomy is being explored widely.[10] The use of newer modalities like biologic agents is still being explored, weighing their benefits and hazardous side effects.

CONCLUSION

This study is being reported owing to its rarity. It underscores the need for comprehensive investigations in diagnosing non-specific supraglottic laryngitis and outlines the treatment modalities. The patient here was treated successfully with short-term steroids and non-steroidal immunosuppressant drugs. As the patient was followed up regularly, she did not develop any symptoms of airway compromise, thus not requiring a tracheostomy. As we reflect on this case, we invite any additional insights or suggestions from fellow healthcare professionals on the management of this condition to potentially improve future management strategies for similar cases.

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