

Transplantation 2020: Vocal cord leukoplakia: Management in the and Office

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Abstract

This presentation will comprehensively review evaluation and management of laryngeal leukoplakia. Though white vocal fold lesions are common, management remains challenging; doing insufficient may allow precancerous lesions to progress, while doing an excessive amount of may create unnecessary dysphonia through scar. I will present a framework for management of leukoplakia which balances oncologic with functional outcomes with the goal of achieving disease control without creating scar. State-of-the-art advances in care of leukoplakia will be emphasized and surgical techniques discussed will include role of infusion, use of the KTP laser and micro flap resection of diseased epithelium. Advanced use of the KTP laser for office treatment of laryngeal dysplasia, a crucial a part of my very own practice and something which is merely available during a limited number of centres worldwide is going to be discussed also, to incorporate appropriate Anesthesia techniques for office based procedures. Epidemiology of leukoplakia, rates of progression to malignancy and role of office-based biopsy will be reviewed. Though focus are going to be on KTP laser strategies as these represent leading edge approached to management of this disease, i will be able to also discuss cold instrument and CO2 laser techniques so that the audience, regardless of the tools available to them in their own practices, will be able to transition techniques learned in this presentation to care of their own patients. Approaches to anterior commissure involvement, bilateral disease and multiply recurrent dysplasia are going to be discussed through case presentations which should increase audience interest.

Tracheo Bronchopathia Osteo Ch"art-12">The overall incidence of this disease varies as reported within the literature—on average 1:125 to 1:6000 cases during bronchoscopy . The presentation is often asymptomatic or may instead include nonspecific respiratory complaints, with cough and dyspnoea the most

common. The etiology of TBOC is unclear, but it's considered secondary to chronic airway inflammation. The diagnosis is formed on bronchoscopic findings and sometimes, CT imaging of the chest, with little role in histopathology to verify findings aside from to exclude other pathologies. Treatment is symptomatic, ranging from cough suppression to excision and dilation depending on severity of the airway compromise.

In this report, we present a case of tracheobronchopathia osteochondroplastica found incidentally during a patient being managed for recurrent vocal fold leukoplakia and dysplasia. We review the clinical manifestations, diagnosis, pathophysiology and treatment for our patient with this rare disease.

A 77 year-old male presented with dysphonia and history of prior outside surgery for leukoplakia, with outside pathologic diagnosis of dysplasia. At time of presentation to our clinic, Tran's oral stroboscope revealed scar of the right vocal fold consistent with his prior surgery and persistent/recurrent leukoplakia. The patient had no complaints of dyspnea, cough or inspiratory stridor. With persistent disease and desire to re-establish pathologic diagnosis, the patient was taken to the OR for suspension micro laryngoscopy and micro flap excision of diseased vocal cord epithelium. During micro laryngoscopy, views of the anterior subglottic demonstrated little nodular sub mucosal lesion along the anterior tracheal wall just beneath the cricoid cartilage. This anterior tracheal lesion was biopsied during the procedure. While the vocal cord leukoplakia was found on histopathology to be dysplasia without evidence of invasion, the ultimate pathology of the proximal tracheal lesion was chronic inflammation.

Serial follow-up for the patient's vocal cord dysplasia was recommended, and approximately three years after surgery, recurrence of the vocal cord leukoplakia was noted. The patient elected in-office KTP laser treatment of his lesion, and with advantage of laryngeal Anesthesia, tracheobronchoscopy was through with a versatile scope at the time of the procedure; of note, all prior exams in the office had been done with a rigid scope for magnified, brilliantly illuminated visualization of his vocal folds, and this was the first time a flexible scope had been used for this patient during this practice. Findings of tracheobronchoscopy were characteristic for TBOC. The patient never endorsed any airway symptoms, cough, haemoptysis, pneumonia etc., and thus no further treatment was indicated. To this day, the patient continues to be monitored for his vocal fold leukoplakia with no evidence of disease and no evidence of any airway complaints.

The existing knowledge about the rare entity of TBOC is essentially from case reports and case series, with the primary report of TBOC supported autopsy findings. The condition was described by Wilks in 1857 as ossific deposits within the anterior portion of the trachea. In 1896, Von Schroeder became the primary to use a laryngeal mirror to document these lesions on a living patient. Shortly thereafter, Killian described these lesions using bronchoscopy in 1899. In 1910, Ascoff was credited for coining the name tracheobronchopathia osteoch"art-18">the largest case study described is by Leske et al with 41 patients. Most other case series are smaller, between one and three patients, all with variable presentations.

Overall the disease entity is rare, but its relevance is vital within the laryngology field with reference to presentation and evaluation on bronchoscopy.

The best approximation of incidence of TBOC is cited as 11 per 10,000 cases. There is no difference in distribution between males and females, and family history does not appear to play role. The average age of diagnosis is between the fourth and seventh decade. It is a benign disease, with most cases incidentally found on bronchoscopy or autopsy. Patients are normally asymptomatic on diagnosis, and it's thought that those that become symptomatic may have acquired a superimposed infection or progressive airway stenosis secondary to the lesions. In turn, they present with nonspecific complaints, the most common ones cited being cough and dyspnea with exertion.

The etiology of TBOC is unknown. Theories have been formulated regarding the pathophysiology of the disease. These have included chondrosis and exostosis of the tracheal cartilaginous rings or metaplasia of the sub mucosal stroma. Associations with other diseases like atrophic rhinitis and neoplastic processes are reported, but there's no science to consistently demonstrate this relationship.

Biography

Lee M Akst is the Head of the Johns Hopkins Voice Centre and is the Director of the Division of Laryngology at the Johns Hopkins University, Department of Otolaryngology-Head and Neck Surgery. The focus of his clinical practice is on management of voice disorders with focus on office-based treatments and operative management of epithelial diseases such as vocal cord leukoplakia, papilloma and early glottis cancer. He has lectured extensively on phonosurgical techniques, treatment of laryngeal leukoplakia, laryngopharyngeal reflux and globus pharyngeus. He has been working with engineers at Johns Hopkins on novel robotic platforms to bringing robotic surgery into the end larynx to aid micro laryngeal operative precision. He has received his undergraduate and medical degrees from Yale University, did his Otolaryngology Residency at the Cleveland Clinic and completed his Laryngology Fellowship at Massachusetts General Hospital.

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