CASE REPORT

# Challenges of Management of Mycotic Laryngitis in Low-Resource Setting: A Case Report

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**ABSTRACT**

**Background:** Mycotic laryngitis is a rare disease commonly seen in immunocompromised individuals with nonspecific clinical manifestations. The condition is often misdiagnosed as other laryngeal pathologies and it is not usually suspected in immunocompetent individuals. **Case Summary**: A 51-year-old male military personnel who presented to our facility with a desire to have his tracheostomy tube removed. About 5 years prior to presentation, he was seen at a tertiary health centre with complaints of progressive unremitting hoarseness associated with features of upper airway obstruction which necessitated an emergency tracheostomy. He had laryngeal biopsy with a histology report of squamous cell carcinoma, and he was sent for chemo-radiation in another facility where he had only chemotherapy session. Examination revealed a functioning tracheostomy tube in situ and a flexible laryngoscopy finding of an exophytic mass with a smooth overlying mucosa on the epiglottis extending to the posterior pharyngeal wall, preventing further view of the laryngeal inlet. Contrast-enhanced CT scan of the neck revealed a multi-loculated non-enhancing hypodense lesion involving the epiglottis and wall of the supraglottic larynx with narrowing of the adjacent airway. HIV screening was non-reactive. Random blood glucose and chest X-ray were normal. He had two series of direct laryngoscopy and excision of a laryngeal mass with histologic diagnosis of mycotic laryngitis. He had systemic itraconazole for six weeks and was successfully decannulated thereafter, and is doing well on follow-up. **Conclusion**: Mycotic laryngitis is a rare condition; therefore, there is a need for a high index of suspicion for early detection and efficient management.

**Key words:** Mycotic laryngitis, fungal staining, histology.

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## Introduction

Mycotic laryngitis is an unusual disease condition in an immunocompetent individual. It has a nonspecific manifestation which often leads to misdiagnosis, hence wrong treatment and prolonged patient suffering.[1] It can be misdiagnosed as laryngeal cancer or granulomatous disease of the larynx.[2]

Mycotic laryngitis has varied clinical presentations which include hoarseness, dysphagia, dysphonia, odynophagia, stridor and respiratory distress.[3] Otorhinolaryngologists should consider mycotic laryngitis as a possible differential diagnosis in laryngeal pathology to avoid mismanagement of patients.

## Case Presentation

The patient was 51-year-old male military personnel who presented to our facility with a desire to have his tracheostomy tube removed. His problem dates back to about 5 years prior to presentation when he developed progressive unremitting hoarseness

associated with stridor and progressive difficulty in breathing with no associated odynophagia, dysphagia, foreign body sensation in the throat or neck swelling. He had no otologic or nasal symptoms. He had no cough, fever, drenching night sweat, weight loss or contact with a chronically coughing adult. He had no preceding trauma to the neck, exposure to head and neck radiation, petrochemicals or inhalational steroids. He neither smokes cigarettes nor ingests alcohol.

At 5 months into the illness, he was seen at a tertiary healthcare centre where he had an emergency tracheostomy to relieve the upper airway obstruction. He subsequently had a direct laryngoscopy and biopsy of a laryngeal lesion with a histology report of squamous cell carcinoma (Acantholytic variant). He was then referred to another tertiary healthcare centre for chemotherapy and radiation. The radiotherapy machine was, however, faulty at that tertiary facility, but he was given a complete course (6 cycles) of induction chemotherapy a year prior to presentation. He then presented to our facility on self-referral, requesting radiotherapy and the removal for his tracheostomy tube which has been in situ for over four years. He was not a known hypertensive, diabetic, asthmatic or retroviral disease patient, and has no known allergy. Examination revealed a middle-aged man well preserved, not pale, anicteric, afebrile and not dehydrated. Neck examination revealed a size 7.5 double lumen, plain and functional portex tracheostomy tube in situ with a clean strap; laryngeal crepitus was preserved with no palpable cervical lymph node. Flexible laryngoscopy revealed an exophytic mass extending from the epiglottis to the posterior pharyngeal wall, preventing further view of the laryngeal inlet. Contrast-enhanced CT scan of the neck revealed a multiloculated non-enhancing hypodense lesion involving the epiglottis and wall of the supraglottic larynx, more towards the right, measuring 5cm in length and narrowing the adjacent airway. (See Figure 1 and 2)

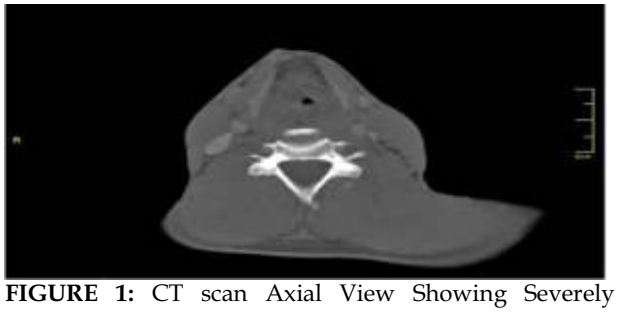

**FIGURE 1:** CT scan Axial View Showing Severely Narrowed Glottis

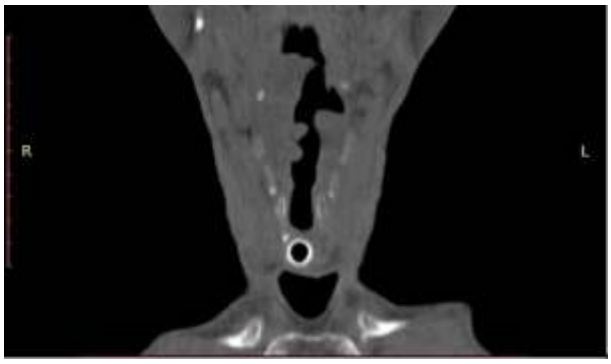


**FIGURE 2:** CT Scan Coronal View Showing Mass in the Larynx, More on the Right with a Tracheostomy Tube

Chest X-ray, Full blood count and differentials, electrolytes, urea and creatinine, as well as fasting blood glucose, were all essentially normal.

Retroviral screening was non-reactive.

An initial assessment of supraglottic laryngeal tumour was made.

He was counselled on the need for a repeat direct laryngoscopy and biopsy to establish a diagnosis for which he consented. Intraoperative findings were those of a fibrotic mass extending from the epiglottis laterally to the right up to the posterior pharyngeal wall with purulent discharge on incision and edematous arytenoid. (Fig. 3)

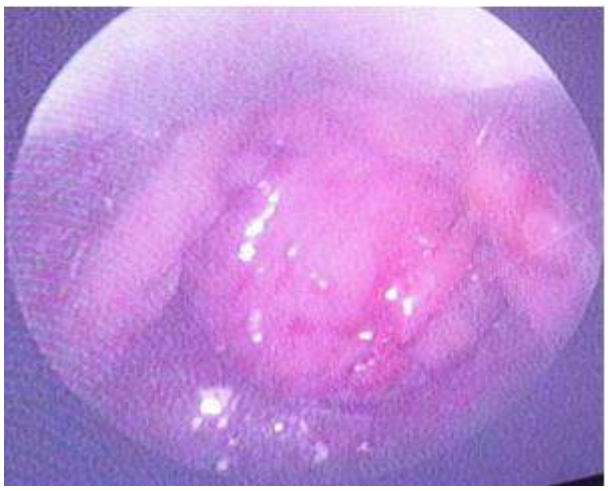

**Figure 3:** Intraoperative Image

He had a laser-assisted debulking of the fibrotic lesion.

Specimen obtained was sent for histology to two different teams of histopathologist at different tertiary hospitals, histology report from one of the tertiary healthcare centre was acanthotic stratified squamous epithelium with a fibromuscular stroma which demonstrates moderate lymphocytic cell infiltrates

and few small sized vascular channels with a conclusion of squamous papilloma while the other histopathologist reported similar finding but further did a fungal staining with Grocott-methanamine silver stain which was positive showing yeast forms and hyphae. A diagnosis of mycotic laryngitis was then made. He had a repeat DL and further excision of the laryngeal lesion and was commenced on oral itraconazole 200mg daily for 6 weeks with a two weekly liver function test. Flexible laryngoscopy at 1week post-operative revealed an edematous epiglottis, aryepiglottic folds, arytenoids and vestibular folds with edematous but mobile true vocal cords.

Repeat flexible laryngoscopy at 5 weeks post-operative still revealed an edematous epiglottis moderately obstructing the laryngeal inlet, edematous aryepiglottic folds, arytenoids and vestibular folds with a pearly white mobile true vocal cords and oedema involving the right piriform fossa. Further repeat flexible laryngoscopy revealed an adequate laryngeal airway, (Fig. 4). He was later successfully decannulated, and was one year post decannulation and on follow-up at the time of this case report.

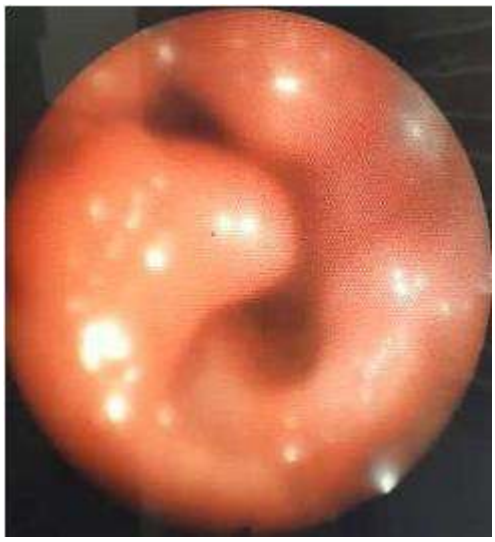

**FIGURE 4: Postoperative Image at 1 Month**

**Discussion**

Fungi usually grow on soil and decaying matter. They are opportunistic organisms which cause infection in immunocompromised individuals. They commonly cause disease of the skin, nails, urinary and respiratory tract.[4] Mycotic laryngitis usually occurs secondary to pulmonary or oropharyngeal mycosis.[5] Risk factors often implicated in mycotic laryngitis include diabetes mellitus, HIV/AIDS, immunosuppressive medications (e.g. chemotherapy, systemic corticosteroids), severe malnutrition, prior radiotherapy, inhaled corticosteroids, gastroesophageal reflux disorder, trauma (intubation) and smoking.[6]

The fungal spores, when inhaled, deposit on the mucosa of the respiratory tract, favoured by the dark and moist airway cavities, they grow to form hyphae, which colonise or invade deeper tissues, producing symptoms when host immunity wanes.[7] The most common fungus implicated in laryngitis is Candida.[6] Other fungal infections in the larynx are Aspergillosis, Cryptococcal, Blastomycosis and Histoplasmosis.

Mycotic laryngitis is commonly seen in immunocompromised patients but it has also been reported in immunocompetent patients.[1] Our patient had no risk factor for immunosuppression prior to the onset of the symptoms. Also, he had no prior endolaryngeal trauma or exposure to inhalational steroids.

Mycotic laryngitis may be confused for laryngeal cancer by the Otorhinolaryngologist due to their similar manifestations. It may present with hoarseness, dysphonia, stridor and respiratory distress.[3] Endolaryngeal examination may show a mass which may be fungating.[8] These are the findings that are commonly seen in laryngeal cancer which is similar to the findings in the index patient which led to the initial diagnosis. As such, the Otorhinolaryngologist should consider mycotic laryngitis as a differential diagnosis for laryngeal tumour.

The surgeon often relies on the histopathologist to determine definitive management of the patient after biopsy of a lesion. When a wrong histological diagnosis is made, inappropriate treatment will be offered to the patient leading to prolonged suffering from both the disease and complications of inappropriate treatment. These were the challenges in the index patient where an initial diagnosis of laryngeal cancer was made from the first hospital and he subsequently had chemotherapy while awaiting radiotherapy.

Histology, special stains (Grocott-methanamine silver, periodic acid Schiff) and culture are methods often employed in making a diagnosis of fungal infection. When histology reveals granulomatous inflammation, such tissues must further be subjected to special stains to rule out fungal infection.[8] In the index patient, histological examination of the specimen from the

larynx was done at two different centres even though chronic inflammation was reported fungal staining was done which revealed fungal spores and hyphae. No fungal culture was done for our index patient because mycotic laryngitis was not considered as a differential diagnosis.

Despite the initial diagnosis of squamous cell carcinoma of the larynx from the first hospital, we still went ahead to do a repeat biopsy as the patient had no referral letter to our facility. This has helped in arriving at the right diagnosis and also instituting the proper treatment for the patient as the disease resolved and he was subsequently decannulated.

**Conclusion**

Mycotic laryngitis should be considered in the differential diagnosis of any laryngeal pathology and biopsy of such a lesion should be subjected to fungal stain, especially when it reveals chronic inflammation. This will prevent misdiagnosis and patients' suffering. This was clearly demonstrated in our case report.

**Reference**


1. Ajeti R. Laryngeal Mycosis in an Immunocompetent Patient: A Case Report. Cureus. 2024 Feb 15;16(2)
2. Swain SK, Sahu MC, Debdta P, Baisakh MR. Primary fungal laryngitis: An overlooked clinical entity. Apollo Medicine. 2019 Jan 1;16(1):11-5.
3. Singh K, Chong AW, Mun KS. Fungal laryngitis causing airway compromise in post irradiated patient. Acta Oto-Laryngologica Case Reports. 2016 Jan 1; 1(1):123-5.
4. Ogawa Y, Nishiyama N, Hagiwara A, Ami T, Fujita H, Yoshida T, Suzuki M. A case of laryngeal aspergillosis following radiation therapy. AurisNasus Larynx. 2002 Jan 1; 29(1):73-6.
5. Zhang S, Farmer TL, Frable MA, Powers CN. Adult herpetic laryngitis with concurrent candidal infection: a case report and literature review. Archives of Otolaryngology–Head & Neck Surgery. 2000 May 1;126(5):672-4.
6. Mehanna HM, Kuo T, Chaplin J, Taylor G, Morton RP. Fungal laryngitis in immunocompetent patients. The Journal of Laryngology & Otology. 2004 May; 118(5):379-81.
7. Dutta M, Jotdar A, Kundu S, Ghosh B, Mukhopadhyay S. Primary laryngeal aspergillosis in the immunocompetent state: a clinical update☆. Brazilian Journal of Otorhinolaryngology. 2017 Mar; 83:228-34
8. Srinivasagam K, Kumarasamy V, Manab FW, Daud AM, Randhawa AS, Mohamad I. Fungal laryngitis: a forgotten disease mimicking laryngeal cancer—a case report. The Egyptian Journal of Otolaryngology. 2023 D


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