

Unusual chronic laryngitis caused by *Trichophyton violaceum*: A rare case report

Ihab E. A^{1*}, Farid R², KY Loh³

ENT Department, Taylors University School of Medicine, Malaysia¹

ENT Department, Hospital Sungai Buloh, Malaysia²

Family Medicine Department, Taylors University School of Medicine, Malaysia³

Corresponding author: 1*



ABSTRACT— Chronic laryngitis caused by fungal infection is rare. In immunocompromised patients such as severe diabetes mellitus, patients on long term steroid therapy and Human Immunodeficiency Virus (HIV) infection; systemic fungal infections are well known. Candidiasis of the esophagus and larynx are well reported worldwide but very few reports on primary infection of the larynx by dermatophytes genus of *Trichophyton*. Fungal laryngitis can mimic the presentation of malignancy or tuberculosis of the larynx. In this case report, we described an HIV patient who presented with chronic odynophagia in which the laryngoscopic examination revealed a fungating mass. Tissue biopsy taken and histology showed no malignancy but mycology study successfully cultured *Trichophyton violaceum*. He responded well to intravenous fluconazole treatment and recovered fully.

KEY WORDS: *Odynophagia, laryngitis, Trichophyton violaceum, HIV*

1. INTRODUCTION

Cutaneous fungal infections in human being are very common and usually they are benign. However, in an immunocompromised person, fungal can become a serious opportunistic infection that lead to systemic mycosis. Uncontrolled diabetes mellitus, long term high dose steroid therapy and Human Immunodeficiency virus (HIV) infection are well known predisposing factors for systemic mycosis. [1] Fungal infection affecting the larynx is rare. However, among the HIV patients, candidiasis affecting the larynx causing chronic laryngitis is well known. [2] There were not many published case reports on other category of fungal infections of the larynx such as dermatophytes.

The following case history described a fungal infection of the larynx that the patient presents with odynophagia, whom after a complete examination was found to have chronic laryngitis secondary to *Trichophyton violaceum*. This is a dermatophyte which is usually associated with superficial cutaneous infection of the skin or scalp but become systemic when a person is immunocompromised.

A 44-year-old man from Malaysia was referred to the Otorhinolaryngology (ORL) clinic with a history of odynophagia of one-month duration. Besides odynophagia, he also complained frequent upper throat discomfort such as foreign body sensation that he could not resist frequent throat clearing. Two years ago, he was investigated for persistent weight loss and subsequently confirmed infected with Human

Immunodeficiency Virus-1. Currently he is still being followed-up by Infectious Disease Clinic. There was no history of fever, rhinitis, hearing loss or dysphagia. His appetite remains good despite of the above symptoms. There was no history of diabetes mellitus, respiratory disease or any family members diagnosed with malignancy. There were no documented any opportunistic infections following the HIV infection. He is a laborer and no significant history to suggest any occupational risk to the airway.

Detail examination was then carried out in the ORL outpatient clinic. Oral cavity and nasal examination did not reveal any gross abnormality. There was no infection, nor any abnormal growth noted in the oropharynx. The tonsils were not enlarged, and no lesions seen at the palate. However, further examination using a laryngoscope reviewed an irregular fungating mass at the right arytenoid extending to right aryepiglottic fold and pyriform fossa. The mass appeared whitish in color and its surface was irregular. (Figure 1). The vocal cord was normal and distance trachea was patent. Both oropharynx and nasopharynx were normal. CT scan of the larynx was performed and revealed supraglottic thickening extending to epiglottic fold and base of the right side of the epiglottis. There was narrowing of the airway proximally 0.6 cm x 0.7 cm. (Figure 2). In view of the symptoms, a tissue biopsy was immediately taken on the same day. However, the histopathological examination of the tissue did not show any malignancy except chronic nonspecific inflammation. Culture for *Mycobacterium tuberculosis* was also negative. The tissue was also sent to mycology laboratory study. Few weeks later the fungal culture was positive for *Trichophyton violaceum*.

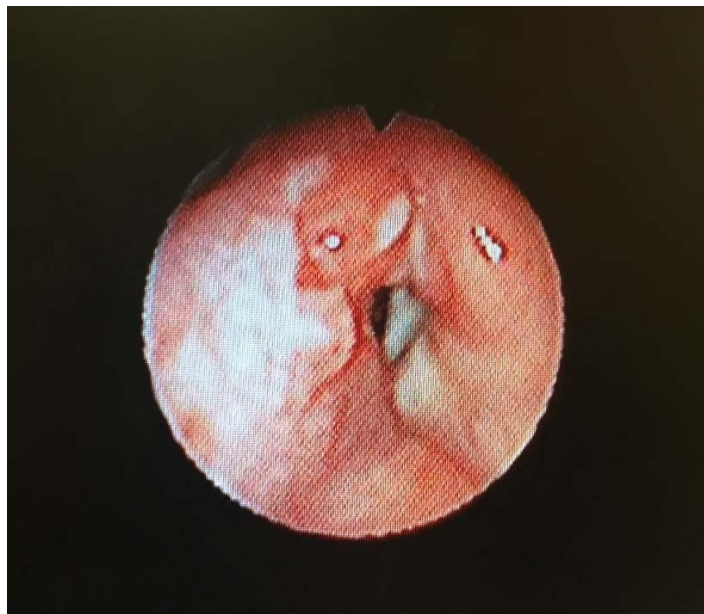


Figure 1: Laryngoscopic view showing fungating mass at the right arytenoid and narrow airway lumen.

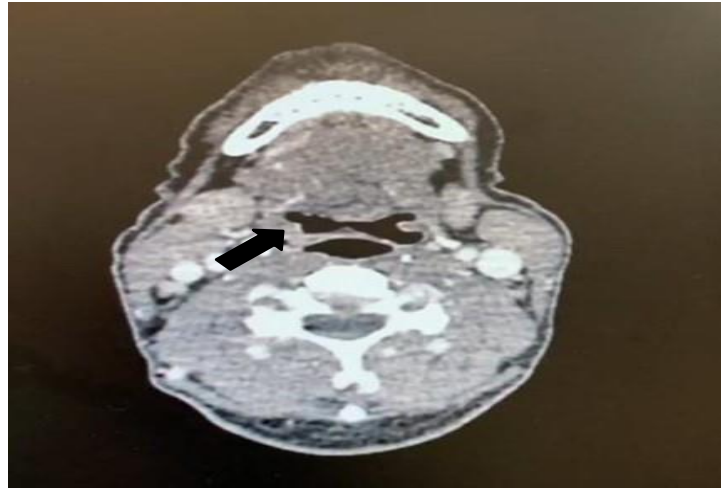


Figure 2: Supraglottic thickening extending to epiglottic fold and base of the right side of the epiglottis.

Following the positive culture of *Trichophyton violaceum*, the final diagnosis of *Trichophyton* laryngitis secondary to underlying HIV was established. He was immediately started on Intra venous fluconazole. The odynophagia subsided after one week and there were no new symptoms developed after that. He tolerated the treatment regime without any side effects or any discomfort. A repeat laryngoscopy was conducted after completing treatment showed total regression of the mass. There was no new lesion seen. Further examination and investigations were performed on his lung, liver and kidney and the results were all normal without any evidence of other systemic fungal involvement. The patient remains well until today and currently he is able to live a normal life.

2. Discussion

Most of the fungal infection in human being are benign and localize to superficial cutaneous infection. However, in immunocompromised person, fungal infection can be severe and it can lead to systemic mycosis. Well known risk factors for systemic mycosis are severe diabetes mellitus, HIV infection and long term steroid therapy. [1] The incidence of systemic fungal infection also well correlated with HIV infection, especially when the patient's CD4 white cell counts drops, systemic fungal infection becomes one of the most frequent opportunistic infection associated with it. [1]

Even though uncommon but it was well documented fungal can infect the upper airway. The commonest fungal affecting the upper air way associated with immunocompromised is candidiasis. [2]. Other category of fungi that has been reported in causing systemic infection in human is from the category of dermatophytes such as genus *Trichophyton* and *Microsporum*. [3] However, there are not many published literatures on confirmed cases of laryngitis caused by *Trichophyton* sp world-wide.

The patient described in this case report had history of confirmed HIV infection, this was the most important predisposing factor in him of developing fungal opportunistic infection. There was no obvious cutaneous fungal seen on his body, therefore it was hypothesized the infection in the larynx could be direct air borne inoculation.

This case also illustrated the importance for the treating doctor to consider opportunistic infection as an alternative cause of odynophagia especially in a young person with underlying HIV infection. Many reports on tuberculosis as the cause of chronic laryngitis had been published, [4] but there were not many known published report of fungi as a cause of chronic odynophagia. *Trichophyton violaceum* is just one example of the species in the genus of *Trichophyton* dermatophytes, which can cause systemic infection in immunocompromised patient. [5] Therefore considering fungi as an etiological agent is appropriate when screening for tuberculosis reveals negative findings, such

as illustrated in this patient. Besides sending for histological study to exclude malignancy, the tissue sample obtained from biopsy should also be sent for both tuberculosis and fungi work-up. This case also demonstrated once a correct diagnosis was established and appropriate management was commenced, the fungi laryngitis was curable.

3. Conclusion

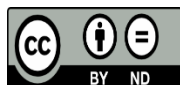
Fungi laryngitis is rare but should be considered in immunocompromised patient when malignancy and tuberculosis have been excluded. Besides the usual reported candidiasis associated with HIV infection, the other category of fungi pathogen such as dermatophytes caused by genus *Trichophyton* should be considered. Early confirmation of diagnosis with proper systemic antifungal treatment can be successful in achieving total healing of the laryngitis.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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