



# Rare Case of Vocal Cord Mucormycosis Involving Bilateral Cord

Reskey Dev<sup>1\*</sup>, Jivan Kshetri<sup>2</sup> and Sriya Bhattarai<sup>1</sup>

<sup>1</sup>Department of Otorhinolaryngology, Kathmandu University, Nepal

<sup>2</sup>Department of Pathology, Kathmandu University, Nepal

## Abstract

Mucormycosis, previously termed as zygomycosis, is an opportunistic infection and is caused by fungi belonging to the order Mucorales. It is found in patients with predisposing conditions such as diabetic ketoacidosis, chronic kidney disease malignancy long-term steroid use and immunosuppressant drugs. Pulmonary mucormycosis commonly occurs in immunocompromised patients or those with malignancies, but vocal cord mucormycosis is rare and the standard treatment is still inconclusive. Very few cases of pulmonary mucormycosis presenting as vocal cord paralysis have been described in the literature. One case of laryngeal mucormycosis presenting with vocal cord polyp has been reported. We report a case of vocal cord mucormycosis presenting with hoarseness of voice with no any pulmonary signs and symptoms.

**Keywords:** Fungal infection; Mucormycosis; Vocal cord

## Introduction

Mucormycosis is an opportunistic infection occurring in immunocompromised conditions. They cause a fungal infection that presents in various clinical forms and affects immunocompromised patients, often with a fatal outcome [1]. The main infections in humans are rhinocerebral sinusitis, pulmonary, cutaneous, and gastrointestinal involvement, and disseminated zygomycosis. Few cases of respiratory tract infection have been described in the literature. Endobronchial mucormycosis presenting as vocal cord paralysis has been reported earlier [2]. We present here the rare case report of isolated bilateral vocal cord mucormycosis with hoarseness of voice and no other symptoms in an otherwise healthy patient with no any immunocompromised state.

## OPEN ACCESS

### \*Correspondence:

Reskey Dev, Department of Otorhinolaryngology, Kathmandu University, Nepal,  
E-mail: reskeydev@gmail.com

Received Date: 24 Dec 2021

Accepted Date: 18 Jan 2022

Published Date: 21 Jan 2022

### Citation:

Dev R, Kshetri J, Bhattarai S. Rare Case of Vocal Cord Mucormycosis Involving Bilateral Cord. *Am J Otolaryngol Head Neck Surg.* 2022; 5(2): 1173.

Copyright © 2022 Reskey Dev. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

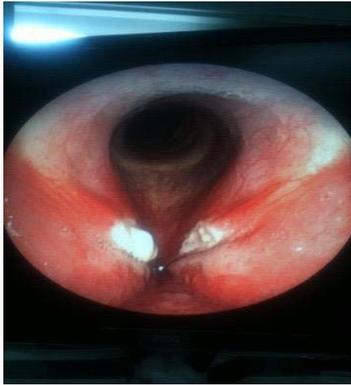
## Case Presentation

A 45-year-old male presented in the Out Patient Department of E.N.T of College of Medical Sciences Bharatpur Nepal in a month of July with the complaint of hoarseness of voice since 1 month. Hoarseness was gradually increasing with no remedy by medication given by the General Practitioner. There was no dyspnea, dysphagia, throat pain, cough, expectoration or any other ear and nose or systemic symptoms.

On flexible nasopharyngolaryngoscopy there was whitish lesion in bilateral anterior one third of vocal cord with rest of the vocal cord highly congested. Bilateral vocal cord was mobile with presence of phonatory gap. False vocal cord was also congested with normal tracheal lumen and other laryngeal sites (Figure 1). Provisional diagnosis of leukoplakia, glottic carcinoma was made. After routine blood investigation direct laryngoscopic biopsy of the vocal cord lesion was done under general anesthesia. Post-operative course of antibiotic, gargle and voice rest was given for a week till the biopsy report arrived. The biopsy report was fungal infection consistent with mucormycosis. The patient was given Tablet fluconazole 150 mg once a day for 1 week and voice rest advised. He was reviewed after 2 weeks. After 2-week patient voice improved with disappearance of white lesion (Figure 2). Histopathology is given in (Figure 3, 4).

## Discussion

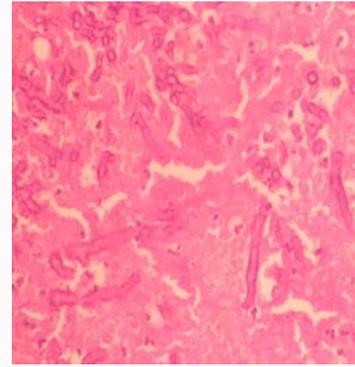
Mucormycosis refers to infection caused by fungi of the order Mucorales belonging to the class Zygomycetes [3]. *Rhizopus* is the most commonly identified genus followed by *Mucor* and *Cunninghamella* [4]. It is a universally distributed fungal infection. These are opportunistic infections seen in immunocompromised conditions like Diabetes Mellitus, stem cell transplant patients, hematological malignancy and solid organ transplant patients and patient on desferrioxamine



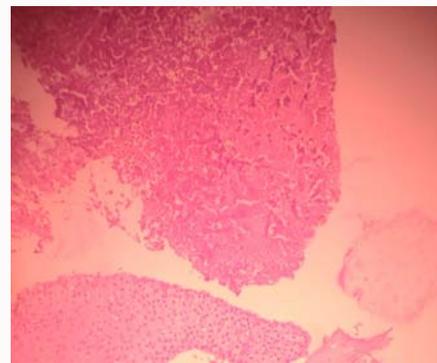
**Figure 1:** Bilateral anterior one third of vocal cord with whitish lesion. Rest of true and false vocal cord are congested with normal tracheal lumen.



**Figure 2:** Disappearance of white lesion with slightly congested bilateral true vocal cord and normal false vocal cord.



**Figure 3:** High power field of aseptate fungal hyphal strands which are haphazardly branched.



**Figure 4:** Lower power field of fungal hyphal strand.

therapy [5]. Mucormycosis is reported most commonly in diabetic patients [6]. Rhinocerebral is the most common form followed by pulmonary [7]. Other manifestations are cutaneous gastrointestinal and disseminated forms [8]. These organisms are usually found on soil, dung and vegetable matter. The route of infection is through inhalation of conidia, other routes include ingestion and traumatic inoculation. Vascular tissue is preferably affected by the fungus leading to infarction and necrosis of respective structures. The fungus has typically broad 10 to 20-micron hyphal strands, which are sparsely septate and haphazardly branched. Diagnosis is made by observing typical clinical features in predisposed patients but confirmed by direct histopathological demonstration of the fungus and culture on Sabouraud's agar medium.

Therapy involves systemic antifungal therapy, surgical resection and control of the underlying disease whenever possible [9]. Antifungal therapy should be given until there is clinical and radiological evidence of resolution of infection [7]. Prompt and effective therapies are essential for a successful outcome.

## Conclusion

Mucormycosis is a well-known acute fulminating infection in an immunocompromised patient. Chronic localized mucormycosis infection is a rare clinical entity [10]. Mucormycosis rarely affect healthy individuals so high index of suspicion is needed and prompt therapy initiated [11]. Delay may result in invasive and disseminated disease. Outcome depends on extent of lesion and early diagnosis and treatment. In our case report we have found that noninvasive

mucormycosis can be treated with surgery and tablet fluconazole for one week.

## References

1. Ribes JA, Vanover-Sams CL, Baker DJ. Zygomycetes in human disease. *Clin Microbiol Rev.* 2000;13(2):236-301.
2. Suresh V, Bhansali A, Sridhar C, Dash RJ. Pulmonary mucormycosis presenting with recurrent laryngeal nerve palsy. *J Assoc Physicians India.* 2003;51:912-3.
3. Rippon JW. Zycomycosis. In *Medical Mycology: The pathogenic fungi and the pathogenic actinomycetes.* Philadelphia: WB Saunders. 1988:681-713.
4. Sentochnik DE, Eliopoulos GM. Infection and Diabetes. In Ronald Kahn C, Weir GC, editors. *Joslin's Diabetes Mellitus.* Baltimore Waverly International. 1998:867-88.
5. Sharma A, Gupta V, Singh RS, Kakkar N, Singh S, Bambery P. Angioinvasive pulmonary mucormycosis presenting as multiple bilateral pulmonary nodules in a patient without obvious predisposing factors. *Singapore Med J.* 2008;49(10):e269-71.
6. Pak J, Tucci VT, Vincent AL, Sandin RL, Greene JN. Mucormycosis in immunochallenged patients. *J Emerg Trauma Shock.* 2008;1(2):106-13.
7. Spellberg B, Walsh TJ, Kontoyiannis DP, Edwards J Jr., Ibrahim AS. Recent advances in the management of mucormycosis: from bench to bedside. *Clin Infect Dis.* 2009;48(12):1743-51.
8. Miladipour A, Ghanei E, Nasrollahi A, Moghaddasi H. Successful treatment of mucormycosis after kidney transplantation. *Iranian J Kidney Dis.* 2008;2(3):163-6.
9. Lee FY, Mossad SB, Adal KA. Pulmonary mucormycosis: The last 30 years. *Arch Inter Med.* 1999;159(12):1301-9.

10. Anand CS, Gupta MC, Kothari MG, Anand TS, Singh SK. Laryngeal Mucormycosis. Indian J Otolaryngol. 1978;30:90-2.
11. Jayanth M, Rao KR, Rao S, Sarma L. A rare case of bilateral vocal cord

mucormycosis. A 49. Pulmonary Infections: Case studies (fungal and other), 2015:A1857.