

# Pulmonary Mucormycosis-A Case Report

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## Abstract :

Pulmonary mucormycosis is a rare, but emerging, life-threatening, rapidly progressive fungal infection that usually occurs in immunocompromised patients. Here is a case report of a 74 yr male patient with type 2 Diabetes Mellitus diagnosed to have pulmonary Mucormycosis from BAL fluid analysis which was s/o broad aseptate fungal elements with irregular branching, Suggestive of Mucormycosis.

## Introduction:

Pulmonary mucormycosis is a rare fungal infection that occurs primarily in patients with poorly controlled diabetes. Acidosis appears to enhance fungal growth.<sup>1</sup> Rhizomucor, Rhizopus, and Absidia are the commonly encountered genera. All the organisms have a predilection for invading blood vessels and causing thrombosis and infarction, presenting a rare case of pulmonary mucormycosis in a diabetic patient.

## History and Examination :

74 year old male patient with history of cough with scanty sputum past 1 month is a known case of type 2DM since 4 year, on oral medication.

O/E; chest wall having multiple scars of healed sinuses

Systemic examination: Signs of right lower lobe collapse consolidation, with reduced breath sounds on the affected side

Other system examination: normal

## Investigations :

- Chest X-ray: RMZ and RLZ non homogenous opacity
- CBC: Hb: 10.7g, WBC: 10,200/mm<sup>3</sup>, platelets: 3laks/mm<sup>3</sup>
- LFT&RFT: WNL
- FBS: 279mg%, RBS: 473mg%, urine sugar: 2% HbA1c:8.4
- ESR: 86mm/hr
- Bronchoscopy: thick viscid mucus plugs in right anterior & medial segments of right lower lobe .

## ➤ BAL fluid analysis :

- AFB: Negative.
- Cytology : Cells with degenerative change in mucinous & fibrillary background with few mature

squamous cells, pigment laden macrophages & bronchial epithelium cells.

- Malignant cytology : Negative
- Histopathology: Tissue with necrosis & dense inflammatory infiltrate of neutrophils with broad aseptate fungal elements with irregular branching. Suggestive of Mucormycosis
- Treatment : Patient was treated with supportive measures, antifungal & antibiotics were withheld due to patients old age & uncontrolled diabetic status. Patient was discharged with a referral to diabetologist for uncontrolled diabetes. Patient came back for review after 4 months with a CXR: RMZ non homogenous opacity with a bronchoscopy s/o RUL apical & posterior segment mucus plugging and disappearance of RLL lesions. BAL fluid analysis s/o broad aseptate fungal elements with irregular branching, Suggestive of Mucormycosis.

**Discussion :** Pulmonary mucormycosis occurs in two forms. The more common form produces parenchymal disease with consolidation of the lung and a rapidly progressive clinical course leading to respiratory failure. The other form, endobronchial disease, affects the large airways predominantly. This form often presents insidiously but it may have devastating consequences when it causes acute upper airways obstruction or fatal haemoptysis resulting from infarction of the airways. Mucormycosis in both forms has a high mortality; about half the patients reported have died from massive haemoptysis. The parenchymal form has the worse prognosis, with a fatal outcome in most cases.

It is generally accepted that surgical resection of the infected part and surrounding devitalised tissues should be performed whenever possible. This view is strengthened by the fact that amphotericin B does not appear to penetrate to the bronchus effectively." It is important to consider the diagnosis of Mucormycosis in a patient with pulmonary lesions and chest wall invasion,

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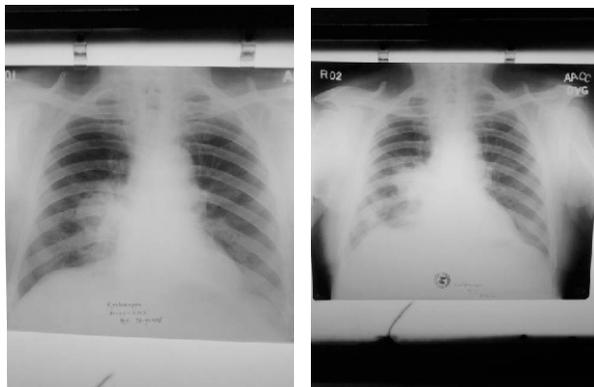
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especially in the setting of diabetes or other immunosuppressed conditions. Early recognition of this diagnosis, along with aggressive management, is critical to effective therapy and patient survival. The delay in diagnosis of this rapidly progressive infection can result in mortality.

**Conclusion :** A case of Mucormycosis presenting as pneumonia in immunocompromised (diabetic).

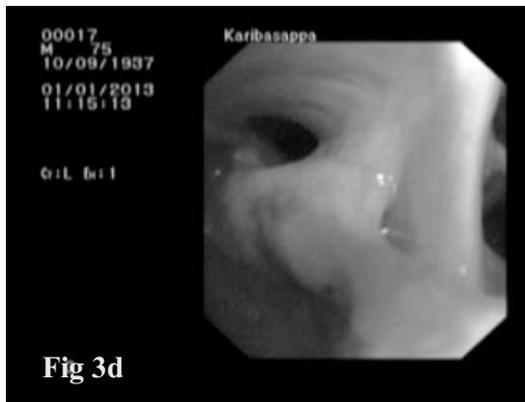
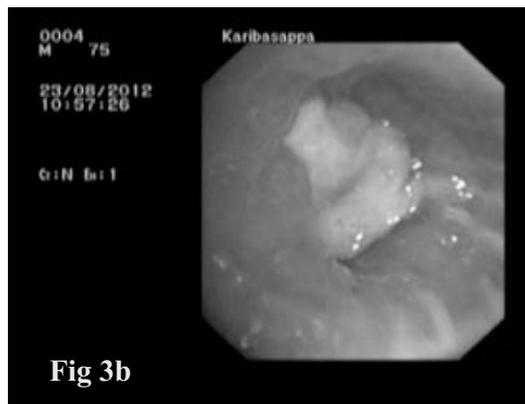
**Fig 1 :** Chest x ray



**Fig 2 :** Healed scars on the chest wall



**Fig 3a - 3d :** Serial pictures of bronchoscopy



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