



## Aspergillus in Active Pulmonary Tuberculosis – A Case Report

Authors

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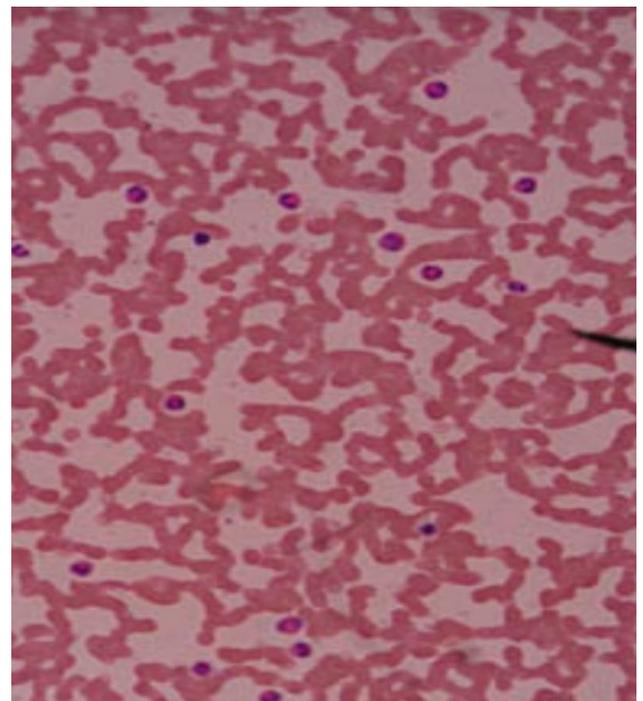
### Introduction

Aspergillus, saprophytic fungi causes a broad spectrum of disease in human host ranging from hypersensitivity reaction to direct angio invasion. Aspergillus primarily affects lungs causing four syndromes 1. Allergic Broncho Pulmonary Aspergillosis, 2. Chronic Nectrotizing Aspergillosis, 3.Aspergilloma, 4. Invasive Aspergillosis. Aspergillosis usually occurs in residual cavity caused by old tuberculosis. Aspergillosis with active pulmonary tuberculosis have been rarely reported.

### Case History

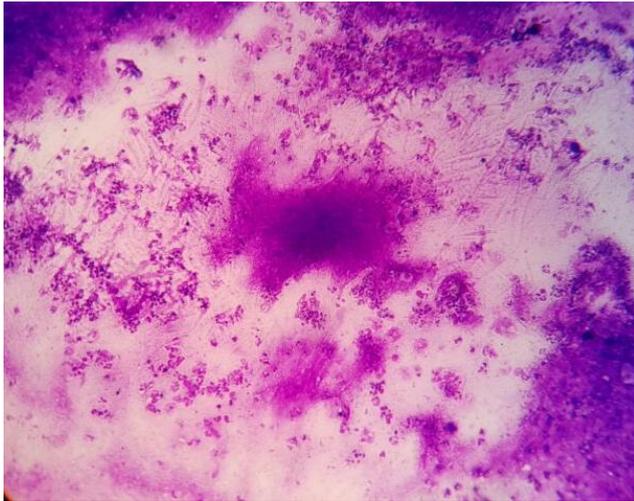
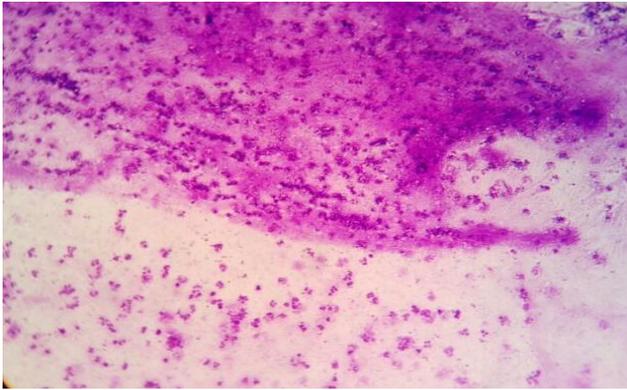
53 years old male patient, cough with sputum , breathlessness, fever, bilateral lower limb swelling, history of loss of weight and appetite, past history of TB, Anti- Tuberculosis drug taken 5 years back, Recently type 2 DM diagnosed, known case of smoker and alcohol.

Peripheral smear: Marked eosinophilia

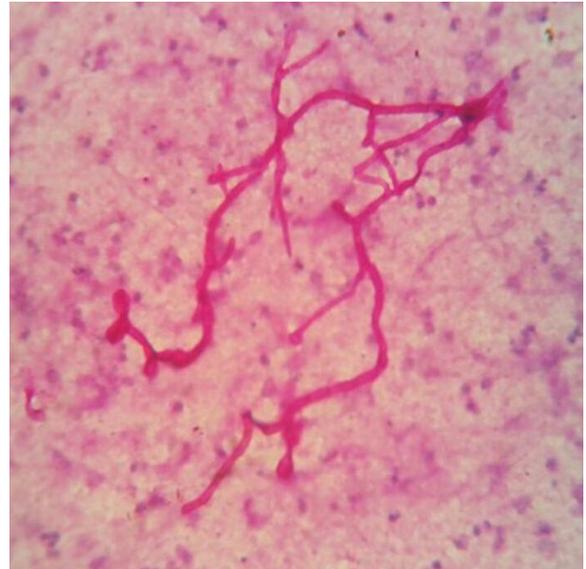
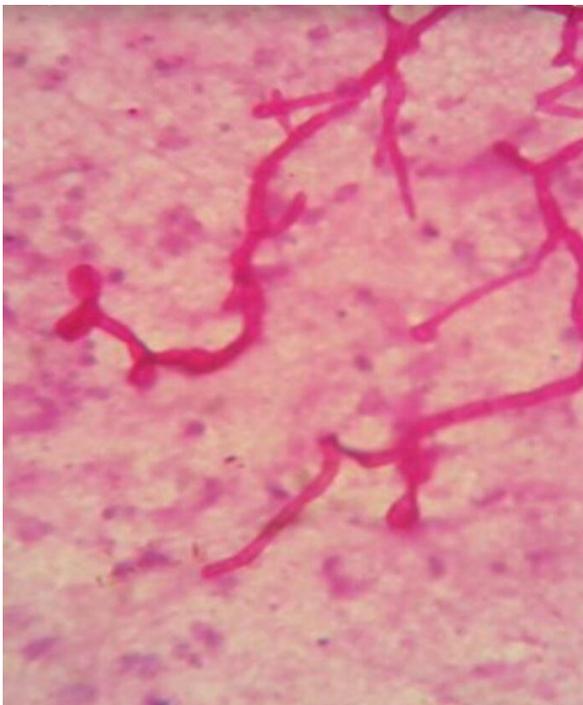


Broncho-Alveolar Lavage done due to suspected TB.

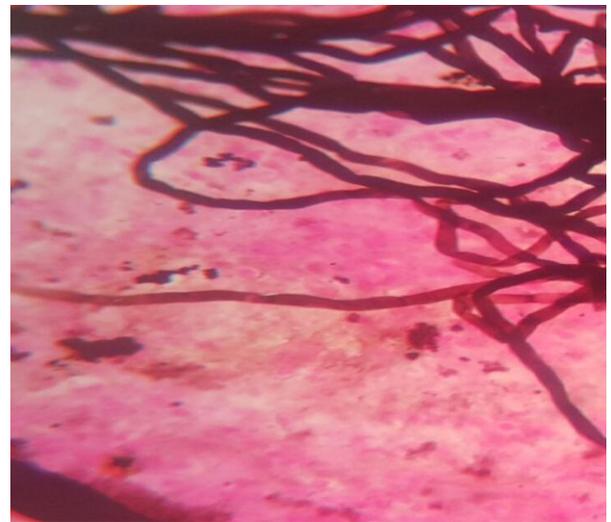
**Cytology:** Inflammatory cells in the background of necrotic debris, giant cells, neutrophils, macrophages, eosinophils, lymphocytes and degenerative inflammatory cells.



**Special stains PAS:** Shows fungal septate hyphae with acute angle branching suggestive of Aspergillosis.



**GMS:** Septations and conidiophore like structures features consistent with Aspergillosis



**Discussion**

200 species of aspergillosis has been indentified among that only 20 causes disease in human. Aspergillus binds and are uptaken by epithelial cells due to presence of sialic acid residues on conidia. It gets deposited in alveolar spaces or

bronchioles. Alveolar macrophages are primarily responsible for phagocytosis and killing, so there is increased neutrophils and eosinophils. The spectrum of aspergillosis ranges from simple colonization to active infection. In case of invasive aspergillosis, there is invasion of blood vessels, the endothelial cells by hyphae. It may lead to pulmonary hemorrhage and vascular thrombus at the site or the organism disseminate via blood stream to other organs

### **Conclusion**

Having Clinical history + Peripheral smear + broncho alveolar lavage Cytology + PAS + GMS Features show suppurative lesion of fungal etiology. Suggestive of aspergillosis

Aspergillosis complicating active tuberculosis has been rarely reported hence extensive evaluation of fungus is required even in active pulmonary tuberculosis.

Pulmonary resection with antitubercular treatment is recommended mostly.

### **Reference**

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