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## **Pulmonary zygomycosis among HIV/AIDS subjects with respiratory symptoms in Calabar, Nigeria**

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**Introduction:** Zygomycosis is a rare infection but the incidence is on the rise as a result of increased use of chemotherapy and steroids among immunosuppressed patients. It is an invasive angiotropic infection with fungi of the *Mucorales* order, which includes *Mucor* species, *Rhizopus* species, *Rhizomucor* species, and multiple others. The second most common form of the infection is pulmonary.

**Materials & Methods:** HIV-positive subjects with respiratory symptoms were enrolled for the study. Subjects selection was based on HIV screening and the ability to produce sputum. A structured questionnaire was administered to all the subjects after obtaining their informed consent for demographic data. Ethical approval was obtained from the ethical research committee, UCTH, Calabar, Nigeria. Blood samples were obtained for CD4 count determination to ascertain the immune status of the patients. Sputum samples produced early in the morning were obtained twice from the subjects and subjected to macroscopy, microscopy and culture. The immune status of the subjects was assessed by CD4 count levels. Identification to the species complex level was performed by macroscopic and microscopic morphology.

**Results:** *Rhizopus arrhizus* 50.0% and *Lichtheimia* species 50% were the only *Mucorales* encountered among subjects in this study. 3.0% pulmonary zygomycosis prevalence was recorded in the study. Subjects with *Rhizopus arrhizus* infection presented hemoptysis and cough while those with *Absidia* infection presented with variable symptoms including; cough, chest pain, sinusitis and fever. The mean CD4 counts of subjects with and without zygomycosis were  $123.0 \pm 136.2$   $351.3 \pm 254.3$  respectively. There was a statistically significant effect of zygomycosis on the CD4 counts of subjects ( $t=2.18$ ,  $p=0.02$ ).

**Conclusion:** This study reveals that pulmonary zygomycosis is a health problem among HIV/AIDS patients in our locality. The immune status may have been influenced by the infection.

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