

The Occurrence of *Nocardia* Species among Patients with Pulmonary Infection

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Objective: The aim is to determine the frequency of *Nocardia* spp. among tuberculous patients in Khartoum state.

Design: Prospective study.

Setting: Abu-Anga Teaching Hospital, El-Shaab Teaching Hospital and the Tuberculosis Reference Laboratory at the National Health Laboratory, Khartoum, Sudan.

Method: Three hundred and twenty-nine patients were included in this study during the period from October 2004 to January 2006. The patients were examined for the presence of acid-fast bacilli. Thin bacterial smears were prepared and stained by Ziehl Neelsen (ZN) stain. Two tubes of the Lowenstein-Jensen (LJ) medium were inoculated with 20 µl of the neutralized sputum sample that was obtained from the digestion and decontamination. One of the two tubes contained glycerol while the other tube contained pyruvic acid to isolate *M. bovis* species if encountered. All cultures were incubated at 37°C for 8 weeks. The growth was monitored up to the 8th week. Phenotypic characterization was performed by using different biochemical tests.

Result: Ten isolates showed rapid growth pattern within 2-3 days after inoculation. Further conventional methods suggested that all these isolates were belonging to the family Nocardiaceae.

Conclusion: *Nocardia* spp revealed considerable occurrence among patients with pulmonary infections (3.3%). This finding suggested that pulmonary nocardiosis might occur in patients who suffer from chronic lung disease in Sudan.

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