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Images in Infectious Diseases

Cerebral and mediastinal abscesses caused by *Nocardia asiatica* in an hiv-infected patient

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We herein describe the case of a 40-year-old woman in the Central-West region of Brazil with a nine-year history of HIV infection, who was receiving stavudine, lamivudine, and efavirenz. She had a CD4 T lymphocyte count of 42/mm^3, CD8 T lymphocyte count of 642/mm^3, and her most recent viral load was 6,275 copies/mL. She presented with mediastinal and cerebral manifestations, characterized by a left hemithoracic tumor, left pleural effusion, evolving hypoesthesia in the phalanges of the right hand, headache, presence of a left thoracic collection, and a hypodense left parieto-temporal lesion on computed tomography, caused by *Nocardia asiatica*. The patient recovered after treatment with sulfamethoxazole/trimethoprim, ceftriaxone, and amikacin; thoracotomy; and drainage of the extensive thoracic collection. Nocardiosis is an uncommon infection that occurs in immunocompromised individuals, such as HIV-positive patients, patients with oncological diseases, or those receiving immunosuppressive drugs[1,2].

Analysis of pleural and cerebral secretions detected *Nocardia spp.*, a Gram-positive (**Figure A**), filamentous, strictly aerobic, partially alcohol- and acid-resistant bacterium (**Figure B**). The laboratory identification of *Nocardia spp.* is difficult as it is often confused with mycobacteria[2]. *N. asiatica* was also identified by direct microscopic examination with 20% potassium hydroxide (**Figure C**). Sequencing of the 1376 bp 16S rRNA from this isolate (GenBank accession no. KF562729) revealed 100% identity with that of the *N. asiatica* strain DSM 44668 (GenBank accession no. GQ217495). Furthermore, phylogenetic analysis showed the formation of a clade with *N. asiatica*, emphasizing the importance of genotypic analysis for the diagnosis of nocardiosis[3].

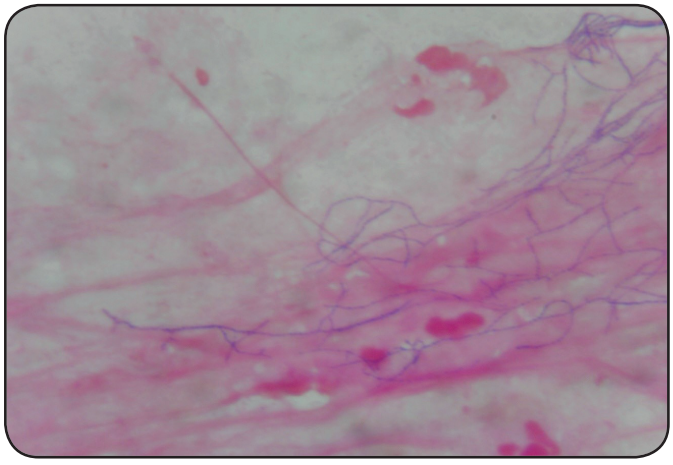

FIGURE A: Presence of Gram-positive filamentous bacteria (*Nocardia spp*) on Gram staining.

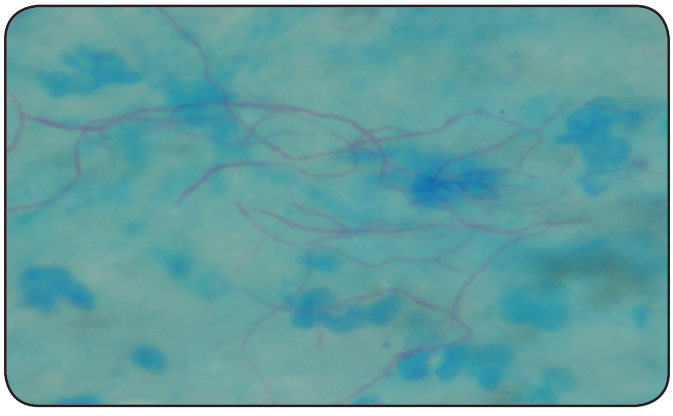

FIGURE B: Presence of partially alcohol and acid resistant filamentous bacteria (*Nocardia spp*) on Ziehl-Neelsen staining.

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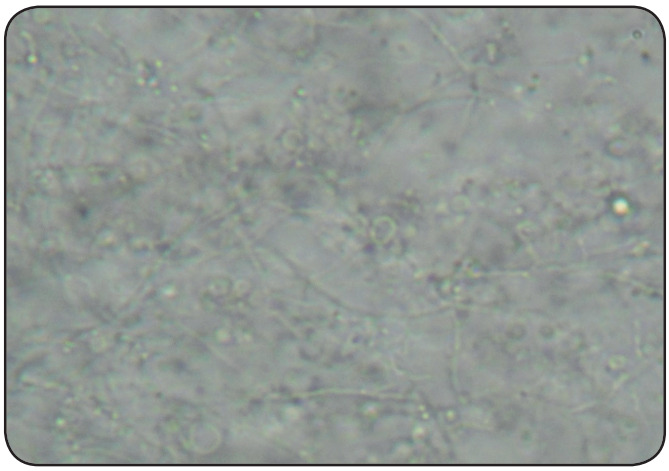

FIGURE C: Presence of filamentous bacteria (*Nocardia spp*), identified by direct microscopic examination with 20% potassium hydroxide.

Conflict of Interest

The authors declare that there is no conflict of interest.

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