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Medical Imagery

Eumycetoma due to *Biatriospora mackinnonii* infection in a young pregnant woman from Somalia

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We report a 25-year-old pregnant female immigrant from Somalia with nodular, indolent progressive swelling of the right distal-medial lower leg and multiple nodular changes on the fingers of both hands (Figs. 1 & 2). Material from a lesion above the right medial malleolus obtained by sample excision tested negative for mycobacteria by conventional microbiology and specific PCR. A postpartum MRI of the right lower leg showed the radiographic "dot in circle sign" as evidence of an inoculated, infectious process (Fig. 3). Histological work-up revealed multiple branched fungal hyphae forming typical grains or druses (microcolonies of the fungus in subcutaneous tissue) (Fig. 4). Specific mycological PCR enabled the determination of *Biatriospora mackinnonii* (formerly classified as *Nigrograna mackinnonii*), a causative agent of Eumycetoma, an infiltrative mycosis, which is endemic in sub-Saharan Africa [1, 2]. Immediate oral drug therapy with itraconazole (200 mg BID) was initiated. A follow-up MRI after 6 months confirmed a clear regression of the findings.

Eumycetoma is one of the WHO’s "neglected tropical diseases", characterized by a triad of subcutaneous indolent tumor, fistulae, and light or dark granules as secretions. Therapy with azoles should be given for at least 12 to 36 months [3, 4]. If left untreated, severe deformity, loss of function of entire extremities, and amputation as ultima ratio may result [5].

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Statement of ethics

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Conflict of interest statement:

The authors have no conflict of interest to report.

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Author contributions

FZ, NK, PN and CL cared for the patient. FZ, NK and CL drafted the manuscript. All authors read and approved the final manuscript.

References


Figure 1: Initial clinical presentation of the patient with weeping, indolent, nodular swelling on the right distal-medial lower leg.
Figure 2: Nodular, painless swelling of multiple affected phalanges. The nodus of the little finger of the left hand was surgically removed and histologically worked up.
Figure 3: Coronal T1-weighted fat-suppressed MRI image of the right lower leg prior to antifungal therapy. Round hyperintense lesions (representing granulation tissue) are surrounded by a hypointense rim with hypointense centre according to the “dot in circle” sign (white arrows).
Figure 4: Grocott stain of biopsy sample showing branched fungal hyphae forming grains or druses, which are aggregates of radially arranged hyphae of the mould *Nigrograna mackinnonii*. 