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First portuguese case report on sporotrichosis caused by *Sporothrix mexicana***Nicolina Dias^{1,2}, Manoel Oliveira³, Manuel Portela², Cledir Santos¹, Rosely Zancoppe-Oliveira³, Nelson Lima¹**¹IBB/Centre of Biological Engineering, University of Minho, Braga, Portugal; ²CITS - Centro de Investigação em Tecnologias da Saúde, CESPU, Paredes, Portugal; ³Laboratório de Micologia, Fundação Oswaldo Cruz, RJ, Brazil

Sporotrichosis is a worldwide subcutaneous fungal infection caused by a traumatic inoculation or inhalation of spores of the dimorphic fungus *Sporothrix schenckii*, which natural habitat is soil and plants. Previous molecular studies revealed that this species constitutes not a single species but a complex of several cryptic species, genetically different. Distinct phenotypic characters, pathological behavior and different antifungal responses suggest that the appropriated treatment depends on the strain which caused the infection. We report, in this work, the first isolation of *Sporothrix mexicana* on human from a Portuguese patient. A 34 year-old male sought care at a podiatry clinic in Vila Nova de Famalicão, Portugal, in 2009 for multiple polymorphous eruptions and ulcers in both feet. He referred working in Malaysia in 2003 wearing open footwear, although he did not recall receiving a skin wound. Back to Portugal in 2004 subcutaneous nodules in both feet ulcerated, and spontaneously healed. He claimed for chronic infection in both feet and lower limbs since 2005 when more severe lesions had appeared. Fragments of skin were collected from lesions and submitted for mycological assessment. Filamentous fungus with hyaline septate hyphae, hyaline and dematiaceous conidia compatible with *Sporothrix* sp was microscopically observed. The isolate was accessed and preserved in the Micoteca da Universidade do Minho (MUM, Braga, Portugal) and given the accession code MUM 11.02. Yeast-like form was achieved incubating the fungus in Brain Heart Infusion Agar in culture slants at $35 \pm 2^\circ$ C. Carbohydrates assimilation pattern was compatible with *Sporothrix schenckii* and *Sporothrix mexicana*. Genomic DNA was obtained from the mycelial phase of MUM 11.02 at Fundação Oswaldo Cruz, RJ, Brazil, and the partial sequencing of the nuclear calmodulin (CAL) gene was based on the amplicon generated by PCR by using CL1 and CL2A primers. A BLAST analysis comparing the sequence of the CAL gene with sequences AM398382/AM398393/AM117444/AM116899/AM116908 in the GenBank database confirmed the isolate identity as *S. mexicana*. MUM 11.02 showed 99% similarity with the sequences of *S. mexicana* with high bootstrap support values. *In vitro* susceptibility testing with antifungals fluconazol, itraconazol and terbinafine revealed MIC 128, 32 and 0.5-1.0 $\mu\text{g/mL}$ respectively. Those results are compatible with *S. mexicana*. This work reports that *S. mexicana* is an emerging cause of human sporotrichosis.

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