



Letter to the editor

Comment on “Orbital Actinomycetoma with cranial extension: A rare case report”

Dear Editor;

A spectacular case report was recently published by Fadalla et al. under the title “Orbital Actinomycetoma with cranial extension: A rare case report” [1]. Actinomycetoma is identified as a chronic subcutaneous infection caused by aerobic *Actinomycetes*; *Nocardia brasiliensis*, *Actinomadura madurae*, as well as *Streptomyces somaliensis* are considered to be the most frequent microorganisms which are isolated from this disease [2]. Nevertheless, a better way of managing actinomycetoma should be defined by identification of bacterial species, drug susceptibility testing, as well as location of infection [3]. We describe some constructive points to enrich the current rare report.

- 1- Aerobic Actinomycetes is a heterogeneous group of actinomycetes including *Actinomadura*, *Gordona*, *Nocardia*, *Rhodococcus*, *Mycobacterium*, *Streptomyces*, and *Tsukamurella* that have similar features such as colony morphology or gram-staining. Accurate identification of aerobic actinomycetes involves performing various biochemical assays, high performance liquid chromatography (HPLC), matrix-assisted laser desorption/ionization time-of-flight (MALDI-TOF) mass spectrometry, and molecular methods is required [4]. However, the authors have been identified *Streptomyces somaliensis* using histopathology staining. The histopathological identification of the causative organism has been described in the literature as a valid method [5–7]; but histopathological staining was not able to identify *Streptomyces* spp. to the species level. Actinomycetoma should be identified using both histopathological staining and microbiological methods to be accurate as well as informative.
- 2- To validate the microbiological results, the performance of repetitive culture results (at least two positive cultures) for confirmation of *Streptomyces somaliensis* infection could be more reliable for these cases. However, details of culture or microbiological identification were not mentioned in this report.
- 3- According to the guidelines of the American Thoracic Society (ATS), aerobic actinomycete isolates should be identified at the species level for proper diagnosis, optimal treatment, and epidemiological purposes [8,9]. *Streptomyces* has an exclusive drug susceptibility pattern. Though, it did not attain an accomplished drug susceptibility testing for this *Streptomyces* spp. and there is no data regarding follow-up results. The recommendation of blind treatment with multiple antibiotics could contribute to the emergence of drug-resistant *Streptomyces* isolates. Thus, drug-susceptibility testing is necessary as an antimicrobial stewardship strategy for reduction of antimicrobial resistance burden. Nevertheless, the authors rectified that the patient was referred to a Mycetoma center for medical treatment and follow-up. According to the literatures, the main therapy in such a case was surgical as well as antibiotic therapy [10]. It is more appealing

that details of treatment processes and follow-up outcomes would be suggested for management of further similar cases.

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Declaration of competing interest

There is no conflict of interest.

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