

DIAGNOSIS AND TREATMENT MADURA FOOT (ACTINOMYCOSIS INFECTION)

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INTRODUCTION

Madura foot is a chronic infection of the skin and underlying tissues caused by both bacteria (actinomycetomas) and fungi (eumycetomas). They are characterized by indolent tumefaction of the affected area, multiple sinus tracts, and granules that contain the agent.^{1,2} The disease was first described in the Indian town of Madura. Mycetoma occurs most often in people who work in rural areas, usually in farmers, hunter-gatherer populations, and field laborers where they are exposed to acacia trees or cactus thorns that contain the etiologic agents that normally live as saprophytes. The disease can also be found in people who work in the city in various occupations, in victims of road accidents who have incurred a traumatic inoculation of the agent, and in travelers to tropical endemic areas.¹ Subtropical regions and the African continent have the highest prevalence. Eumycetoma prevails in the mycetoma belt that stretches between the latitudes of 15° south and 30° north.³

In October 2003, a 29-year-old hispanic male, presented to the clinic with the chief complaint of a plantar mass on the left foot, of 3 years duration (Figures 1 and 2). He works as a migrant worker harvesting oranges. The mass has been growing and in the last 6 months, it has been bleeding through many different little holes. The lesion is also becoming painful. Physical examination of the foot shows hyperpigmented skin overlying a semi-solid mass, 8 cm in diameter, attached to the skin lateral and plantar of the midfoot. The mass is painful on palpation, and there are several small ulcers but with no drainage at this time. The radiographs are normal (Figure 3), but a magnetic resonance image shows a small cortical defect with invasion into the cuboid (Figures 4 and 5). The homogenous soft tissue mass extends from the metatarsal heads to the calcaneus. The patient did not return until 10 months later.

When the patient returned in August 2004, he stated that the mass had not expanded, the blisters would pop occasionally, and the foot had a bad odor. The mass was now 12 cm in diameter (Figures 6-8). A 4 mm punch



Figure 1. Initial presentation, October 2003.



Figure 2. Initial appearance.

biopsy sample and cultures were obtained (Figure 9). The pathology report was positive for dermal sulfur granules compatible with actinomycosis. Antibiotic therapy with Dapsone 100 mg by mouth, twice a day for 1 month and Bactrim double strength 160/800 twice a day for 6 months was initiated. The patient was seen at regular visits and tolerated the Bactrim treatment for one year well (Figure 10). In October 2008 the patient was seen for a 3-year follow-up visit, and was free of infection (Figures 11 and 12).



Figure 3. Radiograph of the left foot.



Figure 6. August 9, 2004.

REFERENCES

1. Fitzpatrick TB, Johnson RA, Wolff K. *Color Atlas & Synopsis Of Clinical Dermatology; Common & Serious Diseases*, 4th ed. St. Louis: Mosby; 2001.
2. Kobayashi GS, Murray PR, Pfaller MA, Rosenthal KS. *Medical Microbiology*, 4th ed; 2002.
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Figure 4. MRI of the left foot shows invasion into the cuboid.

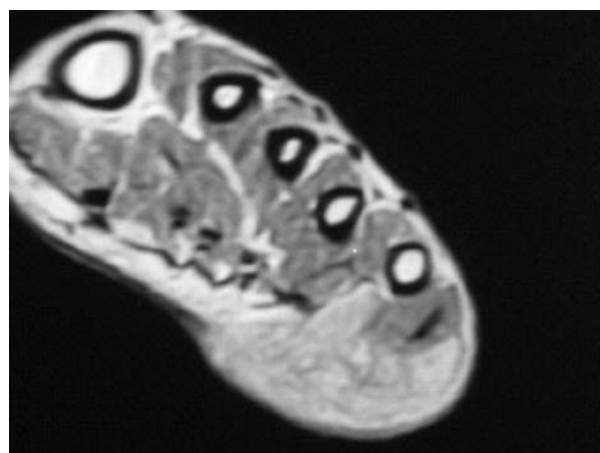


Figure 5. MRI of the left foot shows skin and superficial fascia involvement.



Figure 7. August 9, 2004.



Figure 8. August 9, 2004 punch biopsy and culture.



Figure 9. November 8, 2004.



Figure 10. November 14, 2005 after one year of Bactrim DS antibiotics.



Figure 11. Three-year follow-up, there is no sign of infection.



Figure 12. Three-year follow-up, the patient has full activity and is pain free.