

Mycetoma Cutis (Madura Foot)

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Abstract

Background: Mycetoma is a disease caused by certain types of bacteria and fungi found in soil and water. These bacteria and fungi may enter the body through a break in the skin, often on a person's foot.

Objective: To identify inflammatory skin disease

Patient and method: 30 years old Yemeni farmer from sharaab presented with painless masses under the skin. of his foot fingers destroy the underlying muscle and bone. It secretes black grains. Skin biopsy was diagnostic

Results: The clinical data and the investigations showed that he has mycetoma cutis or Madura foot

Conclusion: Mycetoma cutis is less common in republic of Yemen and this is the first case reported.

Keywords: Eumycetoma grains, Madura foot

Introduction

Mycetoma is an uncommon chronic granulomatous infective disease of the skin/dermis and subcutaneous tissues. It is predominantly a disease of tropical countries and is named after the region of India (Madurai) where it was first described in 1842, also called “Madura Foot,” it is caused by true fungi (eumycetoma) or by the filamentous bacteria (actinomycetoma) [1-4]. It is characterized by a triad of tumefaction, draining sinuses and the presence of colonial grains in the exudates. It is seen commonly in people who walk barefoot. Eumycetoma is rare in Republic of Yemen. The causative agent can be suspected from the colour of the grains [5-10].

Case Report

Thirty years old Yemeni male farmer patient living in village called sharaab out side Taiz province. He presented with loss his small finger in his right foot. Black grains was noted. He treated with antifungal agents. He has eumycetoma caused by fungus. Eumycetoma figure 1 and 2. Skin biopsy showed figure 3. Key histopathological features of eumycetoma are the formation of epithelioid granulomas with microcolonies and grain. Grains are conglomerates of fungal hyphae. In eumycetomas, foreign body reaction to fungal elements results in granuloma formation with epithelioid cell hyperplasia and multiple nucleus giant cells. In eumycetomas, H&E, PAS staining should be performed. The illustrated figure illustrates *Aspergillus niger* showing wide, branching septate hyphae and well-formed conidial heads [11-16].

Dark or black grains

- *Madurella mycetomatis*
- *Trematosphaeria grisea* (formerly *Madurella grisea*)
- *Exophiala jeanselmei*
- *Medicopsis romeroi* (formerly *Pyrenochaeta romeroi*)
- *Falciformispora senegalensis* (formerly *Leptosphaeria senegalensis*)
- *Falciformispora thompkinsii*
- *Curvularia lunata* [17-21].



Figure 1: Showed black and white grains in the finger of left foot and loss one finger or damaged



Figure 2: Black and white grains in the finger of left foot and loss one finger or damaged

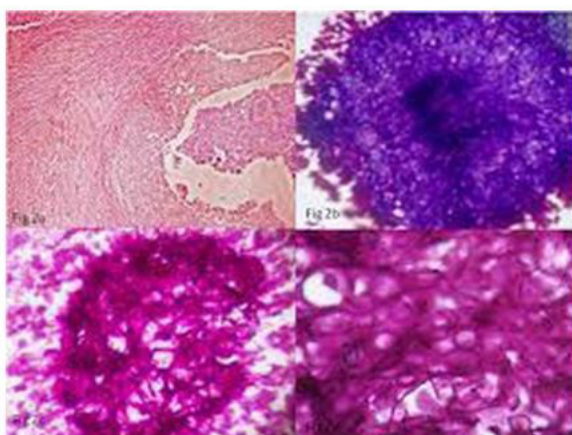


Figure 3: Histopathology of Eumycetoma

Discussion

Mycetoma is a progressive chronic granulomatous infection of the skin and subcutaneous tissue. The disease can occur due to true fungi, referred to as eumycetoma, or by bacteria, referred to as actinomycetoma. Eumycetoma is, therefore, a deep fungal infection of the skin and subcutaneous tissue caused by filamentous fungi. Morphologically and histologically, eumycetoma is characterized by deep granulomatous inflammation and the formation of grains which lead to the destruction of deep tissue, muscle, bone, joints, and tendons. Mycetoma is a WHO-recognized neglected tropical disease with a significant disease burden. It primarily affects those in tropical and subtropical climates who are in direct contact with soil. The most common site of infection is the foot, followed by hands. Less frequently, other areas may be involved [22-27].

The most common organism causing a eumycetoma is *Madurella mycetomatis*. These organisms are present in soil and are implanted in the skin after minor trauma. Slow progressive subcutaneous swelling then develops, followed by multiple nodules that evolve into suppurative lesions with multiple draining sinus tracts. The sinuses then discharge colonies of causative organisms [28-35].

The treatment course is often protracted, challenging, and consists of systemic antifungal therapy combined with surgical procedures. Severe tissue destruction is an undesired consequence of neglected infections. Eumycetomas are chronic and deep skin infections that carry a medical significance and pose a treatment challenge. In endemic areas, eumycetomas lead to socio-economic consequences involving affected patients, their families [36-43].

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