

MYCETOMA PEDIS (MADURAMYCOSIS) IN AN INDIAN IN SINGAPORE

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Although the text-books denote that this disease is common in the tropics and sub-tropics, there has been no report of a case in Singapore and Malaya. Burns-Cox reported the first case from Sabah in 1965. We are reporting this first case in order to point out the rarity of this disease in Singapore, and to bear in mind the possibility of this affection when an immigrant presents with multiple abscesses with discharging sinuses in the foot.

CASE REPORT

A young Indian male, aged 29 years, presented with a hard swelling on the dorsum of the left foot. The swelling was present for 2½ months, but recently he had some pain and the lump had increased somewhat in size. He came over to work as a salesman from South India a few years ago. Twenty years ago, a small cut on the same site was sustained in India.

On examination, the patient was afebrile, and the main findings were in his left foot. There was a well defined swelling 1½" × 1", on the dorsum of the foot, extending over the distal three-fourths of the first and second metatarsals. The skin was intact, shiny and slightly oedematous, and was apparently not adherent to the underlying swelling. There was an old healed scar over it, with no discharge from it. The swelling itself was nodular and irregular in shape but it had well defined edges, and it was adherent to the underlying tissues. The X-rays of the foot did not show any bony changes.

At operation, a non-capsulated fibrous mass, free from the skin, was removed. It was adherent to the sheaths of the extensor tendons of the first and second toes. The patient failed to turn up soon after the operation and no material for culture was available.

GROSS PATHOLOGY

Three irregular pieces of fibrous tissue were obtained, the largest measuring 3 × 1.5 × 1 cm. All of them had a gritty feel with multiple small abscesses in the centre of which black spots were discerned.

HISTOLOGY

All the tissues were blocked. Sections were cut and stained with Haematoxylin and eosin, Gomori's Methanamin Silver and Gram. All the sections showed a chronic inflammatory mass of fibrotic tissue in which numerous small abscesses were present. In the centre of these abscesses were "grains" or colonies of fungi. Each colony was composed of a mesh of septated hyphae of fairly large calibre. At the periphery of each colony a palisade of brown-coloured spores were identified (Fig. 1). Surrounding these colonies were irregular rims of polymorphs, and beyond these polymorphs a margin of histiocytes and giant cells were seen. There was an admixture of polymorphs, plasma cells and lymphocytes amidst the histiocytes. The picture was most consistent with *Monosporium apiospermum*, one of the commonest fungus causing Mycetoma Pedis.

COMMENT

The diagnosis can be made quite confidently on the histology alone. The other common aetiological agent *Nocardia* does not present with spores in the tissues. The hyphae of *Monosporium apiospermum* are broad and septate, and the classical arrangement of spores at the periphery (Fig. 1) is unmistakable.

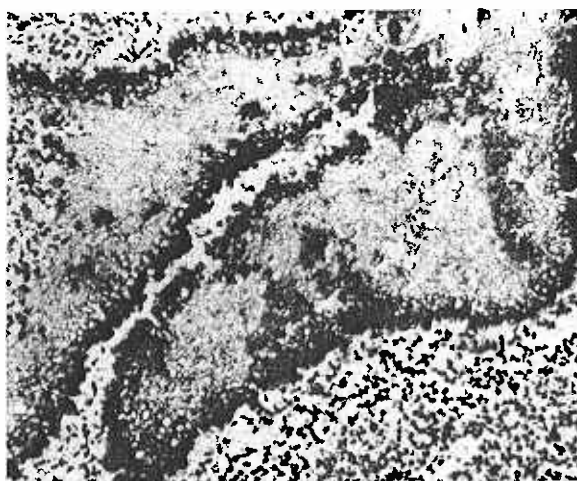


Fig. 1. Note the 2 masses of fungal hyphae. The dark staining borders are the spores at the periphery of the colony. Surrounding these fungi are myriads of polymorphs. Haematoxylin and eosin X 150.

Nocardia and *Monosporium apiospermum* are the commonest saprophytic fungi causing maduramycosis. It is said the fungus is usually introduced into the tissues by an injury sustained years ago. Bare-footedness is a common habit of the region where mycetoma pedis is prevalent. Our patient sustained a cut at the identical site 20 years ago in India. It is difficult to imagine that the fungus had lain dormant in the tissues for twenty years. If the patient had previous swellings and discharging sinuses in the intervening period, then the 20-year-old injury would probably be significant. Furthermore, minor injuries in the more recent years may be forgotten.

The infection is notably deep seated, and thus, like in this case, the skin is free from

involvement unless a discharging sinus supervenes. Bony involvement is not uncommon in longstanding cases, and pain is usually associated with secondary bacterial infection. Our patient suffered pain latterly, but he had no bone involvement.

The patient does not die of the disease, and excision of the mycetoma is best form of treatment.

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