

Madura Foot: A rare case report from Rural Medical College

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Abstract : We report a rare case of actinomycetoma of the foot (madura foot) due to aerobic Actinomycetes in was an agricultural labourer.

INTRODUCTION

Madura foot is a local, chronic, slowly progressive, destructive infection of the skin, subcutaneous tissues, fascia, bone and muscle¹. True fungi (eumycetoma) or aerobic actinomycetes (actinomycetoma) can cause mycetoma. It is more common in males between the ages of 20 and 50 years. A noninvasive and early diagnosis may be possible with x-ray with classical imaging findings.

CASE REPORT

58 year old farm labour with DM presented to our dept for foot x-ray with the history of repeated non healing ulcer in the foot on irregular treatment for one year. Records showed her pus culture was positive for *Madura*. Plain radiograph of the foot showing soft tissue swelling and bone involvement, consisting of multiple osteolytic lesions (cavities) and periosteal reaction involving the proximal ends of metatarsals, cuneiform and cuboid of Lt foot. The diagnosis of madura foot was made.

x-ray Lt foot; shows multiple osteolytic lesions (cavities) and periosteal reaction involving the proximal ends of metatarsals, cuneiform and cuboid of Lt foot showing dot in circle sign.



Madura foot is a term that refers to a chronically swollen indurated foot with multiple scars and sinuses discharging grain-filled pus. It was first described in the Indian district of Madurai in 1846, hence the eponym Madura foot². Endemic in Africa, Mexico and India, it is also found in Central and South America and the Middle

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Received on 27.01.14 Accepted on 30.04.15

and the Far East. Eumycetoma is more common in areas with scarce rainfall and actinomycetoma in areas of abundant rainfall⁴. Radiographs may be normal, demonstrate soft tissue enlargement, bone sclerosis, bone cavities, periosteal reaction, bone expansion, extrinsic cortical scalloping, fanning of the rays or osteoporosis. Eumycotic lesions tend to form a few cavities in bone that are ≥ 1 cm in diameter, while actinomycetes often form smaller but more numerous cavities, leading to a moth-eaten appearance⁵. CT scan provides better delineation of the bone changes than radiographs, plain x-ray & MRI. The MRI/USG described The "dot-in-circle" sign, seen as tiny hypointense foci within the hyperintense spherical lesions is almost similar to conventional findings like our case⁶.

Correlating the MRI and histological findings, they suggested that the high-signal areas seen on MRI represented inflammatory granulomata, the low-intensity tissue seen surrounding these lesions represented the fibrous matrix, and the small central hypointense foci within the granulomata represented the fungal balls or grains. They proposed that it is likely to be a highly specific sign for mycetoma^{7,9}. Eumycetoma is more common in areas with scarce rainfall and actinomycetoma in areas of abundant rainfall.

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