Scholars Journal of Medical Case Reports **ISSN 2347-6559 (Online)**
Sch J Med Case Rep 2016; 4(6):459-461 **ISSN 2347-9507 (Print)**

(An International Publisher for Academic and Scientific Resources) DOI: 10.36347/sjmcr.2016.v04i06.030

Mycetoma of midfoot: A Moroccan case

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Abstract: Actinomycosis or mycetoma is an infectious process caused by a fungal or bacterial agent, giving a pseudotumoral appearance. The evolution is insidious; the bone location at the foot of the far more common; bone disease is a complication that increases the therapeutic management. We report the case of an adult male of 40 years, admitted to swelling of the midfoot, and in histological examination confirmed actinomycosis. Medically treated by antibiotherapy with a favorable outcome. The aim of this work is to recall this affection often unrecognized by rheumatologists so the therapeutic modalities.
Keywords: Actinomycosis; Midfoot ; Biopsy ; Antibiotherapy.

INTRODUCTION

Mycetoma is a granulomatous chronic infection caused by bacterial or fungal agents. It affects mostly young patients, male, native to the tropics and sub-tropics. Isolated cases have been published in Morocco. We report a case of actinomycosis bone and tendon primitive foot in a young patient, lasting for 3 months.

CASE REPORT

Mr BB aged 56, originally from rural areas (in Nkob region located south-eastern Morocco), a farmer by profession, without specific medical history and who consults for swelling of the right midfoot lasting for 3 months and gradually increasing secondary volume to a closed right ankle injury (sprain). The initial lesion was a nodule of the plant of the same foot. This symptomatology was associated with febrile sensations, total functional impotence of the right lower limb with preservation of the general state without weight loss. On physical examination, the swelling was painless, firm consistency and measuring 10-15cm long axis, it interested the entire dorsal and plantar aspect of the midfoot and the posterior portion of the forefoot (Fig 1). The overlying skin was the seat of fistula scars especially the plantar surface (Fig 2). Active and passive mobilization of the right ankle was normal , neurological examination does not objectifing fault, we also note the absence of lymphadenopathy.

Laboratory tests find no leukocytosis or inflammatory syndrome with CRP 8,4mg / L. The infectious balance (Rx chest, urinary and blood cultures, intradermo-réaction of tuberculine) was without abnormalities, syphilis serology (VDRL and TPHA) was negative, uric acid concentration was normal and renal and liver function was also unremarkable.

Plain radiographs of the right foot showed periosteal reaction of the navicular and cuboid with a soft tissue swelling compared (Fig 3).

A magnetic resonance imaging (MRI) of the right ankle showed edematous infiltration of the soft parts tarsometatarsal foot with bone edema of inflammatory pace tarsus (navicular, medial cuneiform bone and intermediate) and the base of the 1st metatarsal bone associated with geodes of the navicular bone and the talus, there is also a tenosynovitis of the long and short peroneal tendons, with no collection or tumor lesions (Fig 4).

A bone biopsy and soft tissues of the back of the right foot was performed with histological and bacteriological study has objectified a granular fabric made of lymphocytes, plasma cells, histiocytes and multinucleated giant cells organizing around felting filamentous and actinomycotic ramifications, the bacterial-parasitological study and cultivation of a biopsy fragment on ordinary culture media were negative.

The treatment was to put the patient under oral amoxicillin 3g / day for at least 12 months, down 6 months objectified clinical improvement with a reduction in the swelling of over 60% (Fig 5).

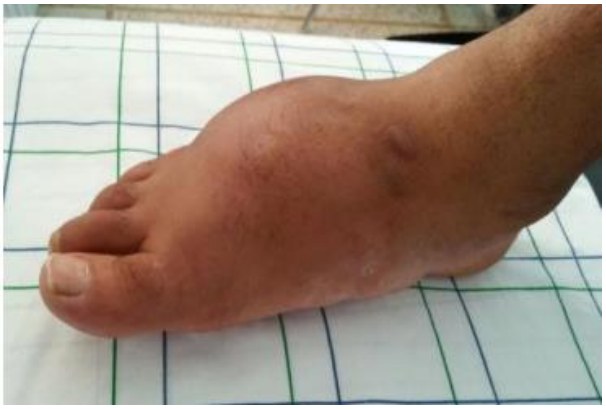

Fig 1: Swelling of the Midfoot

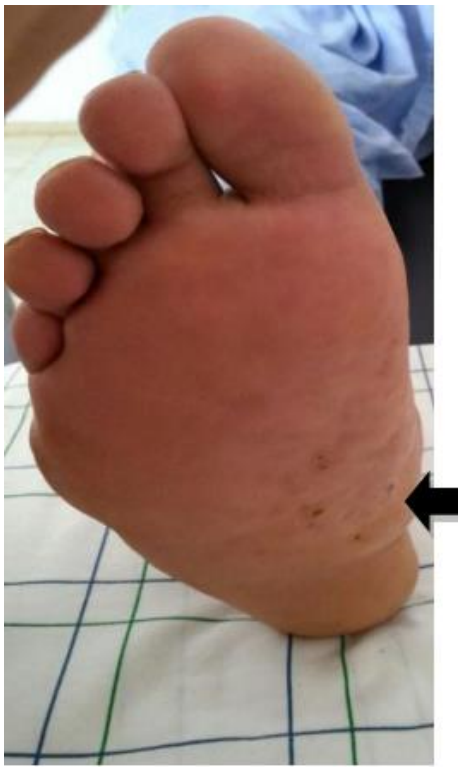

Fig 2: Fistula scars plantar level (Arrow)

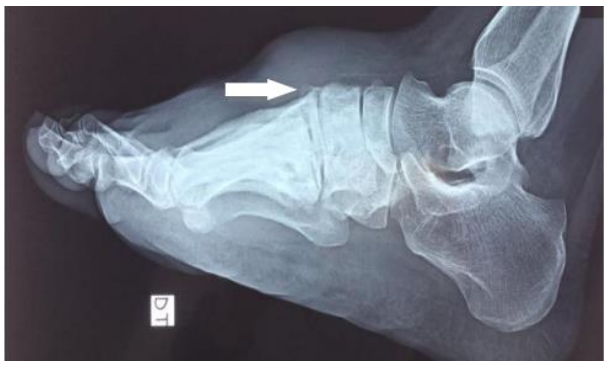

Fig 3: Profile radiograph of the right foot showing soft tissue swelling and periosteal reaction.

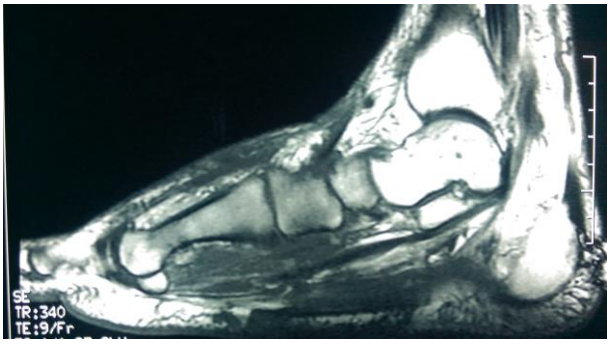

Fig 4: MRI of right foot showing the tarsal inflammatory edema and the base of 1st metatarsal bone with geodes.

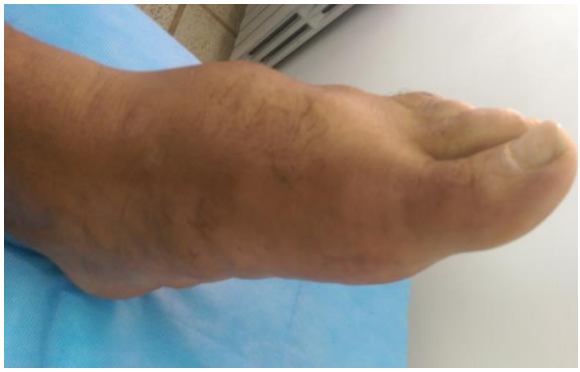

Fig 5: Right foot after 6 months of evolution; there is a regression of the swelling of the midfoot.

DISCUSSION

Mycetoma infection are rare in Morocco, commonly found in tropical and temperate countries [1]. They are secondary to bacterial agents (actinomycosis) or fungal agents (eumycetomes), both types give the same clinical presentation [2]. The bone seat is mostly in the foot giving the appearance of Madura foot [3]. It affects mostly young patients, male, from a rural area, the concept of trauma is not reported by patients but in our context this notion was found [4-5]. The head bacterial organism is a Gram-positive bacilli aerobic filamentous which the most common strain is actinomyces Isralii but also cases of infection by the actinomyces Viscosus have been reported in the literature[6, 7]. The bone in the foot location represents the 5th preferential localization of the germ after that of oral sphere, thoracic, abdominal and pelvic [8]. The door had the foot entrance is in the most part by contiguity after breaking the skin barrier but in rare cases through blood[9-10]. Unlike bone osteomyelitis, bone lesions outside to make in the form of periosteal reaction, cortical erosions or gaps with infiltrative appearance of the soft tissues and cutaneous fistulas [11]. The magnetic resonance imaging is the most contributory radiological examination for diagnostic and staging, it can highlight infiltrating masses made of small cubicles[12]. Histological examination remains for most authors irrefutable evidence for diagnosis in highlight actinomycotic follicles with a filament felting aspect [3-13], this typical aspect is found in our case.

The treatment of this disease is not well established, the actinomyces is very sensitive to penicillin, comprising the treatment of 1st intention [14]. For this reason we opted for antibiotic Amoxicillin made with very close monitoring to detect any resistance and adapt antibiotic therapy. Several sporadic publications published in the North African region, other antibiotics are beings used as cotrimoxazole [15], clindamycin [10], tetracycline and erythromycin. The duration of treatment may extend to 12 months. The surgery is reserved for complications, including spread to another home or failure of adequate medical treatment [16]. The evolution of Madura foot stage of our patient is often favorable [4].

CONCLUSION

Our observation illustrates a case of actinomycosis of the foot known as Madura foot diagnosed with bundles of clinical, radiological and histological. This condition should not be ignored by practitioners in our Moroccan context, because the effectiveness of medical treatment based on antibiotic therapy is based on the stage of disease activity.

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