

## MADURA FOOT: Case Report and Review of the Literature

Reda Lafdil<sup>1\*</sup>, Yassine Benbouzid<sup>1</sup>, Hamza Berrada<sup>1</sup>, Anass Belguerrab<sup>1</sup>, Anass Lahlou<sup>1</sup>, Youness Chagar<sup>1</sup>, Rida-Allah Bassir<sup>1</sup>, Mohammed Kharmaz<sup>1</sup>, Mly Omar Lamrani<sup>1</sup>, Mohamed Saleh Berrada<sup>1</sup>

<sup>1</sup>Traumatology-Orthopedics Department, UHC Ibn Sina, Rabat, Morocco

DOI: 10.36347/sjmcr.2021.v09i11.014

| Received: 04.10.2021 | Accepted: 10.11.2021 | Published: 21.11.2021

\*Corresponding author: Reda Lafdil

### Abstract

### Case Report

Madura foot or mycetoma is a chronic disease that strikes tropical areas and is quite rare in the rest of the world. Its caused by bacteria or fungi infection. The clinical apparition is a swelling of the affected limb and production of colored grains via fistula. X ray allows us to know the stage of madura and histopathology to make the diagnosis. The treatment of mycetoma is consisting of medical therapy in early stages and surgical debridement or amputation when destruction of bones occurs. We report the case of 65 old women treated in our formation.

**Keywords:** Madura foot, biopsy, medical treatment, amputation.

**Copyright © 2021 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

## INTRODUCTION

MyceToma is a chronic subcutaneous infection caused by fungi (emycetoma) or anaerobic bacycia (actinomycetes). It's a serious condition in front of the lesions that affect particularly the inferior limb, and therefore the main complication is amputation. It is endemic in tropical and subtropical countries and quite rare in other countries such as Morocco. We present the case of female patient treated in our hospital.

## CASE REPORT

A 65 year old women with a history of diabetes, living in a rural area north of morocco, presented in our consultation with a 8 year swelling of her sol left foot with the progressive apparition of sinus tract formation. The patient was treated with wntibiotic without improvement.

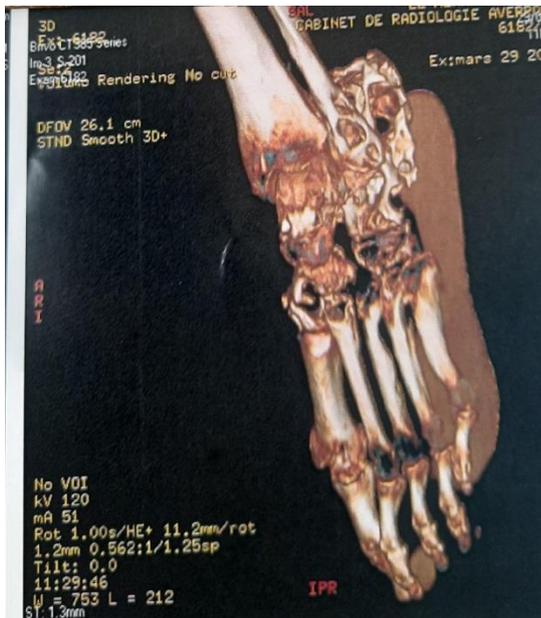
The clinical examination on admission found a conscious, stable patient. Local examination revealed a tumefaction that discharge a purulent exudate via skin fistulae, the exudate contains black and yellow granulations (figure 1). Standard xray showed bone osteolysis (figure 2) confirmed by a CT scan (figure 3). The patient then underwent a biopsy; the histolycal analysis confirmed the diagnosis of Madura's foot. Due to the damage and the extension of bone lesions, a transtibial amputation was necessary. A post-operative control 5 month after surgery did not find any abnormality (figure 4).



Fig-1: Clinical aspect of madura foot.



**Fig-2: Diffuse osteolytic lesions**



**Fig-3: CT scan confirming the diagnosis**



**Fig-4: 5 month follow up**

## DISCUSSION

Described in India for the first time in 1842 in the region of Madura, and Africa precisely Senegal in 1894 by Martec. It's an endemic disease in the tropical regions of Asia, Africa and America in which it happens to cause a real public health issue but this pathology is quite rare in Morocco. [1]. These are inflammatory tumors that begin on the skin and the subcutaneous tissue causing nodular swelling and the formation of sinus tract formation through which colored grains are discharged. The type of mycetoma is often suggested by the color of the grains. Red grains are indicative of an actinomycotic mycetoma. Black grains are consistent with a eumycetoma [2].

Madura foot disease is painless in most cases due to some authors' production of an anesthetic agent. It's considered to be a localized infection, general symptoms are rare, but when present are caused by a secondary bacterial infection [3, 4].

Standard radiographs are initially requested to assess the severity of the lesions. Early X-ray shows calcifications and soft granuloma tissue, but with the progression of the pathology, the bone cortex is compressed by the granuloma with possible appearance of osteolytic lesions [5].

The diagnosis is confirmed by histopathology. A deep surgical biopsy under general or regional anesthesia is necessary and needs to contain a large quantity of infectious tissue and grains [6].

Starting the treatment consisting of combined medical and surgical intervention at early stages of the disease is primordial. The medical treatment comprises antifungal therapy (itraconazole or ketoconazole) in case of eumycetoma and an antibiotherapy (amikacin...). [7].

In case of co-infection, we need to combine the two therapy. The place of surgery is important due to the resistance to medical treatment and wide local excision are necessary at early stages. Amputation is indicated in the advanced stages of mycetoma with excessive bone lesions. The ranges of amputation varies between 10 and 25 of all cases [8].

## CONCLUSION

Madura foot is a chronic subcutaneous disease caused by fungi or bacterial infection and relatively rare in Morocco. The diagnosis is clinically confirmed by histopathology. Early diagnosis is important to start medical treatment and to avoid amputation.

### Conflicts of interest

The authors declare no conflict of interest.

### Authors' contributions

All authors contributed to the care of the patients and the writing of the manuscript. All have read and approved the final version of the manuscript.

## REFERENCES

1. Welsh, O., Vera-Cabrera, I., Salinas-Carmora, M.C. (2007). Mycetoma. *Dermatol. Clin.* 25, 195–202.
2. Maiti, P.K., Ray, A., Bandyopadhyay, S. (2002). Epidemiological aspects of mycetoma from a retrospective study of 264 cases in West Bengal. *Trop. Med. Int. Health* 7, 788–792.
3. Cathrine, A.N., Bhattacharya, K., Srinivasan, V. (2003). Mycetoma leg a case report. *Int J Low Extrem Wounds*, 2(3); 171-172.
4. Fahal, A.H. (2004). Mycetoma: a thorn in the flesh. *Trans R Soc Trop Med Hyg*, 98(1); 3-11.
5. Shadomy, H.J., Utz, J.P. (1993). Deep fungal infection. In Fitzpatrick TB, Eisen AZ, Wolff (eds). *Dermatology in General Medicine*. 4th edition New York, McGraw Hill, 2472-2475.
6. Miller, S.D. (2001). Madura foot: treatment of *Nocardia nova* infection with antibiotics alone. *Am J Orthop*; 30; 495-498.
7. Mahgoub, E. (1995). Agents of mycetoma, In : Mandell G.L., Bennett J.E., Dolin R., eds. *Principles and Practice of Infectious Diseases*, New York, Churchill Livingstone, 2327-2330.
8. Paugam, A., Tourte-Schaefer, C., Keita, A., Chemla, N., Chevrot, A. (1997). Clinical cure of fungal madura foot with oral itraconazole. *Cutis*, 60; 191-193.