

7-1-2016

## Madura Foot: A case report

Daisy Josephine Lobo Ms  
*Manipal College of Nursing*, daisy.j@manipal.edu

Rajendar Benakatti Dr  
*KMC, Manipal*, dr.rajendra.benakatti@gmail.com

Follow this and additional works at: <https://impressions.manipal.edu/mjnhs>



Part of the [Nursing Commons](#)

---

### Recommended Citation

Lobo, Daisy Josephine Ms and Benakatti, Rajendar Dr (2016) "Madura Foot: A case report," *Manipal Journal of Nursing and Health Sciences*: Vol. 2: Iss. 2, .

Available at: <https://impressions.manipal.edu/mjnhs/vol2/iss2/19>

This Case Report is brought to you for free and open access by the MAHE Journals at Impressions@MAHE. It has been accepted for inclusion in Manipal Journal of Nursing and Health Sciences by an authorized editor of Impressions@MAHE. For more information, please contact [impressions@manipal.edu](mailto:impressions@manipal.edu).

# Madura Foot: A case report

Daisy Josphine Lobo\*, Rajendar Benakatti

Email: daisy.j@manipal.edu

## Abstract

Madura foot is an uncommon chronic granulomatous disease of the skin and subcutaneous tissues characterized by localized infection of the subcutaneous tissues by Actinomycetes or fungi, and it is commonly seen in tropical countries. We report a case of Madura foot, which was successfully treated with a combination of Trimethoprim and Sulfamethoxazole.

**Key words:** Granulomatous disease, Subcutaneous tissues, Actinomycetes, Tropical countries, Trimethoprim and Sulfamethoxazole

## Introduction

Madura foot is a fungal infection of the skin, commonly seen among agricultural workers. Minor trauma allows pathogens from the soil to enter the skin. The disease typically follows a slow chronic course over many years with painless swelling and intermittent discharge of pus. Early diagnosis and treatment can cure it, but recurrences are common.

## Case Report

A sixty five year old man was admitted with the history of pain, swelling of dorsum of right foot and ankle for one-month duration. He was an agriculturist, twenty years back. He sustained trauma to the left foot during the agricultural work and it had healed with home remedy. At times, he experienced intense itching sensation at the trauma site. Following the itchiness small weeping wound developed, but it healed on its own. In the past one year, he noted that there was ankle swelling with mild pain, which gradually increased but he ignored it. On admission, vital parameters were stable. Physical

examination revealed diffused erythema of the right foot and ankle. Many fluid filled lesion with discharge, and an abscess on the right ankle with desquamation of the skin with granular tissue was observed (Fig.1). He had mild grade fever on the following day of the admission. Laboratory investigations revealed: RBS - 135mg/dl, Serum Creatinine – 1 mg/dl, BUN – 20mg/dl, Serum Sodium -135mg/dl, Serum Potassium - 4.6 Meq/dl, Hemoglobin - 11.9 gm%, MCH - 30.5, Platelet -  $462 \times 10^3$  U/L, Lymphocytes 20.3, Eosinophil – 4.9, and the blood cell count indicated a chronic infection status. Wound culture and sensitivity result showed resistant to Cloxacillin, Erythromycin, and Aflox, and sensitive to Doxycycline, Clindamycin, Trimethoprim, and Sulphamethoxazole. Wound dressing was done daily with normal saline and Betadine solutions. Assistance was provided to meet his self-care needs and in mobility. Taught the family members and encouraged them to provide the needed assistance. He was treated with a combination of trimethoprim (160mg) and Sulphamethoxazole (800mg), once a day for eight days, and there was significant improvement in the wound healing without debridement. He was discharged on the fifth day of hospitalization with an advice to follow up after two weeks. During the follow up, the wound was found to be better and healing.

### Daisy Josphine Lobo

Associate Professor, Manipal College of Nursing, Manipal University, Manipal

### Rajendar Benakatti

Assistant Professor, General Surgery Unit VIII, Kasturba Medical College Hospital, Manipal

\* Corresponding Author

**How to cite this article:** Lobo, D. J., & Rajendra, B. (2016). Madura Foot: A case report. *Manipal Journal of Nursing and Health Sciences*, 2(2), 72-74.



Figure 1: Madura Foot Lesion in Foot Ankle

## Discussion

Madura foot was also known as ‘Madura mycosis,’ the name originated because of the multiple fungal etiologies. First, Dr John Gill described it as ‘mycetoma’. It is endemic in the tropics and subtropics. The true fungal infection is known as Eumycetoma (40%), and is caused by gram-negative *Pseudallescheria boydii* or *Madurella mycetomatis*. Filamentous bacterial infection is known as Actinomycetoma, which is more commonly seen (60%) and is caused by gram-positive *Actinomyadura madurae* or *Actinomyadura pelletieri*. Gram staining helps in differentiating Actinomycetoma (Gram positive) and Eumycetoma (Gram negative). The most common site of infection is foot (70% cases) hence, the synonym ‘Madura foot’. Hand is the next most common site. Organism enters through repeated minor trauma or penetrating injury.

Agricultural workers are commonly affected as minor trauma gives the portal of entry to the organism. While handling contaminated vegetation different parts of the body like feet, hands, shoulders and back can be affected and walking barefoot adds to it.



Figure 2. Madura Foot Lesion Extending upto the Heel of The Foot

Once the infection sets in following the injury, it goes through a gradual, chronic inflammatory process with intense feeling of itchiness, minimum pain, swelling, and occasional pus discharge (Fig.2). Over a period of time massive swelling, skin induration develops with sinus track formation. As the chronicity increases skin ruptures, infection spreads, more new sinus tracks develop. Chronic bacterial osteomyelitis and tuberculosis could be the main differential diagnosis.

Other investigations include culture of exudates and skin biopsy to identify the causative organism. X- Ray and MRI would provide a better definition for bone and soft tissue involvement, at the same time differential diagnosis could be evaluated. Usually, Mycetoma is diagnosed at an advanced stage, because of the slow, relatively pain-free progressive nature of the disease. Actinomycetomas usually respond better than Eumycetomas to medical treatment - the latter often being difficult to treat. Surgical amputation is essential in bone involvement and related complications.

Surgical debridement and long-term antibiotic therapy is essential in severely infected cases. In other cases, appropriate long-term antibiotic therapy would be sufficient. Bactrim DS, Dapsone, and streptomycin have been found to be useful in Actinomycetoma. Rifampin is a substitute in case of resistance.

Eumycetomas are only partially responsive to antifungal therapy but can be treated surgically. Prognosis of the disease is good but the disease causes deformities and ankylosis. Amputation is essential in chronic neglected infection. Lymphoedema results from lymphatic obstruction from fibrosis. Prolonged antimicrobial or antifungal therapy may result in toxicity.

Actinomycetoma can be cured with the appropriate antibiotic therapy but recurrence is common in Eumycetoma, which in turn requires amputation. Secondary bacterial infection may result in septicemia.

## Conclusion

Madura foot is a rare chronic, localized, fungal infection of skin and is prevalent in tropical and subtropical countries. Agriculturists are the most affected population. Awareness on prevention of injuries, appropriate trauma management can curtail the occurrence of this condition.

### Acknowledgements

Dr K Rajgopal Shenoy, Associate Dean, Academics, Professor, Department of General Surgery, Dr Prasad S S, Professor and Head of Unit VIII, Department of General Surgery, Kasturba Medical College, Manipal.

Sources of support: None

Conflict of interest: None declared

Source of support in form of grants: None

### Reference

- Lichon, V., & Khachemoune, A. (2006). Mycetoma: A Review. *American Journal Clinical Dermatology*, 7(5):315-321.
- Mohammad, N. (2011). The Madura Foot - A case report, *Indian Dermatology Journal*, 2(2): 70-73.
- Alam, K., Maheshwari, V., & Bhargava, S. (2009). Histological Diagnosis of Madura Foot (Mycetoma): A Must for Definitive Treatment. *Journal of Global Infectious Disease*, 1, 64-67.
- Fahal, A. H. (2004). Mycetoma: A Thorn in the Flesh. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 98(1): 3-11.