

## RED GRAIN MYCETOMA FOOT IN WESTERN RAJASTHAN

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Usually the colour of the grains seen in cases of mycetoma are either black or yellow. Recently there were reports that unusual red grains had been noticed in cases of mycetoma.

A case of red grain mycetoma is reported.

**Key Words :** Red grain mycetoma, *Actinomadura Pelletieri*

### Introduction

Extensive studies of mycetoma has also been carried out in western Rajasthan,<sup>1</sup> where dried arid climate predominates with minimal rainfall. Due to substantial variation in the climatic condition, there is variation in the causal agents of mycetoma and therefore in North India, predominant type is Maduromycotic mycetoma<sup>2</sup> - a black grain mycetoma and in South India, predominant type is Actinomycotic<sup>3</sup> - yellow grain mycetoma.

In recent studies, we have observed a few cases of unusual red grain mycetoma caused by *Actinomadura pelletieri*.<sup>4</sup> An additional recent case of red grain mycetoma caused by *Actinomadura pelletieri* in a farmer with the habit of bare footed walking is reported.

### Case Report

A 57-year-old farmer reported to Primary Health Centre, Mokalsar of Barmer district with the complaints of swelling, multiple discharging sinuses present on the planter and dorsal aspect of right foot involving the great toe and medial side of planter surface. Since last 2 years, patient did

not notice the discharge of granules as there was constant bloody discharge. On examination, there were multiple nodules and sinuses on dorsum and planter surface of foot involving great toe. Soft tissue of the great toe was predominantly affected without evidence of bony involvement. A provisional diagnosis of mycetoma foot was made and wide excision of the skin and sinuses was done.

Haematoxylin and Eosin stained section of biopsy material showed sinus tract lined by chronic non-specific vascular granulation tissue and microabscesses around the fungal granules. The granules were tiny oval to spherical irregular and fragmented with smooth denticulate edge, these were stained intensely with haematoxylin and eosin stain and were without any cementing substance, and were non-acid fast by Ziehl-Neelson stain. Per Iodic Acid Schiff and Gram's stains were positive because of the classical semilunar geometrical morphology of fungal colony with denticulate margins, a diagnosis of *A. pelletieri* was made (Fig. 1). Culture of the granules could not be done as sample was received in formalin.

### Comments

In Western Rajasthan, though the commonest species identified is *Madurella mycetomi*,<sup>4</sup> a few cases of red grain mycetoma caused by *A. pelletieri* has been reported.<sup>4</sup> This shows that there is increasing trend of mycetoma infection by *A. pelletieri* in this region, the probable contributing factor is

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improvement in average rain fall at some places. The presence of red grains in sinuses on cutting the biopsy specimen gave a suspicion of *A. pelletieri* which was further

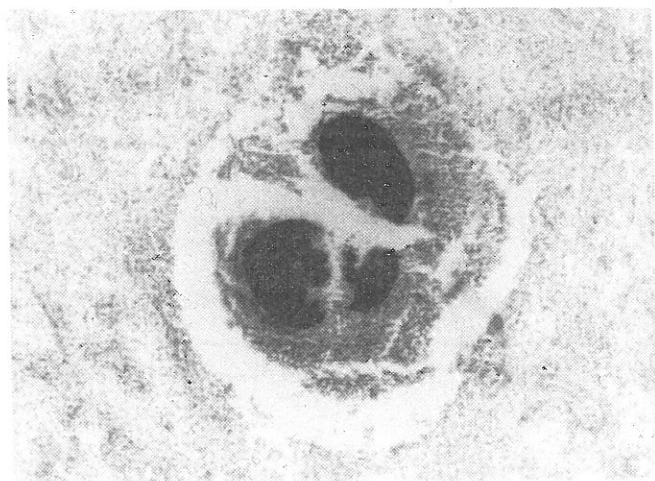


Fig. 1. Microphotograph showing typical denticulate semilunar granule of *Actinomadura pelletieri* surrounded by polymorphs and mononuclear cells (H&E X 100).

confirmed by characteristic histopathological examination, which shows the typical purple haematoxylinophilic semilunar granules.

Though the commonest site of involvement is foot and lower extremity, extrapedal sites like hands, neck, back and scalp have also been reported.<sup>5,6</sup>

Cases of mycetoma are easy to diagnose in this environment due to classical triad of symptoms like swellings, sinuses and discharging granules, particularly if granules are black/yellow in colour. In this case, clinically it was difficult to diagnose as red

grains were admixed with bloody discharge. Therefore it is ideal that whenever we see swellings and sinuses even without discharging granules, a biopsy/culture should always be done.

X-ray of foot revealed soft tissue shadow without any evidence of bony involvement or erosion. Hence no amputation was done. The patient was being treated medically with Dapsone and Cotrimoxazole for a period of 6 months and followup is done at regular intervals for any evidence of discharge or granules.

## References

1. Joshi KR, Sanghvi A, Vyas MCR, Sharma M. Etiology and distribution of mycetoma in Rajasthan, India. *Indian J Med Res* 1987; 87: 694-8.
2. Talwar P, Sehgal SC. Mycetoma in North India. *Sabouraudia* 1979; 17: 287-91.
3. Venugopal TV, Venugopal PV, Paramasivam CN, Schetty BMV, Subramanian S. Mycetoma in Madras. *Sabouraudia*, 1977; 15: 17-22.
4. Mathur DR, Bharadwaj V, Vaishnavi R, Ramdeo IN. Red grain mycetoma caused by *Actinomadura pelletieri* in Western Rajasthan: Report of two cases. *Indian J Pathol Microbiol* 1993; 36/4: 486-8.
5. Joshi KR, Mathur DR, Sharma JC, Vyas MCR, Sanghvi A. Mycetoma caused by *Aspergillus nidulans* in India. *J Trop Med & Hyg* 1988; 88: 41-4.
6. Pankaja Lakshmi, V. Venugopal, Talwar P, Lakshmi, V. Venugopal. Red grain mycetoma of the scalp due to *Actinomadura pelletieri*. *Madurai. Indian J Pathol Microbiol* 1990; 34: 384-5.

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