

Table: Classification of mycetomas based on aetiological agents and colour of the grains

1: EUMYCETOMAS	
Black grains	Madurella sp, Leptosphaeria sp, Phialophora sp, Exophiala sp, Curvularia sp etc..
Pale (white to yellow) grains	Aspergillus sp, Fusarium sp, Petriellidium sp, Acremonium sp, Dermatophytes sp etc..
2: ACTINOMYCETOMAS	
Red grains	Actinomadura pelletieri
Yellow grains	Streptomyces somaliensis
Pale grains	Nocardia sp, Actinamadura madurae

Historical perspective: Mycetoma is a localised, suppurative and deforming granulomatous deforming infectious disease. It was first recognised as a disease entity by Gill in 1842 whilst working in a dispensary in the province of Madura, India.¹ He described a pathologic process in the foot of a man which was characterised by marked deformity and fungoid excrescences with an offensive ichorous discharge. Colebrook, who succeeded Gill at Madura, confirmed these observation and stated that this condition was commonly referred to as 'Madura foot' by the locals.¹ Godfrey in 1845 reported similar condition in a man but with considerable black deposits (grains) resembling small fragments of coal. It was Vandyke Carter (1860) who established the fungal nature of this condition and proposed the term 'Mycetoma'. He differentiated forms based on the colours of the grains (ochroid or pale yellow from melanoid or black grains), but had considered them to be the same pathologic process.¹ In 1894, Boyce and Surveyor proved that the aetiologic agents that produced the black and yellow grains were different and thereby established the two main divisions of mycetoma. In 1913, Pinoy classified mycetomas as those produced by true fungi (eumycetoma) versus those due to aerobic bacteria (actinomycetoma), after describing mycetoma produced by aerobic bacteria that belong to the actinomycete group. Both types have similar clinical findings but entirely different treatment regimes.



Panel: Madura foot (Reproduced with permission from Brunei Int. Med J)

Mycetoma is rare in Brunei Darussalam and this may be related to the climate. Brunei is located near the equator where the amount of rainfall does not favour mycetoma. The first reported case of Madura foot in Brunei Darussalam was in 2000. This was a 43-year-old Malay man storekeeper who presented with a seven months history of painless right foot firm swelling with discharging nodules and hyper pigmented skin (Panel). The underlying organism was *Allescheria boydii* (synonyms: *Petrillidium boydii*, *Monosporium apiospermum*, *Scedosporium apiospermum*).³ This case was complicated with osteomyelitis and the patient was treated with prolonged antifungal (itraconazole) which prevented further progression.

REFERENCES

- 1: Bridges CH. Maduramycotic mycetoma in animals. *Curularia geniculata* as an etiologic agent. *Am J Pathol.* 1957; 33:411-27.
- 2: Sabrina SH, Jacob T, Seneriratne HSV. Madura foot in Brunei Darussalam– a case report. *Brunei Int Med J.* 2000; 2:499-503.

Note: Supplementary text included to enhance the education value