

## Dermoscopy in Actinomycetoma: An Observation

Sir,  
Actinomycetoma caused by bacteria characterized by triad of localised swelling, sinus tracts and discharging grains. It affects the skin, subcutaneous tissue and bones of feet.<sup>[1]</sup> Disease progression, management and prognosis varies from case to case, hence accurate diagnosis is essential. Definitive diagnosis is by histopathology and microbiological study. Dermoscopy is an *in-vivo* diagnostic technique that envisions the skin structures.<sup>[2]</sup> There are no reports of dermoscopy of actinomycetoma in the literature. Here, dermoscopic patterns are evaluated in a case of actinomycetoma and authors pursued to correlate dermoscopic patterns with histopathology.

A 57-year-old male presented with slowly growing swelling in the right foot with multiple discharging sinuses since last 2 years. He was a farmer. No history of trauma. Examination revealed swelling involving distal half of the right foot studded with multiple papules and nodules with discharging sinuses [Figure 1]. Plaques were seen extending over medial malleolus. Skin over the swelling was pigmented and indurated. Systemic examination was normal. Dermoscopic



**Figure 1:** Clinical image of actinomycetoma showing swelling over right foot dispersed with multiple papules and nodules with discharging sinuses. Red and black arrows, respectively, indicate the sites of dermoscopic Figures 2 and 3

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examination of papules and nodules revealed whitish-yellow areas, white scales and brown-black globules [Figure 2] and multiple whitish-yellow structures, red globules and white globules [Figure 3]. Routine laboratory investigations were within normal limits. Histopathology was suggestive of actinomycetoma [Figure 4]. Staining with PAS was positive.

Actinomycetoma looks like eumycetoma, scrofuloderma, chromomycosis and cutaneous leishmaniasis.<sup>[1]</sup> Histopathology is gold standard in these conditions. Dermoscopy acts as adjunct in diagnosis providing additional clue. Generally, yellow areas with telangiectasia suggest granulomas in dermoscopy.<sup>[2]</sup> Whitish-yellow structures observed in present study correspond to granulomas. Although, telangiectasias were sparse, brown-black globules and red areas were well appreciated. Brown-black globules and red areas correspond to dried blood and dilated vessels. White scales correspond to hyperkeratosis.

Dermoscopy of chromomycosis is described in one case, wherein authors concluded that presence of blackish red dots is characteristic of chromomycosis.<sup>[3]</sup> In this case, brown-black globules were seen in addition to



**Figure 2:** Dermoscopy of actinomycetoma: whitish-yellow structures (black star) in the centre. Brown-black globules (black arrows) and white scales (yellow stars) are well appreciated. (DermLite 3, non-contact polarized, 10× original magnification)

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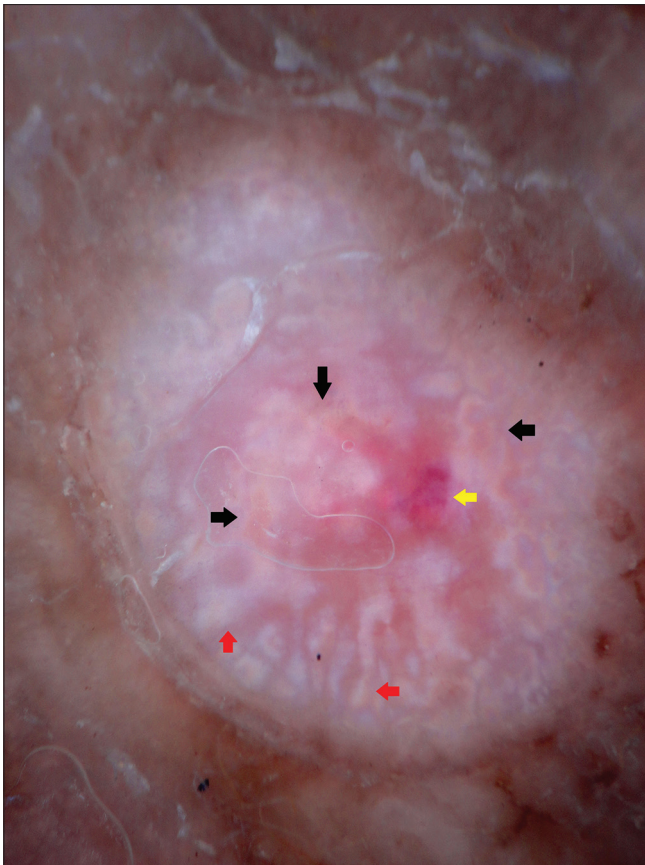
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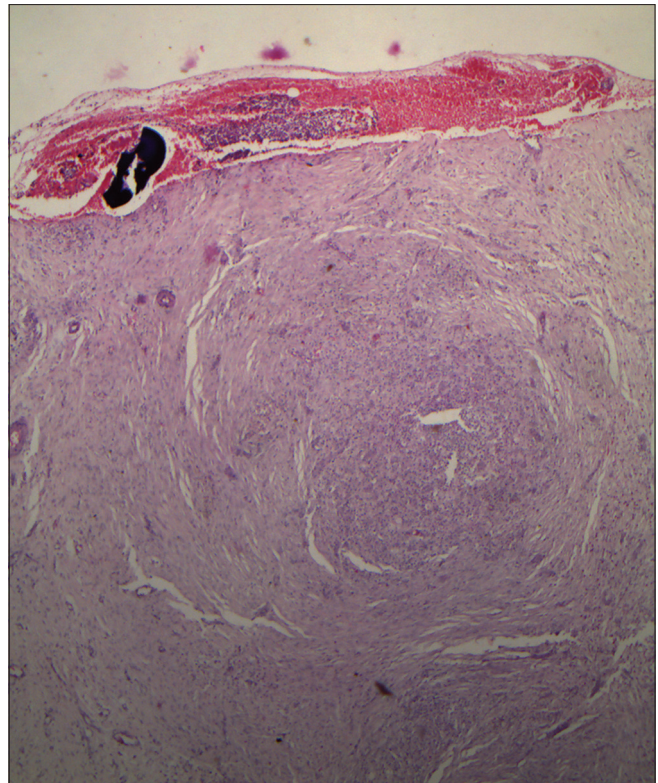
**Figure 3: Dermoscopy of actinomycetoma: multiple whitish-yellow areas (black arrows), white globules (red arrows) and red globules (yellow arrow) are well appreciated. (DermLite 3, contact polarized using ultrasound gel, 10× original magnification)**

red areas. In cutaneous leishmaniasis, yellow teardrop-like and white star burst-like patterns are characteristic and various vascular patterns including arborizing, hair pin and linear vessels are seen.<sup>[4]</sup> Yellow and white structures are classically seen in mycetoma, although authors did not mention the vascular pattern.<sup>[5]</sup> In the present case, vascular patterns were not prominent which is probably due to the longer duration of lesions selected for dermoscopy.

To conclude, actinomycetoma is a chronic granulomatous inflammation of subcutaneous tissue which can lead to damage of skin, subcutaneous tissues and bones. Early diagnosis and treatment can prevent this damage. Dermoscopy demonstrates characteristic patterns assisting in early recognition of this condition. Thus, dermoscopy is an excellent rapid tool in the diagnosis of actinomycetoma. To the best of our knowledge, this is first report on dermoscopy of actinomycetoma. However, it is a single case report; patterns observed here must be ascertained with further studies involving larger number of cases.

#### **Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and



**Figure 4: Histopathology of actinomycetoma: mild epidermal hyperplasia with spongiosis. Granulation tissue in dermis and vessels with thickened walls are well appreciated. Note the grain being eliminated through epidermis and discharge of blood. (H and E, 10×)**

other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

#### **Conflicts of interest**

There are no conflicts of interest.

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