Chromoblastomycosis: Report of two cases on face from urban industrial area

Sir,

Chromoblastomycosis is a chronic fungal infection of the skin and subcutaneous tissue often producing a type of verrucous dermatitis.[1,2] It is most commonly caused by Fonseacaea pedrosoi and Cladosporium carrionii. Infection is prevalent all over the world but more cases are reported in tropical and subtropical countries. A higher incidence is reported from Madagascar and Japan.[1] Infection is not uncommon in India[3] and several case reports have been published from Sub-Himalayan belt, Western and Eastern coasts of India. Central and North Western zones are free from the disease.[4] Most patients have a rural background, mostly farmers or construction workers. About 70% affected are male, mostly of age group 30-50 years.[5] The fungal agent from decaying vegetable matter or soil gets inoculated into skin by injury. Cutaneous lesions are most commonly located on the lower extremities. Upper limbs are less commonly involved. Face is a very rare site. Lesion develops slowly over months or years, starting initially as a verrucous papules, pinkish nodule or plaque that may itch. It gradually spreads centrifugally with coalescing satellite nodules, ulceration, and healing or scarring of the central area. Extensive areas like a whole limb may be affected. Multiple nodules may form cauliflower like growths mimicking tumor. Diagnosis is made by demonstrating the characteristic brown thick walled spherical structures 4-12 μm in diameter (muriform fungal cells) variously called sclerotic bodies or Medlar bodies in biopsy sections or skin scrapings.[6] Fungal culture is required for confirmation of species. We are tempted to report two clinically unsuspected cases occurring on face diagnosed on skin biopsy.

Case 1: A 27-year-old female presented with an erythematous plaque over right maxillary area of 1-year duration. The lesion gradually increased to the present size (palm size) plaque commencing as a small papule [Figure 1a]. Dermatological examination revealed a 3×7 cm sized, well-defined, indurated, serpiginous, erythematous plaque over maxillary area, encroaching the mandibular area, the latter showing hyperpigmented, cribriform scarring.

Case 2: A 55-year-old male presented with a solitary well-defined hyperpigmented brown to skin colored, itchy nodular

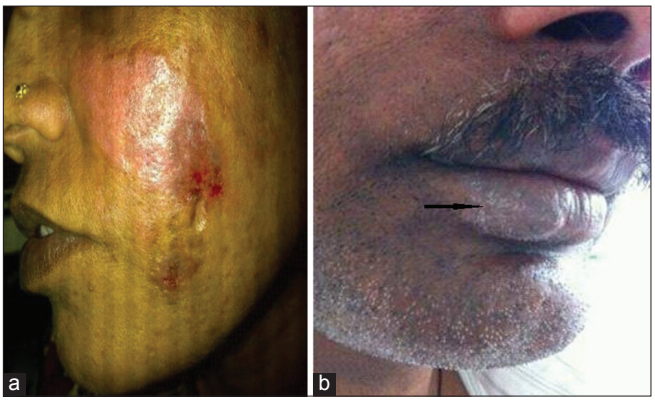

Figure 1: (a) Erythematous plaque and nodules over the right maxillary area. (b) Hyperpigmented brown to skin colored itchy nodular lesion over lateral aspect of the right lower lip [arrow]

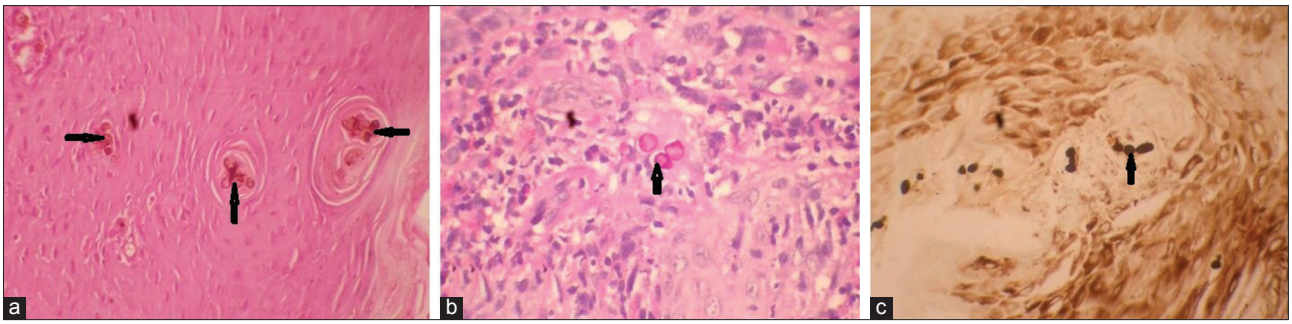

Figure 2: Microphotograph showing brown, round, thick-walled sclerotic bodies. (a) arrow H and E. ×400, (b) arrow PAS ×4000, and (c) arrow GMS ×400

lesion over lateral aspect of right lower lip [Figure 1b] since 8 months. The lesion measured 3.4 × 2.8 cm. In both the cases there was no history of thorn prick or any trauma preceding the onset of the lesions. Both the cases were seronegative for human immunodeficiency virus and had no regional or distant lymphadenopathy or any systemic complaints. The main clinical suspicions were of lupus vulgaris and dermal leishmaniasis.

Histopathological examination of biopsied skin showed hyperkeratosis and pseudoepitheliomatous epidermal hyperplasia with keratolytic microabscesses in the epidermis. Dermis showed granulomatous and mixed inflammatory foci. A fair number of brown, round, thick walled fungal spores were seen in the inflammatory foci and in giant cells of sections stained with hematoxylene and eosin [H and E] [Figure 2a]. The fungal bodies were highlighted by PAS [Figure 2b] and GMS [Figure 2c] stains. No mycelial elements were seen. Transepidermal migration by the fungal bodies [Figure 2a] was evident in the biopsy. Direct microscopy of skin clippings and scrapes were also studied by treating with 10% KOH to demonstrate the characteristic yeast bodies. Fungal culture of the tissues in both cases identified organisms to be Fonsecaea pedrosoi. The demonstration of these fungal bodies known as Medlar bodies or sclerotic bodies is pathgnomic of chromoblastomycosis.

There are very few reported cases of involvement of the face.[7,8] The two cases reported here are peculiar because these were the only cases of chromoblastomycosis diagnosed in our center in the last 2 years and all had facial involvement and were clinically unsuspected. The absence of trauma in all two cases can be attributed to the fact that patients did not notice or remember the initial trauma, as symptoms often do not appear for years. It spreads by autoinoculation and by lymphatics. Hematogenous dissemination is rare. As the lesions are polymorphic, they must be differentiated from verrucous vulgaris, dermal leishmaniasis, mycetoma, squamous cell carcinoma, and sporotrichosis. Definitive diagnosis can be given on histopathology and culture. Medlar bodies are an adaptive form of fungi arrested between yeast and hyphael stage and are the characteristic finding on direct microscopy and histopathology. The fungus is viable even 18 months after isolation. The infection is difficult to treat. They have a low cure rate and a high relapse rate.

Antifungals with great efficacy are itraconazole (200-400 g) daily and terbinafine (500-1000 g) daily for duration of 6-12 months. Management consists of long courses of antifungal chemotherapy often combined with physical treatments such as surgery, cryotherapy, and thermotherapy.[9] Clinical cure may be defined as complete resolution of lesions, usually leaving sclerotic scarring. Mycological cure is defined as negative results on microscopy and culture. Late complications include local destruction, secondary bacterial infection, dermal fibrosis, lymphedema, elephantiasis, and rarely development of squamous cell carcinoma. So we conclude that in chronic verrucous skin lesions on face, clinical suspicion of chromoblastomycosis must be kept in mind. Though Medlar or sclerotic bodies are pathognomic of chromoblastomycosis, definitive diagnosis is achieved by identifying organisms by culture.

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