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Case Report

De-novo Histoid Leprosy Masquerading as Cryptococcosis: A Case Report

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Histoid leprosy is an uncommon variant of lepromatous leprosy with characteristic clinical, immunologic and bacteriologic findings. It usually manifests as relapse in lepromatous patients who are on dapsone monotherapy but uncommonly also arises *de-novo*. We report a case of de-*novo* Histoid Leprosy clinically mimicking as Cryptococcosis. Our patient mimicked cutaneous cryptococcosis because of disseminated lesions which were umblicated with central ulceration and crusting, along with firm papules. Characteristic histopathological findings, presence of mycobacteria in slit skin smears, and nerve thickening helped in arriving at diagnosis of histoid leprosy and these markers/ features should be considered for differentiating these two conditions.

Key words: Histoid leprosy, cryptococcosis, lepromatous leprosy, De-novo

Introduction

Histoid leprosy is an uncommon variant of lepromatous leprosy which has distinct clinical immunologic and bacteriologic findings. It presents with well-defined, smooth, succulent, shiny papules and nodules, mimicking many other dermatosis and can be missed clinically. It usually develops as relapse in patients of lepromatous leprosy on dapsone monotherapy but seen to occur *de-novo* uncommonly (Manoharan et al 2008).

Case Report

A 35-year-old man presented with multiple firm, smooth, painless, non-itchy papules and nodules over both upper limbs and face since three months. The patient did not give any history of impairment of temperature, pain or touch sensations. No history of fever, joint pains, redness of eyes, nose bleed or painful evanescent skin lesions could be elicited. There was no history of prolonged intake of any drug. No history of similar complaints was present in the family. On cutaneous examination, multiple skin-colored, dome-shaped, umblicated non-tender papules and nodules with central hemorrhagic crust, varying in size from 0.5 to 0.8 cm were present over extensor aspect of both arms and face

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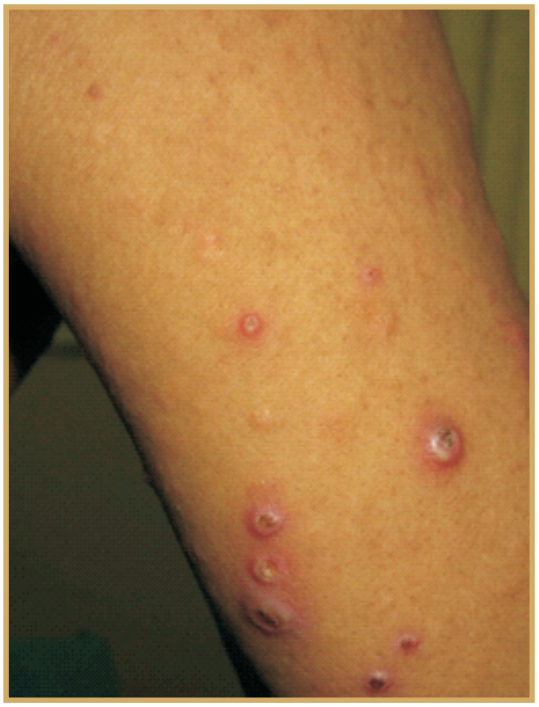

Fig 1 : Umblicated papules and nodules with central hemorrhagic crust

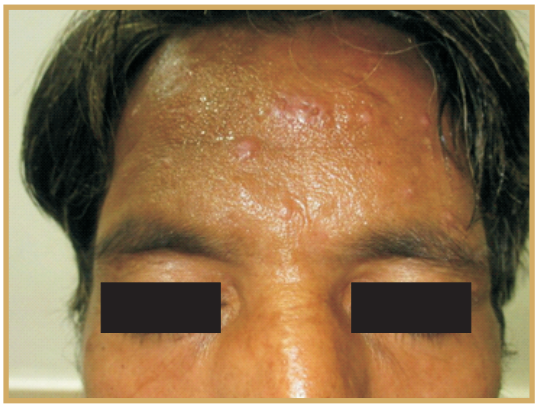

Fig 2 : Dome shaped papules and nodules with one lesion showing central umblication

(Figs 1, 2). Central umblication and crusting were more prominent over both arms (Fig 1). The skin surrounding the individual lesions was normal in appearance. Both the ulnar and lateral popliteal nerves were thickened. Sensory and motor

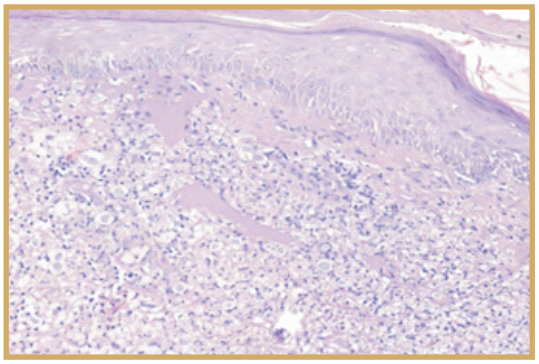

Fig 3 : Collection of foamy histiocytes with Abundant Bacilli (H &E×100)

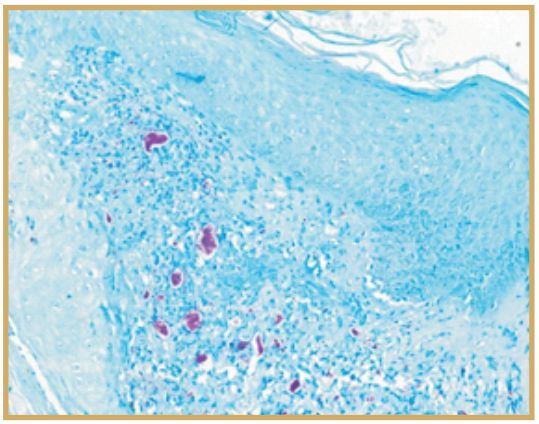

Fig 4 : Foamy histiocytes filled with abundant Acid fast bacilli (Fite Faraco stain×100)

examination in all four limbs was within normal limits. No abnormality was detected on soles and any mucosa. All routine investigations including hemogram, liver function test, kidney function test, urine routine examination were within normal limits. ELISA for HIV was negative.

On histopathology examination, the biopsy specimen from the nodule revealed normal to mildly atrophic epidermis with flattening of rete ridges. There was diffuse collection of foamy macrophages and spindle shaped histiocytes in the dermis (Fig 3). Fite - Faraco stain was positive (Fig 4) for acid fast bacilli (AFB). Slit skin smear revealed acid-fast bacilli with bacteriological

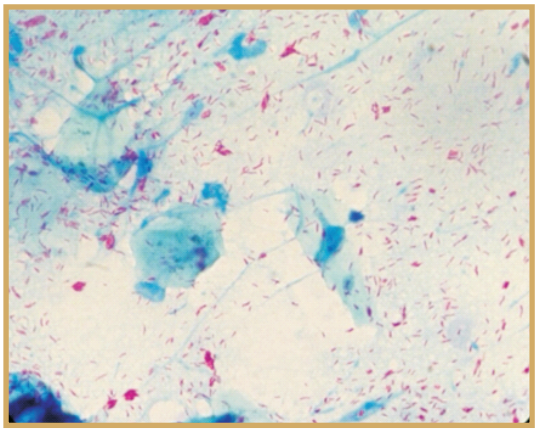

Fig 5 : Multiple acid fast bacilli in Slit skin smear from the lesion (Ziehl Neelsen stain × 40)

index (BI) of 6+ and several globi could be seen (Fig 5). A final diagnosis of *de-novo* Histoid leprosy was made. The patient was started on multi-bacillary multidrug therapy (MB-MDT) with rifampicin, clofazimine and dapsone. The condition of the patient improved and no new lesions were seen. The patient is on regular follow up and MDT-MBR is planned to be continued till completion of 24 months.

Discussion

Histoid leprosy (HL), initially described by Wade, is considered by some as a variant of lepromatous leprosy (LL), and by others as distinct entity. It is so-called because the microscopic appearance of the nodule shows spindle-shaped cells resembling those in a dermatofibroma. It usually develops as relapse in lepromatous patients who are on dapsone monotherapy but uncommonly arises *de-novo* (Annigeri et al 2007). The *de-novo* presentation like in our case clinically mimics molluscum contagiosum or cryptococcosis. The clincians should maintain a high index of suscipion to diagnose such an uncommon presentation especially when sensory loss is absent. Clinically, the lesions in histoid leprosy are characterized by multiple discrete shiny, smooth, painless, succulent, protuberant, sometimes also dermal nodules, papules, and plaques on apparently normal skin. The lesions usually present on the posterior and lateral aspects of arms, dorsum of hands, lower back, buttocks, thighs and over the bony prominences (Annigeri et al 2007). The peripheral nerves may be thickenedor normal (Dimri et al 2012). Histoid lesions have also been found along the course of the peripheral nerve trunks and cutaneous nerves (Kalla et al 2000). The ulnar nerve has been reported as the commonest nerve involved. Slit skin smear from histoid lesions shows abundant acid fast bacilli occurring in clusters, singly or in groups, in macrophages aswell as the tissue. The bacilli appear longer with tapering ends, when compared to ordinary lepra bacilli, usually arranged parallel to the long axis of the cells (Kalla et al 2000). Bacteriological index may be 4+ to 6+. Histopathological findings are unique. Epidermis may be normal, or atrophic due to dermal expansion by the underlying leproma (histoid nodule) and an acellular band (Unna band/grenz zone) located immediately below the epidermis. The leproma consists of fusiform histiocytes arranged in a whorled, crisscross, or storiform pattern. Within the histiocytes, plenty of AFB can be seen. They are arranged in parallel bundles along the long axis of the spindle histiocytes (Histoid habitus) with or without globus formation (Sehgal et al 2009, Chan et al 2006).

Cutaneous infection is seen in 10% of systemic cryptococcosis. In about 50% of cases, cryptococcal infections are seen in immunocompromised patients and rest in immunocompetent cases (Vijaya et al 2001). The presentation in cutaneous cryptococcosis can be protean ranging from umblicated lesions to papules and vesicular lesions (Hicks et al 1997). Our patient mimicked cutaneous cryptococcosis because of dissemi-

nated lesions which were umblicated with central ulceration and crusting, along with firm papules. The two conditions were differentiated on the basis of the characteristic histopathological findings, presence of mycobacteria on slit skin smear, and nerve thickening seen in our case.

The case was unusual as it simulatedcrypto-coccosis or molluscumcontagiosum clinically. None of the cutaneous findings favored histoid leprosy and the diagnosis was made on the grounds of nerve examination along with histo-pathology and slit smear examination. Our report illustrates the importance of high index of suspicion for histoid leprosy so that these cases can be diagnosed early and promptly treatment, thus preventing the further spread of the disease.

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