Indian J Lepr 2012, 84 : 27-29

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**Case Report**

# Histoid leprosy with erythema nodosum leprosum - a case report

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Received : 23.11.2011 Revised : 27.01.2012 Accepted : 29.01.2012

Histoid leprosy is a variant of lepromatous leprosy characterized by cutaneous and/or subcutaneous nodules and plaques present over an apparently normal skin with unique histopathology and characteristic bacterial morphology. Reactions are uncommon in histoid leposy. Our patient developed type 2 reaction after initiating MDT for leprosy.

**Key words :** Histoid leprosy, Erythema nodosum leprosum

## Introduction

Histoid leprosy is an uncommon but well established clinical entity. It occurs usually due to development of drug resistance after taking dapsone monotherapy and /or irregular as well as inadequate treatment in leprosy patients (Wade 1963, Shaw et al 2000). It is characterized by discrete shiny, succulent, firm nodules and plaques on normal appearing skin.

## Case report

A 23 years old male presented with asymptomatic skin colored shiny nodules of sudden onset over the face, trunk, back and buttocks of two months duration. He had not taken any medication nor given history suggestive of chronic disease like tuberculosis or leprosy and episodes of reactions in the past. Family history was not contributory.

Dermatological examination revealed multiple, bilateral, symmetrical, waxy, yellowish to skin coloured, non- tender, shiny, infiltrated papules, plaques and nodules over the face, back of the ear lobules, lips, trunk and buttocks (Figure 1). In addition, he had multiple, symmetrical, non-tender, thickened peripheral nerves with glove and stocking anesthesia. Routine laboratory investigations were within normal limits. Slit-skin smears from the lesion over the forehead and back revealed plenty of pink, solid stained acid-fast bacilli (AFB) with 6+ bacterial index on AFB staining. Histopathological examination of the skin nodule over the back showed atrophic epidermis, free grenz zone and nodular infiltrate of spindle shaped histiocytes arranged in whorls with plenty of acid-fast bacilli (AFB) in the dermis (Figure 2).

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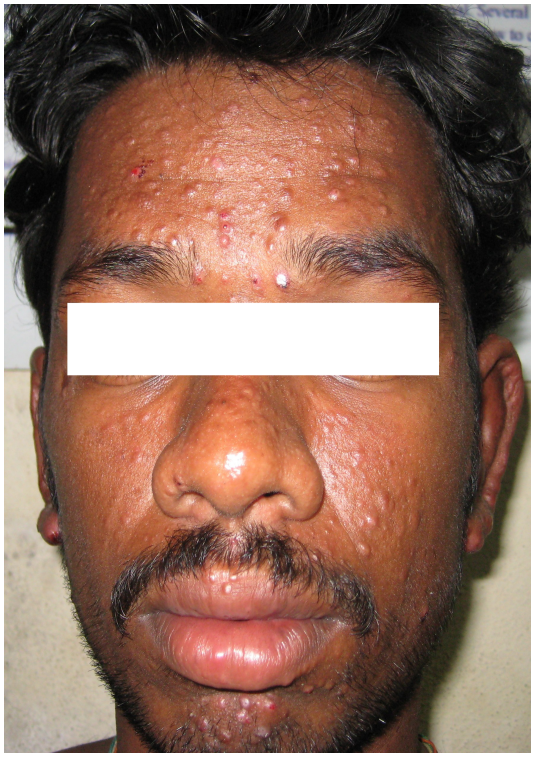

**Fig 1 : Clinical photograph of a patient with histoid leprosy showing characteristic shiny, multiple bilateral, symmetric papules and nodules present over the face, ear lobules, lips and chin.**

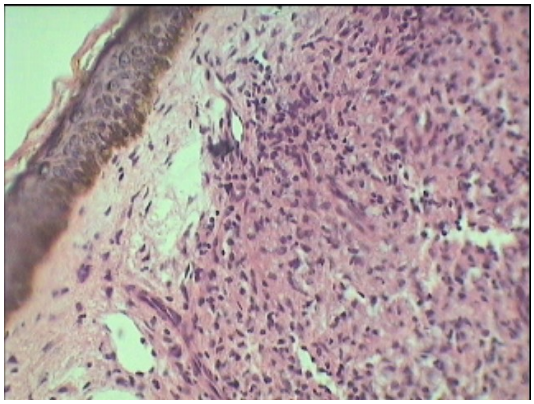

**Fig 2 : Histopathological micrograph showing characteristic histiocytes arranged in whorls in the dermis.**

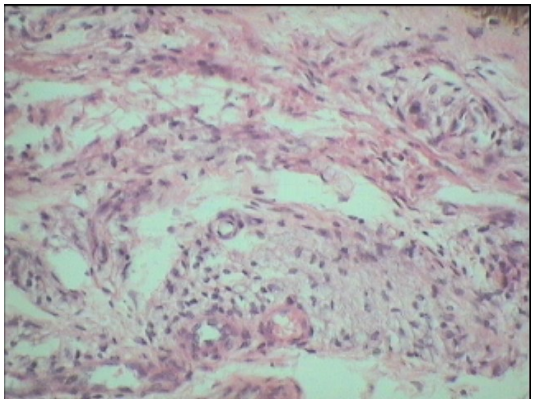

**Fig 3 : Histopathological micrograph showing infiltration of polymorphonuclear cells and vasculitis in the dermis.**

The patient was diagnosed as a case of histoid leprosy and advised anti-leprosy therapy (MB-MDT). After receiving 3 months of MDT, he reported back to the clinic with the complaints fever and swelling of hands and feet. Clinical examination revealed bilateral symmetrical pitting edema of the feet and erythema and softening in the center of existing leprosy lesions with no erythroma nodosum leprosum (ENL) lesions. Histopathological examination of the skin lesion showed poly-morphonuclear cell infiltration and vasculitis suggesting ENL (Figure 3). The patient was diagnosed as type 2 lepra reaction and advised oral prednisolone 40 mg daily for two weeks. With this his complaints showed dramatic improvement suggesting reactional phase of leprosy.

## Discussion

Subsequent to its initial description by Wade in 1963, histoid leprosy has been reported occasionally from different parts of the world. The cardinal features of the disease include yellowish, waxy, papules, nodules and plaques present on the lower part of the back, arms, buttocks, thighs, dorsum of hands and on the bony prominences, especially over the elbows and knees with

histological hall mark of characteristic spindle shaped foamy histiocytes arranged in whorls having plenty of acid fast bacilli in the dermis (Bhutani et al 1974, Chaudhary et al 1992).

Our patient is certainly a case of histoid leprosy because of the characteristic clinical, bacteriological and histological features as highlighted above. However, we were intrigued to note that the disease manifested '*de novo*' presenting for the first time with no previous episodes of leprosy or history of taking anti-leprosy treatment. Another interesting point in our patient is the occurrence of type 2 reaction in the form of pedal edema and fever with no obvious ENL lesions after starting ALT (MB-MDT), which showed dramatic improvement with systemic steroid therapy. Sharma et al (2002) observed softening, ulceration and discharge in histoid lesions of a patient after initiation of MDT, with no other feature of type 2 reaction similar to the patient described herein. Further, they reiterated that reactions (classical ENL or the mild type 2 reaction) can occur in histoid leprosy contrary to the earlier belief that reactions are not seen in histoid leprosy. This is true in our patient also, who had experienced type 2 reaction (fever and edema of feet) and softening in the center of histoid lesions after receiving ALT.

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**How to cite this article :** Vasavi S and Reddy BSN (2012). Histoid leprosy with erythema nodosum leprosum - a case report. *Indian J Lepr.* **84** : 27-29.