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Case Report

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ASTEATOTIC ECZEMA – A CRYSTAL GAZING FOR DIAGNOSING RELAPSE IN LEPROSY

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A B S T R A C T

Leprosy is a chronic granulomatous disease caused by M. Leprae. It predominantly affects the skin andnerves. Patients with leprosy may present with varied clinical manifestations like hypopigmented, hypoaesthetic patches, dryness, fissuring, trophic ulcer and deformity. Asteatotic eczema in the extremities is commonly seen in the late stage of leprosy. This eczematous lesion persists even after completion of treatment. We report three cases of leprosy with asteatotic eczema. A skin biopsy from the ichthyotic patch of all three cases was taken to assess the disease activity and it showed epitheloid granulomas.

INTRODUCTION

Mycobacterium leprae is usually found in the sub-epidermal zone, inside the nerves, sweat glands, arrector pili muscle, macrophages and around the hair follicle.[1] Asteatotic eczema occurs in approximately 10% of leprosy patients. The clinical and histological appearance of ichthyotic skin changes found in leprosy patients resembles that of ichthyosis vulgaris.[2] We present three cases of leprosy with asteatotic eczema in which biopsy from the eczematous lesion showed epitheloid granuloma.

CASE REPORT

Case 1

A 62-year-old farmer presented to our OPD, a year back with complaints of multiple light coloured flat lesions over face, trunk and extremities for 5months. The patient had associated loss of sensation over the lesion. On cutaneous examination there were multiple coppery coloured well defined patch of varying size seen all over the body (Fig. 1,2,3). Bilateral supra ciliary madarosis along with ear lobe infiltration were present. Nerve examination showed enlarged bilateral ulnar and popliteal nerves which were not tender. Slit skin smear for AFB was positive. Skin biopsy taken from the hypopigmented patch confirmed features of BLHD and hence he was started on MDT MB. Now he is on his 12th pulse of MDT MB. He had complaints of dryness of both legs (Fig. 4) for 6 months and on examination, there were no new skin lesions. Skin biopsy was taken from the ichthyotic patch to assess the disease activity. This showed features of mild hyperkeratosis, spongiosis and multiple granulomas (Fig. 5) were present in the dermal region around neurovascular bundles in adnexa.

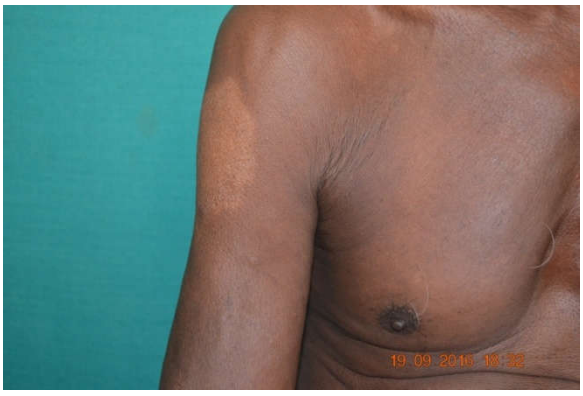

Figure 1 Hypopigmented patch on the right upper arm

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The granuloma composed of lymphocytes, histiocytes and epithelioid cells in equal proportion. This was consistent with BTHD.

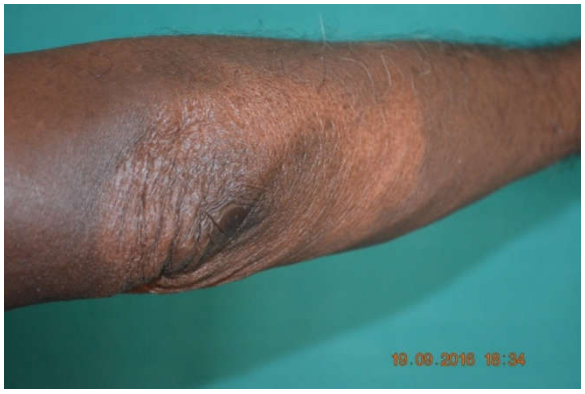

Figure 2 Hypopigmented patch on the right elbow

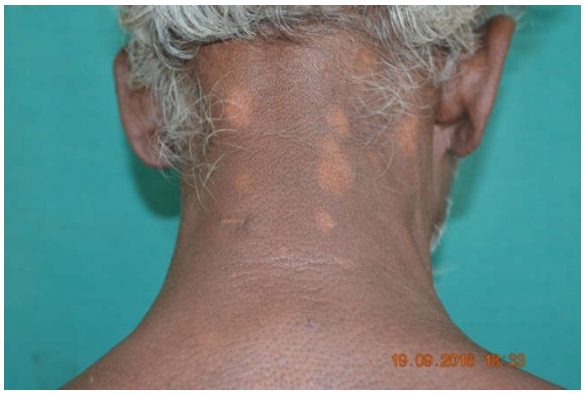

Figure 3 Multiple hypopigmented patches over the posterior aspect of the neck

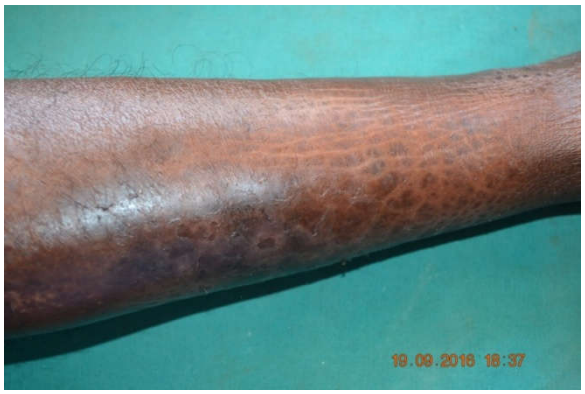

Figure 4 Asteatotic eczema over the anterior aspect of right leg

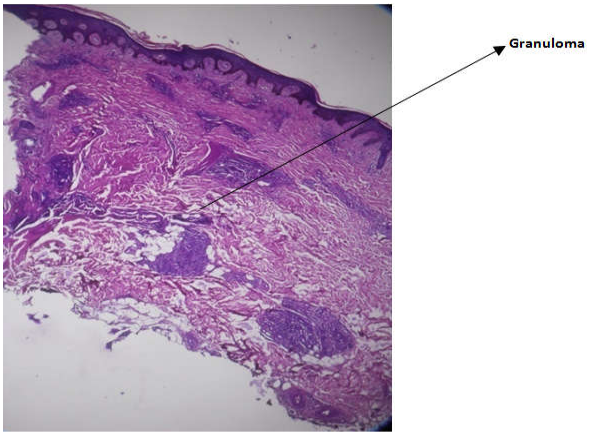

Figure 5 Biopsy from asteatotic eczema of treated leprosy showed compact granuloma in the dermis (H &E, X10)

Case 2

A 35-year-old male who was adequately treated for inderminate Hansen's disease in the year 2007. Three years back he presented with multiple hypopigmented, hypoanesthetic patches over the back, abdomen and dryness over both legs. Clinically we diagnosed as BLHD and biopsy done from a hypopigmented patch showed features of BTHD. So he was started on MDT MB and at the end of 1 year he had persistent hypopigmented patch. Hence biopsy was repeated which showed features of BTHD and MDT MB was continued. After 24 months of treatment a biopsy was taken from the ichthyotic patch (Fig. 6) which again showed features of BTHD (Fig. 7).

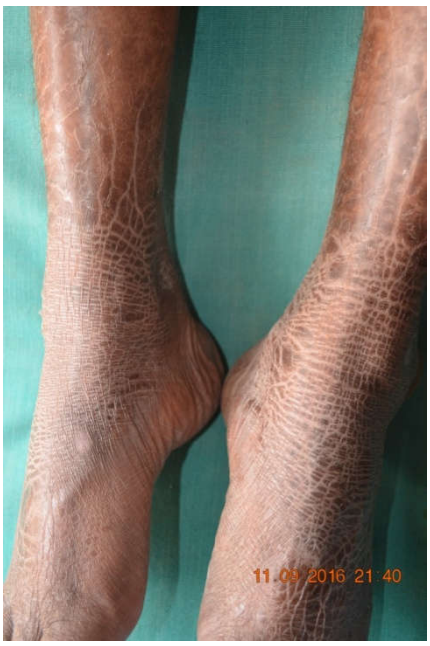

Figure 6 Asteatotic eczema over both legs

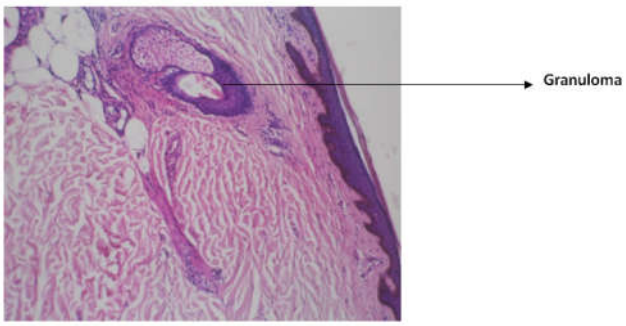

Figure 7 Biopsy from the asteatotic patch showed granuloma around the adnexal structures (H& E, X40)

Case 3

A 62-year-old female who was diagnosed as pure neuritic Hansen's disease 10 years back. She took MDT MB for three months and defaulted. She presented to our OPD with ulcer over the left foot and dryness over both legs for 3 years. On examination there were no hypopigmented patches. She had glove and stocking type of anaesthesia, peripheral nerve examination showed enlarged B/L ulnar, radial cutaneous and popliteal nerves. A biopsy was done from the ichthyotic patch which showed features of BTHD.

DISCUSSION

There are definite histological changes seen in the normal appearing skin in all types of leprosy but greater in cases at the lepromatous end of the spectrum. The cases reported here had extensive areas of acquired ichthyosis. Asteatotic eczema occurs due to the anhydrosis which in turn results from the degeneration of the autonomic nerve fibers in the affected skin and later stages due to atrophy of sweat and sebaceous glands.[3] The sebaceous glands become dysfunctional resulting in superficial loss of lipids causing increased transepidermal water loss predisposing the skin to dryness.[4] Wetook a skin biopsy from the ichthyotic patch to assess the disease activity and this might be helpful in further management of the patient. The skin biopsy of asteatotic eczema of all the three cases showed compact granuloma with giant cells. Poricha *et al*. observed that a compact granuloma with a dense collar of lymphocytes around a few epithelioid cells and without giant cells was attributed in favor of a resolving granuloma.[5] Hence the presence of giant cells is suggestive of activity. But to confirm disease activity further polymerase chain reaction (PCR) based studies are needed.

CONCLUSION

These cases are reported because of the lack of studies showing histopathological features of ichthyotic patch which stress the importance of doing a biopsy from the ichthyotic patch in patients who have completed treatment before a long time and having a persistence of ichthyotic patch. This will help to assess the relapse of the disease.

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