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NODULO - ULCERATIVE LESIONS IN HISTOID LEPROSY A CASE REPORT

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Abstract : Histoid leprosy is a well-recognized clinical entity, an expression of multibacillary leprosy, characterized by cutaneous and or subcutaneous nodules and plaques on apparently normal skin with unique histopathology and characteristic bacterial morphology. A 50 year old male presented with multiple nodules over the extremities of 6 months duration and few noduloulcerative lesions over both shin of 3 weeks duration. No history of anti-leprosy treatment in the past. General and systemic examination was normal. Dermatological examination revealed hypoaesthetic, hypopigmented patches of varying sizes over lower abdomen and lower back. Histopathology of hypopigmented patch confirmed Boderline tuberculoid leprosy. Slit skin smear, histopathological examination and fite faracco staining of nodular and nodulo-ulcerative lesion confirmed Histoid leprosy. This case been reported for the rare presentation of ulceration in histoid nodules.

Keyword : Leprosy, Histoid, Nodules.

INTRODUCTION

The term 'histoid leprosy' was first coined by Wade in 1963 as a histological concept of bacillary rich leproma composed of spindle-shaped cells along with an absence of globi formation. Histoid leprosy is an expression of multibacillary leprosy1 either as de novo or variant of lepromatous leprosy and may occasionally be seen in borderline2,3 and indeterminate leprosy.4

CASE REPORT

Fifty year old male agriculture worker presented with multiple, painless, raised skin lesions over both upper and lower limbs of 6 months duration with ulceration of few nodules over both lower limbs of 3 weeks duration. The lesions were not associated with constitutional symptoms, discharge or spontaneous regression. There was no history of impairment of sensation or weakness of small muscles of hands and feet. No personal or family history of leprosy or anti-leprosy treatment. General and systemic examination were normal. Dermatological examination revealed multiple, firm, discrete, shiny, skin colored nodules of size 0.5cm to 1.5cm present over both lower limbs(fig- 1), extensor surface of lower 1/3rd of both arms and upper 2/3rdof both forearms(fig-2). Nodules were not warm, not tender, not attached to deeper structures and the skin over the nodules was not pinchable. Few nodules over the shins showed central ulceration(fig-3). Twelve well defined to ill-defined hypopigmented, hypoaesthetic dry patches of varying sizes(1cm to 6cm) were present over the lower abdomen(fig-4) and lumbosacral region.Ichthyosis was present over both lower limbs. Madarosis, skin infiltration and glove and stocking anaesthesia were absent. Bilateral ulnar, radial cutaneous, popliteal and sural nerves were equally thickened and not tender. Weakness of palmar and dorsal interossei muscles of both hands and dorsiflexors of both big toes was made out. No trophic ulcer was present. Gait was normal. Clinical diagnosis of borderline leprosy with Histoid Hansen considered.

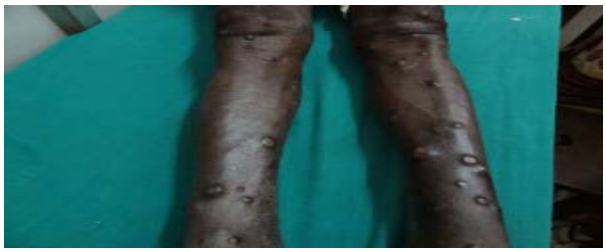


FIG-1: MULTIPLE NODULES OVER BOTH LOWER LIMBS

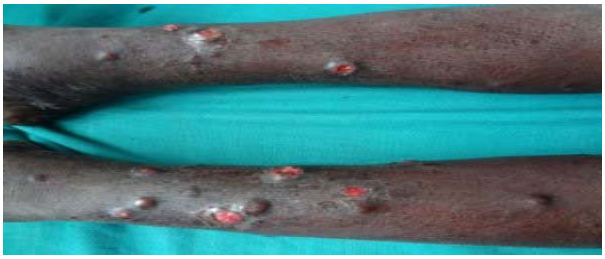


FIG 3: NODULO ULCERATIVE LESIONS OVER BOTH LOWER LIMBS

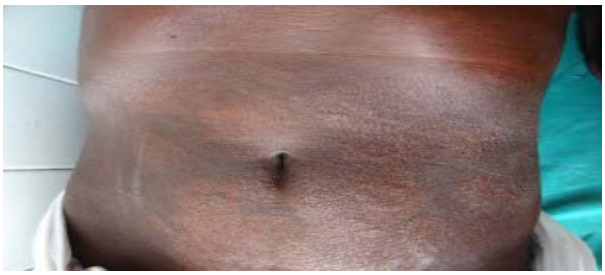


FIG 4:WELL DEFINED TO ILLDEFINED HYPOPIGMENTED, HYPOAESTHETIC, DRY PATCHES—ABDOMEN

INVESTIGATIONS

Complete blood count, ESR, renal function test, liver function test and urine analysis were normal. Slit Skin Smear(SSS) from nodule and nodulo-ulcerative lesion showed plenty of long, slender, lepra bacilli with tapering ends(fig-5&8). SSS from both ear lobules and hypopigmented patches were negative for lepra bacilli. Histopathological examination(HPE) of nodule(fig- 6) and edge of the nodulo-ulcerative lesion(fig-9) showed thin epidermis, cell free subepidermal zone, well circumscribed collection of spindle shaped histiocytes and few epitheloid cells consistent with Histoid leprosy . Fitefaracco staining showed plenty of long, slender lepra bacilli (fig-7&10). HPE of hypopigmented patch(fig-11&12) showed atrophic epidermis in few areas, epitheliod granuloma in upper dermis, dermal nerves and around the peri-appendageal structures consistent with borderline tuberculoid leprosy . Fite faracco staining showed few solid and fragmented lepra bacilli(fig-13). Clinico-pathological correlation confirmed the diagnosis of Histoid Hansen with borderline tuberculoid leprosy. Patient was started on Multi Bacillary- Multi Drug Therapy (MB-MDT) and under follow up.

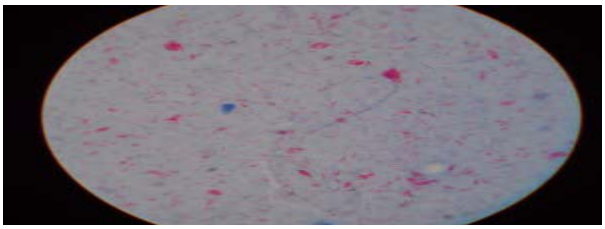


FIG 5:SLIT SKIN SMEAR OF NODULE Long, Slender, lepra bacilli with tapering ends

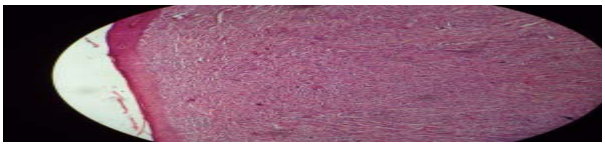
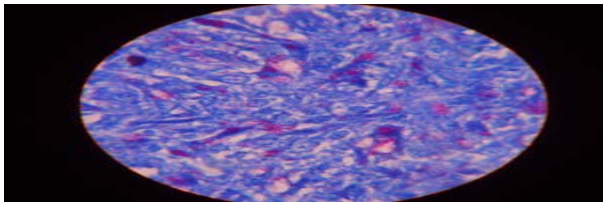


FIG 6:HPE OF NODULE (10X) Collection of Spindle Shaped Histiocytes



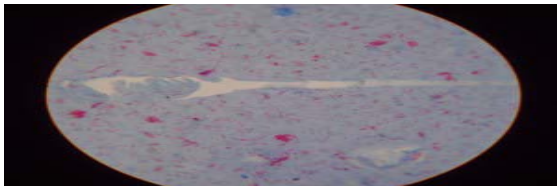


FIG 8:SLIT SKIN SMEAR – NODULO ULCERATIVE LESION Long, Slender Lepra bacilli with Tapering ends

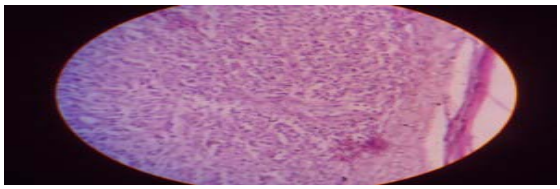


FIG 9:HPE (40X) – EDGE OF NODULO ULCERATIVE LESION Collection of spindle shaped histiocytes

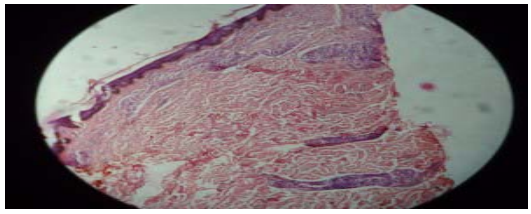


FIG 11:HPE(10X) OF HYPOPIGMENTED PATCH Curvilinear Epitheloid Granuloma

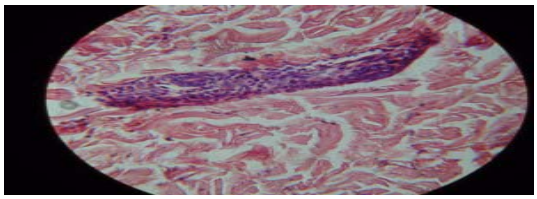


FIG 12:HPE(40X) OF HYPOPIGMENTED PATCH Epitheloid Granuloma involving erector pilori Muscle

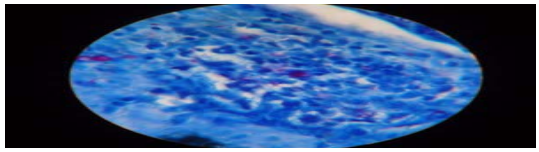


FIG 13:FITE FARACCO STAIN – HYPOPIGMENTED PATCH Solid and Fragmented Lepra bacilli

DISCUSSION

Histoid leprosy is considered as a well-recognized expression of multibacillary leprosy characterized by typical clinical, histopathological, immunological and bacteriological findings.5Histoid leprosy in general occurs in patients who have received dapsone monotherapy,7 irregular or inadequate antileprosy treatment.8 However, there are also reports of Histoid leprosy developing as relapse after successful treatment9 or even appearing de novo without a prior history of any antileprosy treatment. 10Histoid leprosy may occasionally be seen in borderline 2,3and indeterminate leprosy.4The pathogenesis of this rare and unusual variant of leprosy still remains unresolved. The interplay of genetic factors, immune response and treatment received in a given patient seems to influence the

manifestations of histoid leprosy. Although histoid leprosy is considered to be a variant of Lepromatous Leprosy(LL), there exists an enhanced immune response against M. leprae in these patients compared with LL patients with respect to both cell-mediated (CMI) and humoral immunity.11 The presence of necrosis and ulceration in histoid lesions indicates an augmented local CMI to combat M. leprae.12 Despite the presence of adequate numbers of macrophages, it has been claimed that they lack the functional property to kill bacilli that exist in high numbers in histoid lesions. 11 It is possible that under the influence of M. leprae antigens, macrophages in Histoid Hansen lose their bacteriolytic property or produce 'suppressor' cytokines, such as interleukin-10,12,13 that adversely inhibit T cell-mediated responses to M. leprae. Clinically, the histoid lesions commonly appear as smooth, shiny, hemispherical, dome-shaped, nontender, soft to firm nodules which may be superficial, subcutaneous or fixed deeply under the skin and plaques or pads appearing on otherwise normal-looking skin.14Nodules and subcutaneous nodules were the commonest morphological pattern and a significant proportion of patients had more than one type of lesion. In this patient, histopathological examination of nodule and nodulo-ulcerative lesión confirmed the diagnosis of Histoid leprosy. The ulceration in the nodular lesions of Histoid leprosyis a rare clinical presentation. The nodulo – ulcerative lesions may be one of the morphological patterns among the various clinical presentations of Histoid leprosy.

CONCLUSION

The occurrence of histoid nodules with ulcertion in this patient can be regarded as a sign of "local augmentedimmunity".This case been reported for the rare occurence of ulceration in Histoid nodules. In this era of elimination of leprosy, emphasize on early identification and prompt treatment of multibacillary forms of leprosy is the need of hour to decrease the transmission of this infection amidst the general population.

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