International Journal of Scientific Reports
Kalvit KR. Int J Sci Rep. 2019 Nov;5(11):338-340
http://www.sci-rep.com

pISSN 2454-2156 | eISSN 2454-2164

DOI: http://dx.doi.org/10.18203/issn.2454-2156.IntJSciRep20194650

Case Report

De novo histoid leprosy in an immunocompetent male: a rare case report from North east India

Kushal R. Kalvit*

Department of Medicine, Agartala Government Medical College, Agartala, Tripura, India

Received: 05 August 2019
Revised: 10 September 2019
Accepted: 18 September 2019

***Correspondence:**
Dr. Kushal R. Kalvit,
E-mail: kkalvit5@gmail.com

ABSTRACT

Histoid leprosy is a rare form of lepromatous (multibacillary) leprosy. This form of leprosy is fairly common in patients on dapsone monotherapy and irregular treatment. Sometimes it can arise de novo as well. Very few cases have been reported in immunocompetent individuals from India. I report a case of de novo histoid leprosy in a 22 year old male from north east India.

Keywords: Leprosy, Lepromatous, Histoid, De novo

INTRODUCTION

Histoid leprosy is a well-recognized entity, characterized by cutaneous and/or subcutaneous nodules and plaques present over apparently normal skin, with unique histopathological and characteristic bacterial morphology. The term 'histoid leprosy' was originally coined by Wade as a histological concept of bacillary-rich leproma composed of spindle-shaped cells, along with the absence of globus formation (so conspicuous in ordinary leproma). It exhibits a fibromatoid tendency in the chronic form.[1] It often goes unrecognised and leads to misdiagnosis and delayed treatment. It also adds to the burden of total leprosy cases in the country and hampers the progress of leprosy eradication programs. I report a case of histoid leprosy in a 22 year old male who is immunocompetent.

CASE REPORT

A 22 year old male, manual labourer presented with history of multiple round swellings beneath the skin on face, arms, chest and buttocks since 2 months. The swellings did not change in size and were not associated with pain or itching. There was no history of fever, rash, joint pains, cough, pedal edema, tingling sensation or numbness in any limbs. There was no similar history in the past. He had no history of diabetes, tuberculosis, any other chronic illness or any drug intake. There was no similar history in other family members. Examination revealed a temperature of 98.8°F, pulse rate 90 beats/minute, blood pressure 126/80 mmHg, respiratory rate of 15/minute and mild pallor. There were multiple firm, non-tender, irregular, 0.5-1.0 cm subcutaneous nodules on the face, around the angle of mouth, bilateral arms and forearms, around the nipples and bilateral gluteal regions. These nodules were mobile and not fixed to underlying structures. Skin over the face showed 4 to 5 erythematous papules with raised margins in perioral area (Figure 1). There was loss of hair over the lateral part of eyebrows on both sides. There was no lymphadenopathy or enlarged nerves. Examination of cardiovascular, respiratory, abdomen and central nervous system was unremarkable. Routine blood investigations showed haemoglobin=10.4 g/dl, total leukocyte count=8000/mm^3, platelet=3.8 l/mm^3, blood urea nitrogen=14 mg/dl, serum creatinine=1.0 mg/dl, Na=±138 mmol/l, K=±4.3 mmol/l, blood glucose=98 mg/dl, bilirubin=0.6 mg/dl, serum glutamic-oxaloacetic transaminase (SGOT)=15 IU/l,

serum glutamic-pyruvic transaminase (SGPT)=22 IU/l, alkaline phosphatase (ALP) =132 IU/l. Human immune deficiency virus (HIV), Hepatitis B virus aurface antigen (HBsAg) and antibodies against hepatitis C virus (anti-HCV) were negative. Chest roentgenogram and electrocardiogram (ECG) were within normal limits. Histopathologic examination was done on two nodules in the maxillary region of face which showed atrophic epidermis with spindle shaped histiocytes arranged in bundles and whorls (Figure 2). Ziehl-Neelsen (ZN) staining of the specimen revealed plenty of acid fast bacilli (AFB). A separate slit skin smear (SSS) from ear lobe demonstrated AFB with bacteriological index of 6+ (Figure 3). Thus a diagnosis of de novo histoid leprosy in an immunocompetent male was made and the patient was started on multibacillary multidrug therapy (MBMDT) and is on regular follow-up.

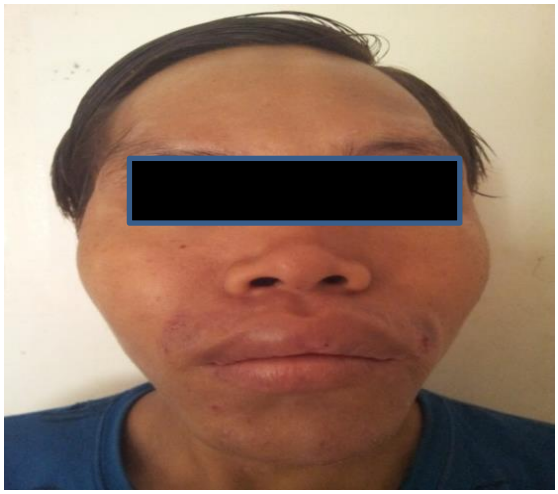

Figure 1: Erythematous papules with raised margins in perioral area and loss of lateral eyebrows on both sides.

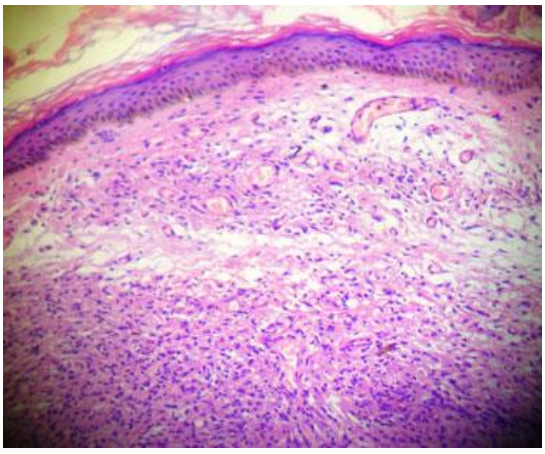

Figure 2: Histopathology of subcutaneous nodule showing spindle shaped histiocytes arranged in whorls and bundles.

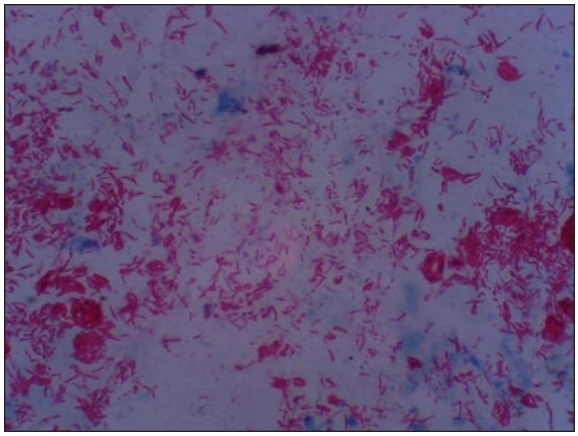

Figure 3: SSS from earlobe showing plenty of AFB.

DISCUSSION

Classical histopathologic findings include epidermal atrophy as a result of dermal expansion by the underlying leproma and an acellular band located immediately below the epidermis. The leproma consists of fusiform histiocytes arranged in a tangled or storiform pattern containing AFB.[1] Histoid leprosy has a male preponderance and the average age at diagnosis is between 21 and 40 years.[2] The incidence in India is reported to vary from 2.79 to 3.60%.[3] Histoid leprosy is managed initially giving the range of motion therapy with rifampicin 600 mg, ofloxacin 400 mg and minocycline 200 mg which is followed by World Health Organisation (WHO) MBMDT therapy.[3] It might represent an enhanced response of the multibacillary disease in localizing the disease process. An increase in both cell mediated and humoral immunity against *Mycobacterium leprae* has been hypothesized.[4] Fine needle aspiration cytology (FNAC) can be a rapid, safe and effective alternative for diagnosis in a suspected case of histoid leprosy.[5]

CONCLUSION

The diagnosis of histoid leprosy should not be restricted to immunocompromised individuals. Many regions of our country still lack essential medical services and hence many cases go undiagnosed and/or untreated. A high index of suspicion is necessary for early diagnosis and treatment.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Kalvit KR. *De novo* histoid leprosy in an immunocompetent male: a rare case report from North east India. Int J Sci Rep 2019;5(11):338-40.