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A Case Series of De Novo Histoid Leprosy and Review of Literature

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ABSTRACT

Histoid leprosy is a bacillary rich leproma with abundant histoid bacillus having unique clinical, bacteriological and histopathological characteristics. It is a rare form of leprosy which usually manifests following monotherapy or drug resistance and rarely as de novo.It poses a challenge in diagnosis as it mimics a variety of dermatological conditions & in many cases it lacks the cardinal features like loss of sensation. Early Diagnosis and treatment of histoid leprosy is important as it might serve as a reservoir and source of community spread. In this article, we report a case series of this unique variant of leprosy and review of literature.

Keywords-Histoid leprosy, leproma, globi, shiny nodules.

Introduction

Histoid leprosy is a rare form of leprosy with high bacillary load. It has unique microbiological characteristics presenting with long uniformly stained acid fast bacilli that don't form globi[1] and unique histopathological characteristics forming histoid granuloma comprising of abundant histiocytes with histoid bacilli arranged in histoid habitus[2]. Histoid leprosy is usually reported after dapsone monotherapy, drug resistance or irregular treatment[3][4]. De-novo histoid leprosy is relatively rare. In this article, we report a case series of de-novo histoid leprosy.

Case Series:

Case 1:

A 23-year-old male who is a laborer by profession came with the complaints of multiple asymptomatic, raised, shiny skin lesions over the body for the past 5 months. The skin lesions

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were first noted over the right arm that gradually progressed to involve the left arm, back and lower extremities

There was no history of fever, numbness, tingling, loss of sensation, lymphadenopathy, epistaxis, pedal edema, muscle wasting, trophic ulcers, previous treatments or similar complaints in family.

General and physical examination were within normal limits

Dermatological examination showed multiple, shiny, skin colored to fleshy, well circumscribed, firm, non-tender grouped papules and nodules measuring size of 0.5 – 1 cm seen over the posterior and lateral aspect of both arms, dorsum of hands and right knee. The surrounding skin was normal[as shown in Figure 1].

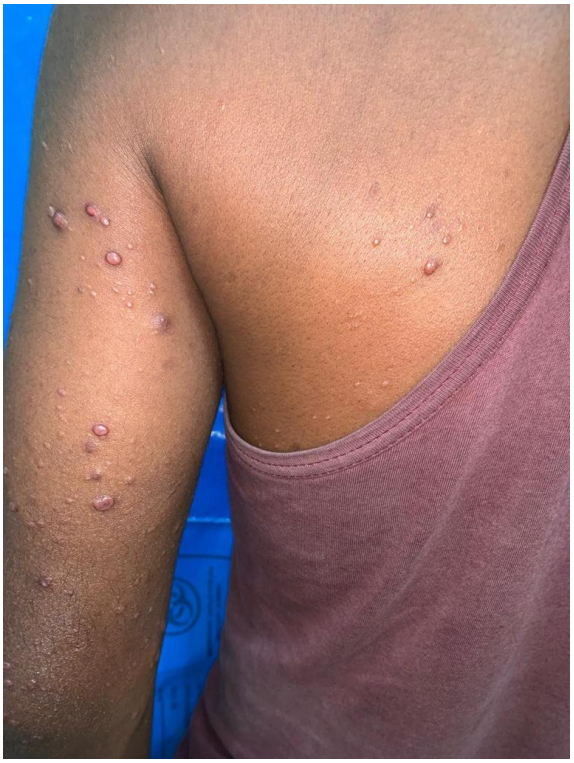

Figure 1: Showing skin-colored shiny discrete papules and nodules arising from the normal skin over the posterior aspect of right and back.

Peripheral nerve examination showed bilateral ulnar nerves were thickened [grade 1] .Sensations were unaltered

Blood investigations and serology were within normal limits. Slit skin smear showed plenty of acid-fast bacilli with a bacterial index of 6+. Histopathology showed atrophic epidermis with a histoid granuloma showing plenty of spindle shaped histiocytes.[as shown in Figure 2].The patient was managed with Multibacillary multidrug therapy.

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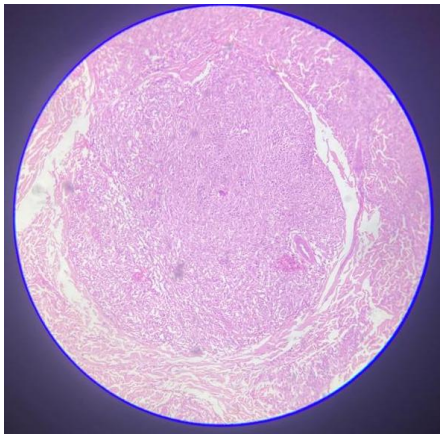

Figure 2: Shows histoid granuloma showing plenty of spindle shaped histiocytes.

CASE 2:

A 43 year old female patient came to the OPD with the complaints of asymptomatic, raised, shiny skin lesions over the body arising from the normal skin since 1 year. There was no history of loss of sensation. Patient was on native treatment for the same but the skin lesions continued to slowly progress involving the upper limb followed by lower limb and eventually the face which prompted the patient to seek for medical attention.

Dermatological examination showed multiple, shiny, skin colored discrete, well circumscribed, firm, non-tender papules and nodules measuring size of 0.5 – 2 cm seen over the extensors of both upper limbs,lower limbs and face. [as shown in Figure 3]. The surrounding skin was normal.Sensations were intact.

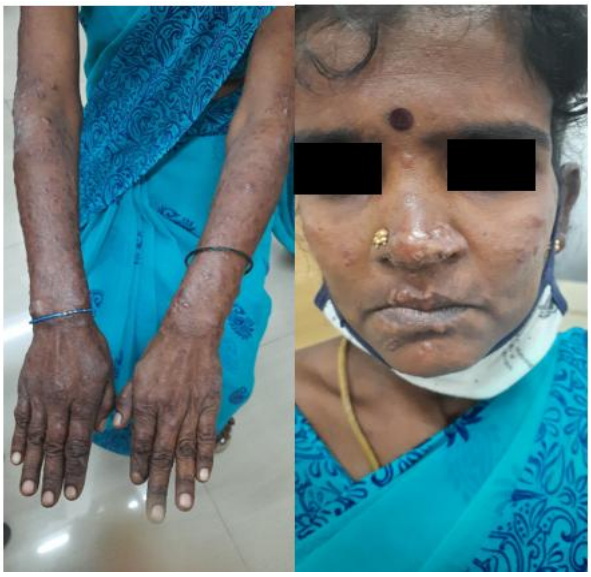

Figure 3: Showing shiny skin colored papules over the face and extensors of both upper limbs.

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Peripheral nerve examination showed thickening of bilateral ulnar nerves, radial cutaneous nerves and lateral popliteal nerves[grade 1].
Blood investigations and serology were within normal limits. Histopathology was consistent with histoid leprosy. The patient was started on Multibacillary multidrug therapy and is under follow up.

Case 3:
A 31-year-old male presented to our OPD with multiple skin-colored raised lesions over the extremities, back and few over face for 6 months.
The lesions were asymptomatic and there was no loss of sensation. There were no systemic complaints or similar complaints in family.
General examination was within normal limits
Cutaneous examination revealed multiple shiny, hemispherical, non-tender, skin-colored papules and nodules present symmetrically over the trunk and upper and lower limbs & few skin colored shiny plaques were seen over right knee [as shown in figure 4]. Sensations were intact and peripheral nerve examination showed bilateral grade 1 ulnar nerve thickening. Blood investigations were within normal limits. Biopsy was done and histological features were consistent with histoid leprosy. Patient was started on MB-MDT Therapy

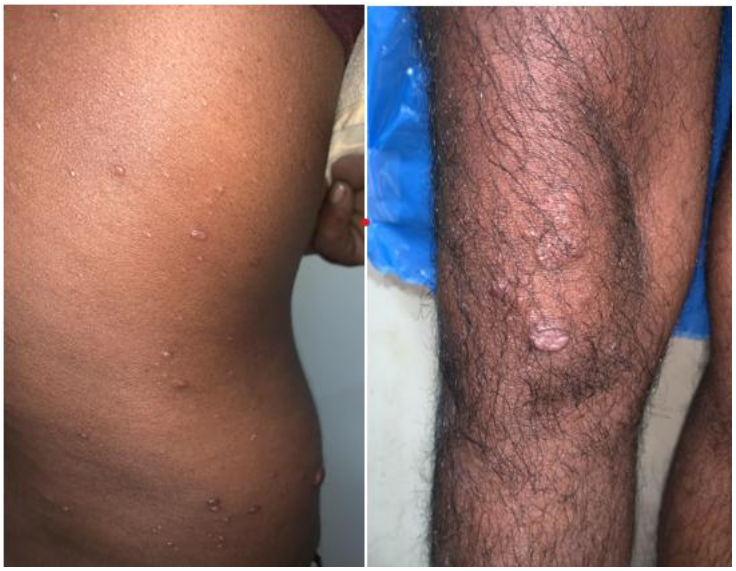

Figure 4: Showing shiny discrete skin colored papules over the trunk &the right knee.

Discussion:
Histoid leprosy is a widely recognized form of leprosy falling under the lepromatous spectrum with unique bacteriological and histological characteristics.[1]
Even though this is a form of multi-bacillary leprosy with abundant histoid bacillus , the cell mediated immunity is better when compared to the lepromatous leprosy.[1]

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These present as well defined, erythematous, fleshy or skin-colored smooth, shiny nodules arising from the normal skin which in contrast to the lepromatous leprosy that arises from the infiltrated plaques. They can also present as papules, plaques or subcutaneous nodules. Most commonly occurring over the extensors of limbs, gluteal region and trunk and over bony prominences. [5] Facial involvement in the form of histoid facies can also occur. Ulnar nerve is the most common nerve that is affected.[6] However these can also present without the cardinal signs of leprosy like sensory loss(as was seen in our patients) or nerve enlargement , posing difficulty in diagnosis.
Histoid leprosy can masquerade as lepromatous leprosy, neurofibromatosis, dermatofibroma , sarcoidosis and PKDL(post kala azar dermal leishmaniasis), multiple xanthomas or reticulohistiocytosis.[7][8]

Histoid leprosy has a high bacterial load which is evidenced by the high morphological and bacteriological index (5+ or 6+). These bacillary are longer than the usual lepra bacilli.[1]
Histopathological examination reveals a well circumscribed histoid granuloma with abundant spindle shaped histiocytes arranged in a whorled fashion. The histoid bacilli are arranged in a parallel fashion along the long axis of histiocytes which is known as “histoid habitus”. The dermal expansion can lead to formation of “grenz zone” As the skin lesions age these is subsequent progressive increased deposition of collagen and it becomes fibrotic.[1][2]
Histoid leprosy can be managed by ROM therapy along with MB-MDT or MB-MDT for a longer duration for about 2 years of till smear negativity whichever is later.[9]

Conclusion:
Histoid leprosy is a multibacillary leprosy with high bacterial load hence high index of suspicion is required for diagnosis and management so as to prevent the community spread.

Conflicts of interest: Nil

References:
1. Gupta SK. Histoid leprosy: review of the literature. International journal of dermatology. 2015 Nov;54(11):1283-8.
2. Bhat YJ, Hassan I, Yaseen A, Wani R. De novo histoid leprosy: A case report from a post-elimination area. Indian journal of dermatology. 2015 Mar;60(2):214.
3. Sehgal VN, Srivastava G, Singh N, Prasad PV. Histoid leprosy: the impact of the entity on the postglobal leprosy elimination era. International journal of dermatology. 2009 Jun;48(6):603-10.
4. Dimri D, Sethi B, Kumar Y. De novo histoid leprosy in an elderly: A case report and review of the literature. Case reports in pathology. 2012;2012.
5. Dimri D, Sethi B, Kumar Y. De novo histoid leprosy in an elderly: A case report and review of the literature. Case Reports in Pathology. 2012 Jan 1;2012.
6. Kalla G, Purohit S, Vyas MC. Histoid, a clinical variant of multibacillary leprosy: report

from so-called nonendemic areas. International journal of leprosy and other mycobacterial diseases. 2000 Sep 1;68(3):267-71.

7. Andrade PJ, Messias SD, Ferreira PC, Sales AM, Machado AD, Nery JA. Histoid leprosy: a rare exuberant case. Anais brasileiros de dermatologia. 2015 Oct;90(5):756-7.
8. Virendra N Sehgal(2016).Histoid leprosy. In:IAL textbook of Leprosy , 2nd edition, Jaypee Brothers Medical Publishers, New Delhi pp 274.
9. Bartos G, Sheuring R, Combs A, Rivlin D. Treatment of histoid leprosy: a lack of consensus. International Journal of Dermatology. 2020 Oct;59(10):1264-9.