Indian J Lepr 2024, 96 : 343-347

http://www.ijl.org.in

Case Report

Cutaneous Sarcoidosis Treated as Leprosy- A Case Report

RS Patil[1], YS Marfatia[2], D Menon[3], B Patel[4]

Received: 15.05.2024 Revised: 25.07.2024 Accepted: 30.07.2024

Sarcoidosis is a multisystem disease of unknown aetiology characterized by epithelial cell granulomas without caseation in different organs. It involves mainly the mediastinal and peripheral lymph nodes, lungs, skin, eyes, liver and spleen. It acts as a great mimicker of various skin and systemic diseases. Diagnosis is challenging and mainly done by exclusion. Histopathology shows well-formed naked epithelioid cell granulomas and inclusion bodies. Corticosteroids are the mainstay of treatment. Herein we report a 60-year-old male, who presented with asymptomatic multiple erythematous well-defined plaques over face, trunk and upper limb clinically looking like lepromatous leprosy. He was earlier treated with anti-leprosy drugs (ALD) for 6 months as facilities for slit-skin smears and biopsy were not available at that time, following which he showed no improvement. There was no motor/ sensory deficit and skin smear for acid-fast bacilli (AFB) was negative. Skin biopsy was taken from a representative lesion. Histopathological findings were suggestive of sarcoidosis. He then started oral and topical corticosteroids along with PUVA therapy, following which he showed significant improvement. This report highlights the need to access to slit-skin smears and histopathology to confirm or rule out the diagnosis of leprosy.

Key Words : Sarcoidosis, Leprosy, Granuloma, Corticosteroid, PUVA

Introduction

Sarcoidosis, derived from Greek word "Sarco" means flesh and Eido means type or like (Bindu Suparna & Joshi 2014), is a multisystem disorder of unknown etiology which is characterized by noncaseating granulomas on histopathology (Mahabal et al 2021). It primarily affects the lungs, lymphoid systems, skin and any organ system in the body. Skin is the second most reported organ involved in sarcoidosis. The prevalence is 20–35% (Mahabal et al 2021). Skin lesions of sarcoidosis include macule, papule, plaque and nodules. Like leprosy, cutaneous lesions are usually non itchy and asymptomatic and of long duration (Bruce et al 2008). Because of its rarity it can be misdiagnosed as leprosy. Since it is a diagnosis of exclusion, it is mandatory to exclude other granulomatous diseases (Sreeja et al 2022). We report such a case who was initially treated with anti-leprosy drugs with no response and was finally confirmed as a case of sarcoidosis.

Case Report

A 60 year old male having erythematous nodules and well-defined plaques over body

[1] Dr Raveena S Patil, MBBS, 3RD Year Post Graduate Student, SBKS MI&RC, Vadodara
[2] Dr Yogesh S Marfatia, MD (Skin & VD), Professor, SBKS MI&RC, Vadodara
[3] Dr Devi Menon, MD (Skin& VD), Consultant Dermatologist
[4] Dr Brijesh Patel, MD (Skin& VD), Consultant Dermatologist
[1, 2] Department of Dermatology Venereology & Leprosy, SBKS Medical Institute & Research Centre, Piparia, Vadodara, PIN- 391760
[3] Thiruvananthapuram, Kerala
[4] Surat, Gujarat
Corresponding Author: Dr Raveena S Patil & Dr Yogesh S Marfatia, **Email**: ym11256@gmail.com

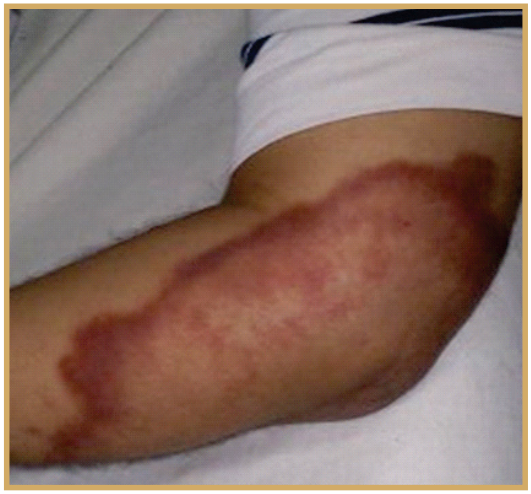

Fig. 1a : Single, well-defined, erythematous plaque with prominent raised erythematous margin seen over posterior aspect of left forearm extending to left arm.

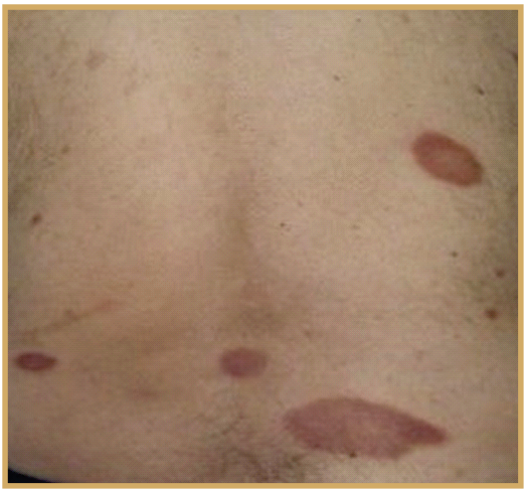

Fig. 2a : Multiple, well defined, annular erythematous plaques with mild central clearing seen over back.

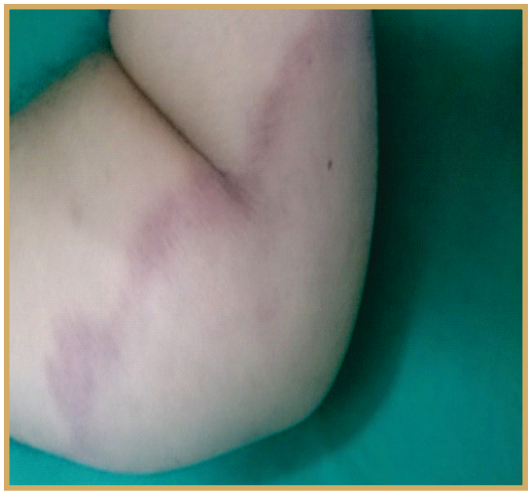

Fig. 1b: Post treatment- showing marked clinical improvement with central clearing.

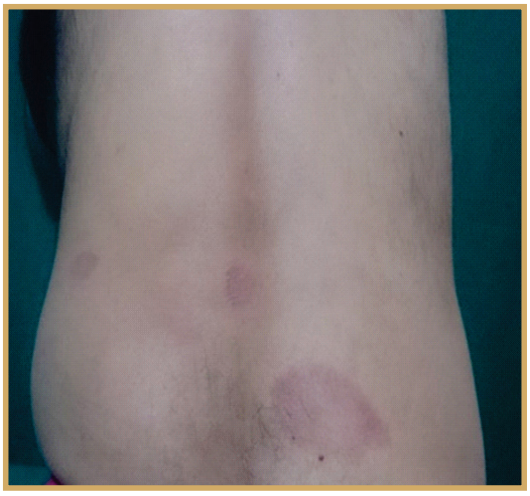

Fig. 2b : Post treatment- showing marked clinical improvement.

for 10 months, insidious in onset and gradually progressive in nature. No history of itching or pain over the lesions was present. There was no history of constitutional symptoms. Patient initially attended a primary care centre. As it was clinically looking like a case of leprosy, patient was treated with multi-bacillary anti leprosy drugs (WHO-MDT MB) which includes monthly rifampicin (600mg) plus clofazimine (300mg) and daily clofazimine (50mg) plus dapsone (100mg)

orally for 6 months but showed no improvement and was then referred to the Dermatology out-patient department of our institute for further management. No other significant past history or family history was present. Examination revealed multiple well defined, erythematous nodules and plaques over both upper limbs (Fig. 1a), back (Fig. 2a), abdomen, bilateral lower limbs and face (Fig. 3a). Motor and sensory examination were within normal limits.

On investigation- the hemogram was within normal limits, no abnormality detected on Chest X-RAY and HRCT, USG abdomen and pelvis showed no abnormality. Urine routine examination was normal. AFB (slit skin smear) was negative.

Differential diagnosis of leprosy, leishmaniasis, lymphocytoma cutis was considered. Skin biopsy was taken from a representative lesion. Histopathology revealed nodular tuberculoid granulomatous inflammation throughout the

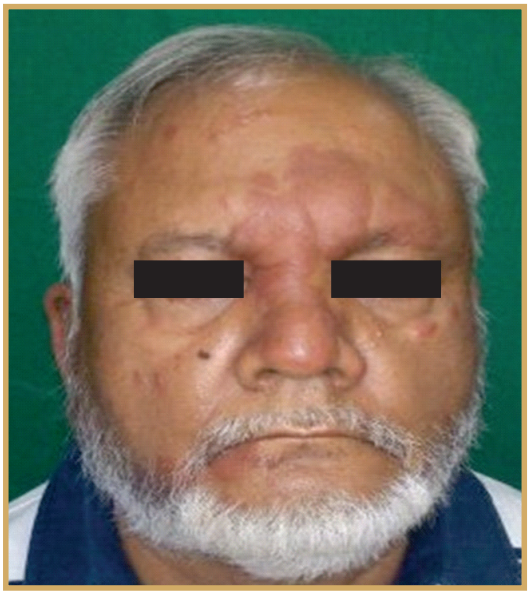

Fig. 3a : Single, well-defined erythematous plaque with multiple small erythematous plaques over its periphery seen over forehead extending to nose and left periorbital area.

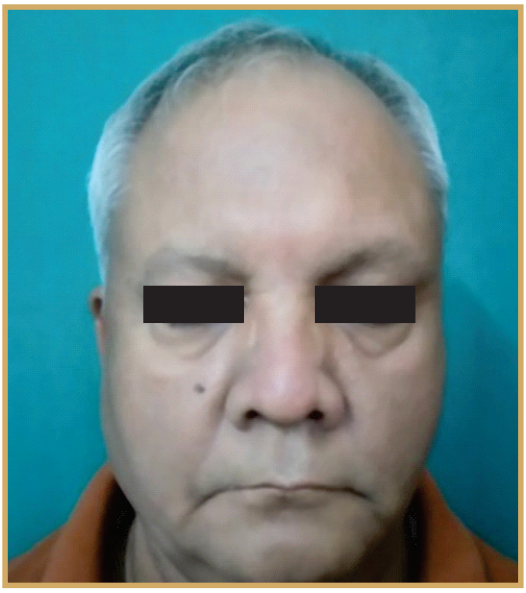

Fig. 3b : Post treatment- showing complete resolution.

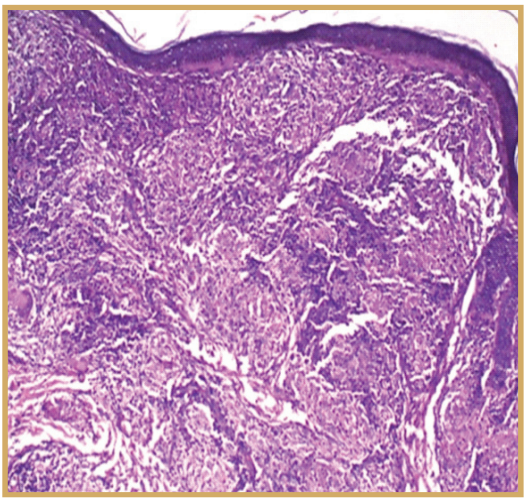

Fig. 4 : Histopathologic details- Epidermis shows moderate spongiotic psoriasiform changes. Nodular tuberculoid granulomatous inflammation throughout the dermis. Granuloma consists of lymphocytes, plasma cells, histiocytes, epithelioid cells & occasional langhan's & foreign body giant cells (40x). No organisms were seen

dermis. Granuloma consists of lymphocytes, plasma cells, histiocytes, epithelioid cells & occasional Langhan's & foreign body giant cells. Epidermis showed moderate spongiotic psoriasiform changes. No organisms were seen (Fig. 4). The diagnosis of tuberculoid granulomatous dermatitis, suggestive of sarcoidosis was considered.

The patient was treated with oral methylprednisolone (40 mg) in tapering doses, topical steroids in terms of clobetasol propionate 0.05% once a day and PUVA (Oral Psoralen followed by Ultraviolet-A exposure) therapy three times/week. Marked improvement was seen at the end of 3 months. He was advised to continue applying clobetasol propionate 0.05% on alternate days and PUVA therapy twice/week as a maintenance therapy for another 3 months. There was almost complete resolution at the end of 6 months (Figs. 1b, 2b, 3b). Patient was advised to come for regular follow up 3 monthly and report immediately in case of recurrence of lesions.

Discussion

Diagnosis of leprosy must be based on absolute presence of at least one of the following 3 cardinal features:

1. Anaesthetic skin lesion
2. Thickening of peripheral nerves with sensory and/or motor deficit in the territory of nerve.
3. Positive Slit skin smear (SSS) for Acid fast bacilli (AFB).

Our case did not have the first two cardinal features and facilities/ expertise to perform SSS was not available.

Sarcoidosis is an immune mediated multisystem granulomatous disease of unknown etiology which presents with myriad of clinical features mainly affecting lungs, lymph nodes, eyes and skin (Mathumathy et al 2020). They usually present with two types of skin manifestations:

1. Specific lesions like maculo-papules, plaques, subcutaneous nodules, lupus pernio (LP), infiltrative scars.
2. Non-specific lesions like erythema nodosum which is the most common type.

The case under discussion was treated for leprosy based on long-standing cutaneous findings like asymptomatic erythematous papules, nodules and plaques. There were no neurologic findings. Baseline slit skin smear (SSS) for acid fast bacilli (AFB) was not done. In absence of sensory/ motor deficit, diagnosis of leprosy can be confirmed by SSS or skin biopsy. This suggests a lack of awareness about role of SSS and biopsy in diagnosis of leprosy at primary care level.

Mahajan et al (2007) reported 23 patients' clinical profile of cutaneous sarcoidosis. Most of the patients had combination of asymptomatic papules, nodules, plaques and psoriasiform lesions and one patient had erythema nodosum like lesions. Such features prompt diagnosis of leprosy which is much more common as compared to sarcoidosis.

Conclusion

Leprosy and Sarcoidosis are great imitators. Both share similar cutaneous clinical features in terms of asymptomatic, long standing erythematous papules, nodules and plaques. The case discussed here represents overdiagnosis of leprosy at peripheral level. The diagnosis of sarcoidosis is missed because of its rarity and lack of knowledge about its varied presentation. Greater awareness about about cardinal features of leprosy and its diverse manifestations mimicking other dermatologic conditions will help us in preventing the misdiagnosis (Reddy et al 2011). This case is being reported to highlight importance of diagnosing leprosy based on SSS/ skin biopsy in absence of neurologic findings.

References

1. Bindu Suparna M, Joshi S (2014). Cutaneous sarcoidosis: A rare case report. *Int J Med Res Health Sci.* **3(3**): 779-781.
2. Bruce T, Marc A, Richard M (2008). Sarcoidosis. In: Fitzpatrick's Dermatology in General medicine, (Gilchrest B, Goldsmith L, Katz S, Wolff K et al, eds), 7th edn, Vol II McGraw Hill, New York, pp 1484-1492.
3. Mahabal GD, Peter DC, George L et al (2021). Cutaneous sarcoidosis: a retrospective clinico-pathological study from the Indian subcontinent in patients attending a tertiary health care centre. *Indian Dermatol Online J.* **12(4):** 566-571.
4. Mahajan VK, Sharma NL, Sharma RC et al (2007). Cutaneous sarcoidosis: Clinical profile of 23 Indian patients. *Indian J Dermatol Venereol Leprol*. **73 (1**): 16-21.
5. Mathumathy R, Murugun S, Adikrishnan S et al (2020). Cutaneous sarcoidosis-A report of two intriguing cases. *J Clin Diagn Res*. **14(9):** WD01-WD03. https://doi.org/10.7860/JCDR/2020/44897.14009.
6. Reddy RR, Shashi Kumar BM, Harish MR (2011). Cutaneous sarcoidosis - a great masquerader: a report of three interesting cases. *Indian J Dermatol*. **56(5**): 568-572. https://doi: 10.4103/0019-5154.87158. PMID: 22121281; PMCID: PMC3221226.
7. Sreeja C, Priyadarshini A, Premika, Nachiammai N (2022). Sarcoidosis – A review article. *J Oral Maxillofacial Pathol.* **26(2**): 242-253.

How to cite this article : Patil RS, Marfatia YS, Menon D et al (2024). Cutaneous Sarcoidosis Treated as Leprosy- A Case Report. *Indian J Lepr.* **96**: 343-347.