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Clinical Image

An Adult Male with Multiple Skin Lesions

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Abstract:

Leishmaniasis, caused by Leishmania spp. and transmitted by infected female phlebotomine sandflies, manifests in various forms. These include visceral, cutaneous, and post-kala-azar dermal leishmaniasis (PKDL). The World Health Organisation (WHO) has officially validated Bangladesh as the first country to eliminate visceral leishmaniasis. However, sustaining this achievement is challenging if PKDL cases remain unchecked because PKDL patients act as human reservoirs. Here, we depict a case of PKDL with mixed skin lesions involving the face and multiple body parts. We hope this will raise a concern among us to be vigilant for such cases and maintain the success of eliminating visceral leishmaniasis.

Keywords: *Leishmaniasis, PKDL, neglected tropical disease, sandflies*

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Case report:

A 36-year-old normotensive, non-diabetic male from Brahmanbaria presented with multiple skin lesions at different parts of the body for the last 10 years, which had gradually increased in size. Lesions were mainly mixed. There was no history of significant fever, cough, painful skin lesions over the shin, joint pain, red eye, weight loss, anorexia, loss of sensation over lesions, or itching. His bowel and bladder habits were normal. He was diagnosed with a case of Kala-azar in his early twenties, received optimum treatment (liposomal amphotericin B), and was cured.

Examination shows his face was mildly erythematous; there were multiple nodular lesions of variable sizes on the face, ear lobules, and tongue (figure 1A), along with multiple plaques over the dorsum of the hand, flexure surface of the wrist and extensor surface of the forearm near the elbow (figure 1B-C). There was a hair loss over the plaques, and skin tethering was seen. But sweating and sensation were intact. Scratching the lesions doesn't reveal any bleeding spots. There was no organomegaly or lymphadenopathy. Examination of other systems revealed no abnormality.

Investigations show Hb 14.2 g/dL, RBC 4.49 x 10^{12}/L with normal indices and Hct, WBC 5 x 10^{9}/L with normal differential counts, and platelet count 200 x 10^{9}/L. PBF showed anisocytosis with anisochromia, but otherwise, it was normal. Renal and liver function were normal. The fasting lipid profile was within normal limits. Chest X-ray was also normal. ICT for Kalazar (rk39) was positive for IgG, but IgM was negative (10/09/2023). The patient underwent slit-skin smear multiple times, and the results are presented in Table I.

Table-1. Slit skin smear and skin biopsy results

07/09/23 (Modified ZN stain)	Sample from ear lobule, site of lesion, nasal septum	No Hansen's bacilli found
09/09/23 (Giemsa stain)	Skin lesions	No LD body was seen
23/01/22	Skin biopsy (from left forearm)	LD bodies are present

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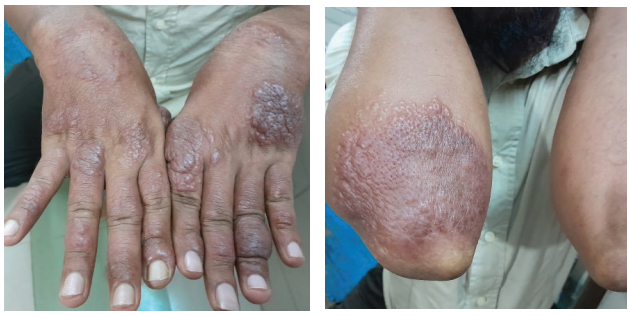

A B

Figure 1: A – Multiple plaques of various sizes and skin tethering on the dorsum of both hands. V – Large plaque with skin tethering on the dorsum of the forearm near the elbow.

With this report, the patient was diagnosed with a case of post-Kala-azar dermal leishmaniasis (PKDL). He was advised to contact The Kala-azar control program of the health ministry and started receiving oral miltefosine (50 mg BD).

After starting the treatment, the patient responded with a gradual resolution of skin lesions. Three months later, two more skin biopsies were done. Both showed a collection of lymphocytes and plasma cells, but no LD bodies were seen. The patient tolerated miltefosine therapy, and there was no history of diarrhoea.

So, this was a case of post-Kala-azar dermal leishmaniasis (PKDL) that responded to anti-leishmanial therapy.

Discussion:

Leishmaniasis significantly impacts health in many countries, including Southeast Asian countries. The number of kala-azar cases in these countries has declined steadily over the years.[4] Recently, Bangladesh achieved a historic milestone by eliminating kala-azar as a public health problem.[2]

Post-Kala-azar dermal leishmaniasis (PKDL) is a cutaneous sequela of kala-azar and has become an entity of epidemiological significance because of its ability to maintain the disease in circulation.[5] The World Health Organization reports that the majority of PKDL cases in Bangladesh are characterised by persistent, spreading macular lesions. Occasionally, accompanying papules can also appear on the face. Notably, about 10% of these cases occur in individuals with no prior record of visceral leishmaniasis.[6]

Diagnosis is done mainly on clinical grounds. Supportive investigation includes demonstrating LD bodies in lesions by slit-skin smear and culture. Immunofluorescence and immunohistochemistry may demonstrate the parasite in skin tissues. In the majority of patients, serological tests (direct agglutination test or k39 strip tests) are positive.[3]

Conclusion:

Post-Kala-azar dermal leishmaniasis (PKDL) poses a challenge to maintaining a sustained elimination of visceral leishmaniasis in our country. Early detection, notification, and proper treatment with follow-up are crucial to achieving sustained Kala-azar clearance and improving the health of our community.

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