Case Report

Syphilis cornee mimicking lichen planus clinically and histologically

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Abstract

Palmoplantar lesions of secondary syphilis are often termed "syphilis cornee." A 32-year-old male presented with itchy lichenoid papules on both soles and left palm associated with grayish white papules on the buccal mucosa and glans penis. Initial clinical diagnosis of palmoplantar lichen planus with mucosal involvement was supported by the histopathological finding of interface dermatitis. However, more detailed history, serological tests of syphilis, and review of histopathological findings led us to revise the diagnosis as syphilis cornee. This case highlights the uncommon presentation of syphilis cornee as pruritic palmoplantar lichenoid papules with histology showing interface dermatitis. A high index of clinical suspicion of secondary syphilis is needed as its manifestations are often deceptive.

Key words: Lichen planus, palmoplantar lesions, syphilis

INTRODUCTION

Many sexually transmitted infection clinics in India have shown an increasing trend in the reporting of syphilis.[1] Data from United States also show that the rate of primary and secondary syphilis has been steadily increasing from the year 2001. The rate was 8.7 cases per 100,000 population in 2016 – compared to 2.1 cases/100,000 population in 2001.[2] Secondary syphilis is a great imitator with diverse clinical presentations and histologic patterns. The bizarre manifestations of the disease coupled with inconsistent serological tests, especially when there is coinfection with HIV, are likely to increase the importance of dermatopathological correlation in the diagnosis of syphilis.[3]

CASE REPORT

A 32-year-old married male presented with multiple itchy lichenoid scaly papules on both soles of 2 weeks' duration. Dermatological examination revealed multiple hyperpigmented lichenoid and keratotic papules, a few of them scaly, on the medial border and instep of both soles [Figure 1a and b] and thenar aspect of left palm. He also had few grayish white papules on left retromolar region as well as on glans penis. He did not have lymphadenopathy. Systemic examination was normal. A clinical diagnosis of palmoplantar lichen planus with mucosal involvement was considered.

In view of the unusual localization of lesions to the palms and soles, a skin biopsy was done from the lesion on the sole with a provisional diagnosis of lichen planus. Histopathology showed interface dermatitis with hyperkeratosis, focal hypergranulosis, mild acanthosis, and saw-toothing of rete ridges with basal cell degeneration. Upper dermis showed dense band-like infiltrate composed of lymphocytes

Access this article online

Quick Response Code:

Website: www.ijstd.org

DOI: 10.4103/ijstd.IJSTD_15_18

How to cite this article: Ambooken B, Asokan N, Jisha KT, Ninan L. Syphilis cornee mimicking lichen planus clinically and histologically. Indian J Sex Transm Dis 2018;39:130-2.

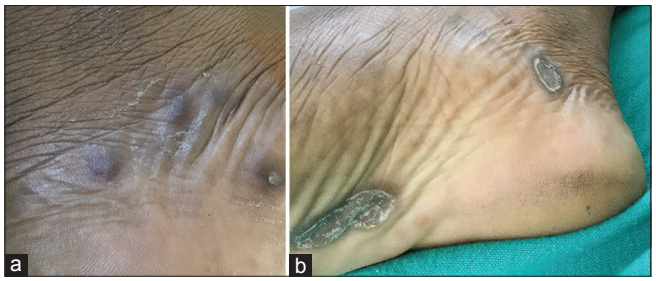

Figure 1: (a) Lichenoid papules on the instep of left foot. (b) Two hyperpigmented plaques with collarette of scale on the right sole

suggestive of lichen planus [Figure 2a]. One week later, when he came for follow-up, morphology of some of the lesions made us suspect syphilis cornee. On probing further, he gave history of multiple extramarital unprotected homosexual exposures. Dark ground microscopy for treponema pallidum from the cutaneous and mucosal lesions was negative. Venereal disease research laboratory (VDRL) test was reactive in 1:32 dilution and treponema pallidum hemagglutination test was positive. Serological tests for HIV 1 and 2 and hepatitis B and C were negative. Hemogram, urine analysis and liver and renal function tests were normal. In view of the positive serological tests, the histopathology slide was reviewed. It revealed additional findings of vascular endothelial proliferation in the upper and mid dermis with perivascular lymphocytes having ample cytoplasm and numerous plasma cells [Figure 2b].

A final diagnosis of secondary syphilis was made. He was treated with doxycycline 100 mg twice daily for 2 weeks, as he gave history of previous allergy to penicillin. Within 2 months, the cutaneous and mucosal lesions had subsided completely, and his VDRL became nonreactive by the end of 1 year.

DISCUSSION

Palmoplantar lesions of secondary syphilis are often termed "syphilis cornee." Usually, they present as asymptomatic keratotic papules in association with other classical mucocutaneous lesions of secondary syphilis. Biopsy from plamoplantar lesions is rarely done. In our case, the pruritic nature of the plantar lesions, exclusive localization of the lesions to palms and soles, along with white lesions on the oral and genital mucosa, suggested an initial diagnosis of lichen planus which was further supported by the histopathological report of interface dermatitis. However, more detailed history taking, serological tests of syphilis, and a review of histopathology slides led to the diagnosis of syphilis cornee.

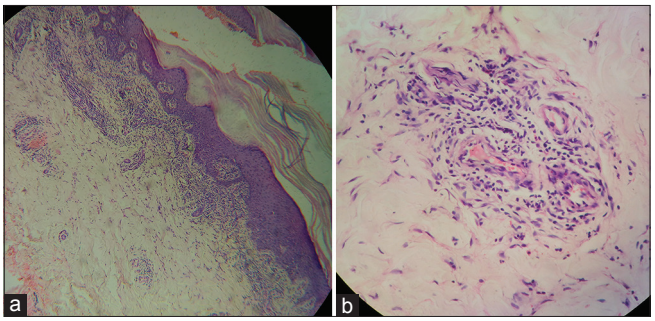

Figure 2: (a) Epidermis showing focal hypergranulosis, mild acanthosis, basal cell degeneration, and dermis showing band-like inflammatory infiltrate (H and E, ×100). (b) Endothelial proliferation with perivascular lymphocytes having abundant cytoplasm and numerous plasma cells in the dermis (H and E, ×400)

Lichenoid eruptions in secondary syphilis have been reported from prepenicillin era. As arsenicals were the drug of choice in those days, it was assumed that they were the cause of the lichenoid lesions.[4] Even after penicillin replaced arsenicals, lichenoid histologic changes were observed. In 1974, Lochner and Pomeranz delineated the entity of lichenoid syphilis.[5]

Histopathological findings of secondary syphilis are diverse and include psoriasiform and lichenoid patterns. It can exhibit a wide spectrum, from interface dermatitis to granulomatous disease.[6,7] In a recent study of histology of syphilis by Flamm *et al*., the most common features noticed were interstitial inflammatory infiltrate, endothelial swelling, irregular acanthosis, and elongation of rete ridges.[8] Lichenoid pattern was observed in 23% of cases. Inflammatory infiltrate was composed of plasma cells in 68.9% and lymphocytes with ample cytoplasm in 58% of cases. In the present case, when the initial diagnosis of interface dermatitis was reviewed, the diagnostic findings of endothelial swelling and plasma cell infiltrate were identified.

There have been case reports of palmoplantar syphilis being mistaken as psoriasis.[9,10] An interesting feature of our case is the exclusive localization of the pruritic lichenoid lesions on the palms and soles which later evolved into typical lesions of syphilis cornee. Thus, lichenoid histology in palmoplantar lesions needs to be viewed with caution and it warrants a thorough search for other classical features of syphilis such as endothelial swelling and plasma cell infiltration. As we are witnessing a resurgence of syphilis, a high index of suspicion is needed as its clinical and histological manifestations can be diverse and sometimes misleading.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Shah BJ, Karia DR, Pawara CL. Syphilis: Is it making resurgence? Indian J Sex Transm Dis 2015;36:178-81.
2. Centers for Disease Control and Prevention. Division of STD Prevention. Sexually Transmitted Disease Surveillance, 2016; September, 2017. Available from: https://www.cdc.gov/std/stats16/CDC_2016_STDS_Report-for508WebSep21_2017_1644.pdf. [Last accessed on 2018 Mar 24].
3. Hicks CB, Benson PM, Lupton GP, Tramont EC. Seronegative secondary syphilis in a patient infected with the human immunodeficiency virus (HIV) with kaposi sarcoma. A diagnostic dilemma. Ann Intern Med 1987;107:492-5.
4. Ahlswede E. Arsphenamine eruptions resembling lichen planus. Arch Dermatol Syphilol 1924;9:479-81. Cited by Khurana A, Singal A, Gupta S. Annular lichenoid syphilis: A rare entity. Indian J Sex Transm Dis 2014;35:146-8.
5. Lochner JC, Pomeranz JR. Lichenoid secondary syphilis. Arch Dermatol 1974;109:81-3.
6. Jeerapaet P, Ackerman AB. Histologic patterns of secondary syphilis. Arch Dermatol 1973;107:373-7.
7. Alessi E, Innocenti M, Ragusa G. Secondary syphilis. Clinical morphology and histopathology. Am J Dermatopathol 1983;5:11-7.
8. Flamm A, Parikh K, Xie Q, Kwon EJ, Elston DM. Histologic features of secondary syphilis: A multicenter retrospective review. J Am Acad Dermatol 2015;73:1025-30.
9. Bittencourt Mde J, Brito AC, Nascimento BA, Carvalho AH, Nascimento MD. A case of secondary syphilis mimicking palmoplantar psoriasis in HIV infected patient. An Bras Dermatol 2015;90:216-9.
10. Solak B, Kara RO, Erdem T. Palmoplantar syphilis misdiagnosed and treated as palmoplantar psoriasis for 2 years. J Family Med Prim Care 2016;5:506.