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Case Report

Uncommon Primary Syphilis Presentation as Oral Mucosal Ulcer

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A B S T R A C T

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Case Report

A 57-year-old male presented with a painless, non-healing ulcer in the oral mucosa and a scaly red lesion on his leg for the past two months. The lesions did not respond to over-the-counter hydrocortisone. He denied a past medical history of sexually transmitted infections, illicit drug use, sick contact, recent travel, and unsafe behavior. Physical examination revealed a 3 cm non-tender, edematous, erosive plaque on the labial mucosa of the lower lip and solitary scaly red plaque on the right tibia **(Figure 1)**. The patient had poor dentition; there was no cervical lymphadenopathy. There was no lesion on the palms, soles, or genitalia. He was afebrile and otherwise asymptomatic. A trial course of oral cephalexin prescribed by his primary care physician did not improve the lesion. A punch biopsy of the oral and leg lesions revealed a dense dermal inflammatory infiltrate with lymphocytes and plasma cells **(Figure 2).** Sequentially, immunohistochemical staining was performed which identified numerous spirochetes **(Figure 3).** Rapid plasma reagent (RPR) serologic testing was positive. Additional screening for human immunodeficiency virus (HIV) and other sexually transmitted infections was negative. The clinical and laboratory findings confirmed the diagnosis of primary syphilis. The patient was treated with benzathine penicillin G which led to the resolution of his lesions.

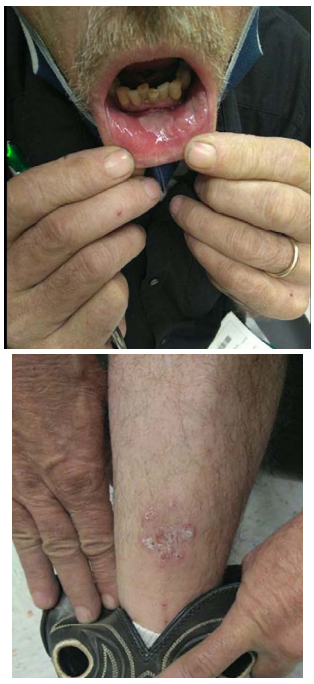

Figure 1. Physical exam revealing a 3 cm non-tender, edematous, erosive plaque on the labial mucosa of the lower lip (1a) and solitary scaly red plaque right tibia (1b).

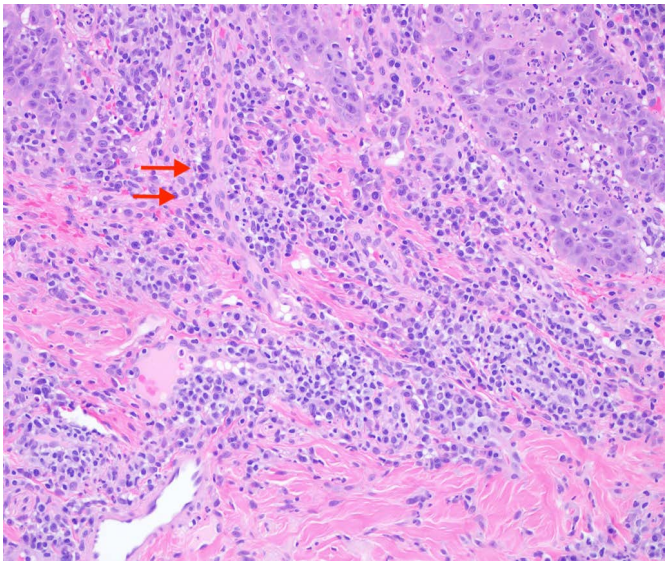

Figure 2. Histology of the punch biopsy of the oral lesion and the plaque on the leg revealing a dense dermal inflammatory infiltrate with lymphocytes and numerous plasma cells on hematoxylin and eosin stain.

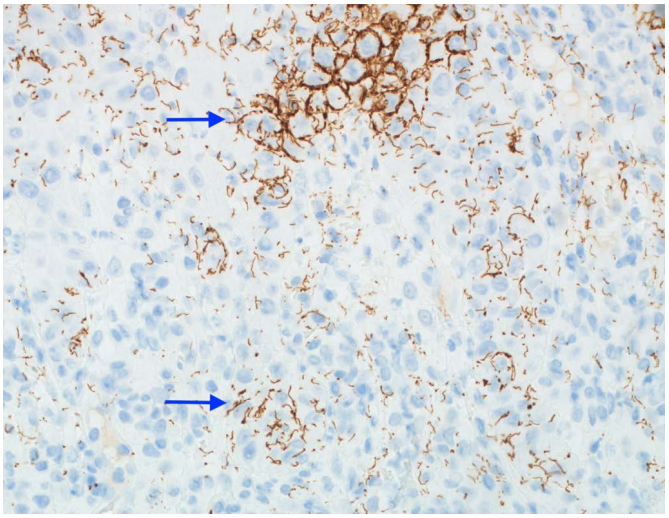

Figure 3. Immunohistochemical staining for Treponema pallidum which identified numerous spirochetes.

Discussion

The classic presentation of syphilis consists of primary syphilis, which presents with a painless chancre occurring about 21 days after exposure[1,2]. Clinical features of syphilis can be very diverse, making it the "great imitator" and patients most commonly present during the secondary stage of syphilis with papulosquamous rash involving the trunk or reddish- or copper-colored macules on the palms and soles[2-4]. Chancre of primary syphilis most commonly occurs in the genital area as a painless papule that ulcerates and regional lymphadenopathy is often present[4,5]. Infrequently, only 4 % of cases of chancres occur in the oral cavity[6]. We believe the oral mucosal lesion of our patient was a chancre of primary syphilis rather than secondary syphilis based on history and timing of exposure.

Multiple chancres can occur when co-infected with HIV[1,5,7]. Chancres typically resolve within 6 weeks with or without treatment[1,8]. Compared to the low infectious transmission rate of late latent lesions, primary lesions have as high as 30% transmission rate and are considered highly contagious[2]. This unusual presentation of primary syphilis can contribute to the delay in clinical diagnosis. Serologic testing is the most common method for screening and diagnosing syphilis[1,2,6]. It is essential to consider the diagnosis of syphilis when histopathological findings consist of numerous plasma cells[4]. Immunohistochemistry confirmatory testing for syphilis detection is commonly used, however, it is costly. Benzathine penicillin is the mainstay choice of treatment for all stages of syphilis[1-3]. Early manifestations are treated with a single 2.4 million-unit dose of intramuscular benzathine penicillin, however, late latent or tertiary syphilis is required weekly treatment for three weeks[1,4]. Moreover, neurosyphilis is treated hourly, and penicillin-allergic patients must be desensitized[1,4]. Doxycycline or azithromycin can be used as an alternative treatment for patients with penicillin allergy[4,5]. Jarich- Herxheimer reaction (JHR) from early treatment should be anticipated and not be mistaken for penicillin allergy[1,5,9]. JHR can present with fever, headache, and hypotension; treatment is supportive care[1,9]. Moreover, after initial treatment, laboratory testing should be assessed frequently to ensure appropriate outcomes such as 4 fold decrease in RPR titer, and seroconversion by 36 months[5].

Primary syphilis classically presents as a painless papule that ulcerates in the genital area, however, uncommonly it may present in other body parts including mucosal lesions. To not delay the diagnosis and treatment of syphilis, clinicians should have a high suspicion of primary syphilis based on history and timing of exposure as well as uncommon clinical presentation.

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Conflicts of Interest: None

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