

Syphilitic chancre of the lower lip

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Dear Editor,

Syphilis is a chronic infectious disease usually caused by spirochete *Treponema pallidum*. Nowadays, it is estimated that there are more than 11 million new cases of syphilis in the world every year, and more than 90% of the cases are in developing countries¹. Syphilis re-emerges mainly in men who have sex with

men(MSM)in high-income countries. In contrast, it is an endemic disease in low-income countries. Although its mortality rate decreases, its varied clinical manifestations are likely to lead to misdiagnosis or delayed diagnosis, especially when the primary lesions occur in the extragenital regions. *Treponema pallidum* usually enters the human body through microlesions in the skin or mucous membrane. The typical primary painless ulcerative lesion, which is called a chancre, often develops at the site of inoculation within 10 to 90 days after unprotected sexual intercourse.

Here we report a 26-year-old man presented to the dermatology department with a painless ulcer on the midline of his lower lip for 3 weeks (Fig. 1). The isosceles triangular ulcer is measured 1.3cm in waist length, 0.7cm in base length with a smooth, clean base and indurated, elevated borders, which was slightly bleeding. The patient announced not any other lesion on his trunk or limbs. He initially visited a clinic and was prescribed mupirocin ointment. He used the ointment for a week and went to another clinic due to no significant improvement of the ulcer. This time he applied acyclovir cream. After two weeks, the ulcer had not improved. The patient claimed to have had unprotected orogenital sex with two women in two months. He declared he had not any prior sexually transmitted infection. Physical examination showed no remarkable signs on the trunk, limbs, especially genitals or anus. Peripheral lymphadenopathy was not revealed clearly. Toluidine red unheated serum testing was positive with a titer of 1:16, in the meantime *treponema pallidum* particle agglutination assay was positive. He tested negative for human immunodeficiency virus. The situation of those women was unclear because he had been out of touch with them. The patient was treated with benzathine penicillin (2.4 million) once a week for 3 consecutive weeks. The lesion was undetectable completely after 4 weeks (Fig. 2).



Figure 1 The lower lip ulcer before treatment.



Figure 2 The ulcer on the lower lip disappeared after treatment.

Diagnosis of syphilis remains an intractable problem to clinicians because of its multiple features in morphology. The majority of chancres locate in the genital area. A chancre is a painless, clean, solitary, and indurated erosion in general. Nevertheless, the symptoms and appearances of primary lesions may vary, such as in other sites, with disparate size, amount, depth, shape, or manifest as mucous patches²⁻³. Besides genitals, the rectum, anus, oral cavity, face, eyes, and fingers are involved⁴. Extragenital chancres cover about 5%~14% of the cases⁵. The most common region is oral cavity. One article points out that the tongue is the most affected site with solitary location of oral primary syphilis⁶. However, it is widely believed that lips are the usual location infected by orogenital, oroanal contact or kissing. No matter in heterosexuals or in MSM, oral sex is prevailing. It is reported that the upper lip is the most common site among men, while the lower lip is among women possibly because of fellatio and cunnilingus⁷. But our patient was an exception. Whether it associates with his personal habits or not is unknown.

In addition, syphilis is well known as a notorious imitator of various diseases, the characteristics of which are diverse. The chancre of the lips could mimic some infectious diseases, such as herpes simplex, leishmania, tuberculosis, ulcers caused by Epstein Barr virus or cytomegalovirus; and some non-infectious diseases, just like fixed drug eruption, lichen planus, plasma cell cheilitis, squamous cell carcinoma, Behcet disease, and trauma³. When a chancre occurs in the lips or in other regions except genitals, it is difficult to diagnose accurately and without delay.

This case highlights that complete dermatological examination and laboratory inspection are crucial to making an appropriate diagnosis particularly when the initial treatment is ineffective.

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AUTHOR CONTRIBUTIONS

Lingyi Zhao and Yao Ni: Writing-original draft; writing-review & editing.

Jingying Sun: Data collection.

Janzhou Ye: Supervision.

Lingyi Zhao and Yao Ni contributed equally to this work

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study. Data sharing does not apply to this article as no new data were created or analyzed in this study.

ETHICS STATEMENT

The patient has consented to publish this information.



