ORAL TERTIARY SYPHILIS : A CASE REPORT

Abstract
Currently, tertiary syphilis is very rarely seen. This paper describes a case of benign tertiary syphilis. The lesion appears as a solitary hypertrophic lesion on the dorsum of the tongue. The oral aspects of tertiary syphilis and the importance of considering this pathologic entity in the differential diagnosis of oral lesions are highlighted.

Keywords: Spirochetes – Treponema pallidum - tertiary syphilis.

Résumé
Actuellement, la syphilis tertiaire est très rarement observée. Cet article décrit un cas de syphilis tertiaire bénin. La lésion apparaît comme une lésion hypertrophique solitaire sur le dos de la langue. Les caractères oraux de la syphilis tertiaire et l'importance d'envisager cette entité pathologique dans le diagnostic différentiel des lésions buccales sont mis en évidence.


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Introduction

Syphilis is a sexually transmitted disease (STD) produced by Treponema pallidum, a microaerophilic spirochete which mainly infects humans [1]. This infection can also be transmitted in utero, and rarely by blood transfusion or non-sexual contact [2].

Syphilis has two main clinical stages: early and late. Early or infectious syphilis (recently acquired, or of less than two years’ duration) is the more contagious stage, and includes the primary and secondary forms and the early latent period [3]. In tertiary syphilis, which is extremely rare, manifestations may take up to 10 years to appear and then present themselves as benign tertiary (gummatous lesions), cardiovascular syphilis, or neurosyphilis [4].

Fortunately, manifestations of tertiary syphilis have become rare due to the development of programs that control sexually transmitted diseases and the inadvertent therapy with antibiotics administered for other pathologic conditions.

In this report, we describe a case of benign tertiary syphilis represented by a solitary lesion of the tongue.

Case Presentation

A 65-year-old lady was referred to the Department of Oral Medicine & Radiology for the evaluation of a solitary painless ulcer on the dorsum of tongue from the Department of Venerology, Medical College, Trivandrum, Kerala.

Her medical history was uneventful. She had increased salivation for the past 5 years.

Her husband died 17 years ago. She had 4 healthy children.

The clinical examination didn’t reveal any active skin or genital lesion. She had a solitary painless, 2x2cm well-defined ulcer in the middle of dorsum of tongue (Fig. 1) with a pale granulation tissue at the base. There was no fluid exudation on pressure.

Cervical and generalized lymphadenopathy was not detected.

Subsequent hematological, serological and histopathological investigations were carried out. Hematological examinations were within normal limits. Blood serologic tests for syphilis (STS) showed positivity in 1 of 32 dilutions. Treponema pallidum haemagglutination (TPHA) test was positive; hepatitis B surface antigen (HBsAg) and the enzyme-linked immunosorbent assay (ELISA) were negative.

Histopathological examination revealed only a chronic nonspecific inflammation (Fig. 2).

Based on the results of serological examination, the patient was diagnosed as having a gummatous ulcer on the tongue and was put on penicillin therapy as intramuscular injection – PP 12 lakh units daily for 12 consecutive days. A resolution of the lesion was noticed 2 weeks after the initiation of the penicillin therapy and blood STS became non-reactive after 3 months.

Discussion

Infective syphilis is caused by the spirochete Treponema pallidum. Transmission occurs via close contact with an infected lesion, which usually occurs on the genitals.

Following contact, Treponema pallidum penetrates the genital or oral mucosa, multiplies at this site of entry, and systemically spreads via the lymphatics and blood. After an average incubation period of up to 90 days, a chancre develops at the site of inoculation. These ulcers may be solitary or multiple, and generally heal spontaneously within 3–8 weeks.

Syphilis gives rise to a wide spectrum of orofacial manifestations [5-7]. However the exclusive oral localization, not associated with general manifestations, is uncommon [8]. The various orofacial manifestations of the different stages of syphilis are shown in table 1 [9].

Gummas tend to arise on the hard palate and tongue, although very rare, they may occur on the soft palate, lower alveolus and parotid gland.

The signs and symptoms of primary and secondary syphilis resolve spontaneously. Patients enter then the latent stage of infection [10, 11]. Manifestations of tertiary syphilis may appear after several years of non-treatment with cardiovascular and neurologic involvements including severe manifestation of general paresis and aneurysm of aorta.

Benign tertiary syphilis is characterized by the tissue immunological reaction that leads to a specific lesion designed as gumma. These lesions are destructive granulomatous inflammation that may develop in any organ [4]. In the present case, the lesion observed on the dorsal surface of the tongue was a “gummatous inflammation” of tertiary syphilis.

Conclusive diagnosis of syphilis infection is based on confirmation of
the clinical signs and symptoms with laboratory tests [11]. *Treponema pallidum* can be identified in lesions by dark field microscopy or direct immunofluorescence, but usually serological confirmation is necessary [12].

The diagnostic serologic tests for syphilis include tests that detect antibodies to non-specific treponemal antigens - the Rapid Plasma Reagin (RPR), Venereal Disease Research Laboratory tests (VDRL) and tests that detect antibodies specific to *Treponema pallidum* – the Treponema pallidum haemagglutination assay (TPHA) and fluorescent treponema antibodies absorbed assay (FTA-Abs).

The non-specific antibody tests are inexpensive, rapid screening tools and markers of disease activity. The specific tests are more sensitive than the non-specific assay. FTA-Abs detects antibodies to *Treponema pallidum* in the early stages of infection [12, 13]. In the secondary stage, microorganisms may be detected by special silver impregnation techniques and direct fluorescent antibody testing.

Meyer and Shklar reported the features of primary and secondary syphilis to be essentially non-specific and the tertiary lesion to be the most obviously granulomatous and populated by Langhans-type giant cells [14]. The histo-pathologic features in the primary lesions consist of an ulcerated epithelium. The underlying connective tissue may show moderate vascularity with intense chronic inflammatory cell infiltration, predominantly lymphocytes and plasma cells with perivascular pattern. In secondary syphilis, the features include hyperplastic epithelium and the connective tissue shows perivascular infiltration with chronic inflammatory cells. In tertiary lesions, ulcerated epithelium with inflammation of connective tissue and foci of granulomatous inflammation with histiocytes and giant cells are noticed [14-16].

Features of c/c granulomatous inflammation without significant necrosis are typical of early nodular lesions of tertiary syphilis and the sparse numbers of plasma cells can mask the diagnosis [17]. Tertiary lesions are only sparsely populated with spirochetes [18]. Easy, consistent and reliable identification of *Treponema pallidum*, however remains problematic.

**Conclusion**

Syphilis is an infectious disease presenting stages associated with specific oral lesions. Therefore, health professionals should be familiar with the different syphilis oral manifestations at each stage and be prepared to refer any suspected patient for further evaluation.
References


