


Secondary Oral Syphilis: literary review and case reports

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Abstract:

Syphilis is a sexually transmitted systemic disease that is on epidemic conditions in Brazilian territory in recent years. The decline in the use of barrier contraceptive methods, a high number of sexual partners, misinformation and a decrease in the fear of young people towards sexually transmitted diseases, due to the greater current longevity of HIV-positive patients, are some of the possible justifications for the expressive increase of the cases. The discovery of acquired syphilis usually occurs in its secondary phase with manifestations in areas of mucosa and skin, and the oral cavity is frequently affected, with prominent regions of the tongue, lips and palate. The dental surgeon plays a key role in the early diagnosis of syphilis, since oral manifestations are relatively common, especially in its second phase. In this work we present two cases of acquired syphilis with oral manifestations which diagnoses were conducted by dentists.

Keywords: Bacterial Infections, Sexually Transmitted Diseases, *Treponema pallidum*

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INTRODUCTION

Syphilis is a sexually transmitted systemic disease caused by the anaerobic spirochete bacterium *Treponema pallidum*. This microorganism mainly affects humans and can invade virtually any organ of the body with complex clinical implications.^{1,2,3,4}

There are two types of syphilis: congenital, transmitted vertically by transplacental dissemination which prevention can and should be done during prenatal examinations, and the acquired, which transmission occurs through sexual pathways.^{3,4}

The clinical manifestations of acquired syphilis, based on their phases of activity and infectivity, are classified into three stages: primary, secondary and tertiary, which have important clinical and public health implications.^{5,6} The first stage of syphilis is characterized by the primary complex, including single ulceration at the site of bacterial inoculation with a hardened margin combined with ipsilateral lymphadenopathy.^{7,3} It is important to note that although the main site of inoculation is the genital organs in general, extragenital areas such as the anus and oral cavity are also affected.^{8,9}

Secondary syphilis represents the stage where the clinical diagnosis of the disease most commonly occurs and usually presents as a generalized, symmetrical eruption involving the entire trunk and extremities including the palms of the hands and soles of the feet. The two main oral characteristics of secondary syphilis are mucosal plaques and maculopapular lesions.^{10,3,11,1} Tertiary syphilis is characterized by three main manifestations: granulomatous syphilis, neuro-syphilis and cardiovascular syphilis.¹² Syphilitic gum is a painless granulomatous lesion usually located on the skin, bone, and liver.^{13,8} In addition, the literature mentions a latent stage, which comprises the time interval after infection by *Treponema pallidum*, characterized by serum reactivity and no other evidence of the disease.^{9,14}

The diagnosis of syphilis is based on laboratory tests that are necessary according to clinical suspicion and are basically divided into treponemal tests that use the bacteria that causes the disease as an antigen, such as indirect immunofluorescence (FTA-abs - Fluorescent Treponemal Antibody absorption).¹⁵ Non-treponemal tests, which detect antibodies that are not specific to *Treponema pallidum*, such as the VDRL (Venereal Disease Research Laboratory).^{16,4}

Although the treatment varies with the route of administration, duration and dosage of the drug, it is usually done with the antibiotic penicillin, regardless of

which stage of the disease the patient is in.^{17,18} Usually penicillin G benzathine or penicillin G procaine are the choices for treatment and are highly effective.^{17,16,8}

As a very common disease for centuries, the introduction of penicillin therapy and prevention campaigns have made syphilis a rare disease.^{19,16} In recent years, despite the introduction of established and standardized treatment protocols, there has been a dramatic resurgence of this disease in several countries, including Brazil with recent outbreaks.^{3,8} Considering the oral manifestations of acquired syphilis, the dental surgeon must be aware of the oral manifestations that the disease may have, acting in an earlier diagnosis.

The objective of this study is to report two cases of acquired syphilis with oral manifestations diagnosed by the dental surgeon.

CASE REPORT

Case 1: Patient WRS, feoderma, male, 20 years old, attended the dental emergency of a university with complaints of gingival lesions clinically compatible with necrotizing ulcerative gingivitis (NUG). In addition to the marginal gingivae, there were erythematous and whitish lesions on the tongue and upper and lower lips with approximately 21 days of onset (Figure 1A, 1B, 1C and 1D - we should show NUG + tongue and lip lesions in this figure). For treatment of the NUG, irrigation was performed with hydrogen peroxide and periodontal scraping, as well as guidelines for adequate personal hygiene and prescribed analgesics. Still to relieve painful oral erosions, mouthwashes with 0.5 mg / 5 ml beta-methasone elixir were prescribed twice daily. To better investigate oral erosions, the patient was referred to the stomatology outpatient clinic of the same institution. After a week, the patient attended the stomatology clinic with great improvement of the gingival frame, but with multiple white plaques irradiated at the lateral borders of the tongue compatible with mucosal plaques, as well as erythematous and whitish lesions on the upper and lower lips. In detailed anamnesis, the patient reported being a smoker (10 cigarettes per day), a social drinker and cocaine and marijuana user. He denied the use of injectable drugs and mentioned sexual intercourse without the use of condoms, even though he denied the presence of any genital lesions. Based on anamnesis and physical examination, the diagnosis was based on oral manifestations of secondary syphilis. Anti - HIV I / II, VDRL, FTA Abs - IgG and IgM serological tests were requested for syphilis and mononucleosis. The patient



Figure 1A. Clinical aspect of Necrotizing Ulcerative Gingivitis that motivated the search for treatment by the patient.



Figure 1D. Left lateral border of the tongue showing white lesion with irradiated appearance.



Figure 1B. Upper right upper lip showing "Mucous Plate" lesion.



Figure 1C. Bilateral lesions on the lower lip suggesting aspects of "Mucous Plates".

returned to the clinic after seven days with the result of the serological tests showing non-reactive Anti HIV I / II, non-reactive mononucleosis, IgG reagent syphilis and VDRL 1/128, confirming the hypothesis of secondary syphilis. The patient was then promptly scheduled at the outpatient clinic for infectious diseases of the same university, with spontaneous remission of oral lesions and absence of genital lesions. The treatment was Penicillin G Benzathine - 2.4 million IU, IM, single dose (1.2 million IU in each gluteus) and Doxycycline 100 mg, 2x / day, for 15 days. After 2 years, the patient is free of any injuries and in good general health.

Case 2: Patient JAS, feoderrma, male gender, 48 years old, was referred to the university's stomatology diagnosis clinic by a private dental surgeon due to the presence of painful and whitish lesions on the palate and lower labial mucosa. The anamnesis showed that the patient was a smoker for 20 years and had heterosexual and homosexual intercourse without the use of condoms, culminating in the diagnosis of HIV 2 years ago. Oroscopy showed white plaques on the palate that were not detachable from scaling associated with probable petechiae. The tongue showed central misalignment and whitish areas present. The labial commissures showed ulcerations compatible with angular cheilitis and the lower labial mucosa had white plaques similar to the mucosal plaque (Figure 2A, 2B and 2C - photo of the palate, tongue, lower lip and labial commissure). Upon questioning, the patient still claimed to have had ulcerations in the scrotum that had already disappeared. The hypothesis of a proposed clinical diagnosis was secondary syphilis and association with oral candidiasis. Thus, laboratory



Figure 2A. Diffuse white plaques interspersed with erythematous areas, especially on the hard palate.



Figure 2B. Diffuse white lesions on the vermilion of the lower lip suggesting "Mucous Plates".

tests were requested: VDRL, FTA Abs - IgG and IgM for syphilis, Anti HbC, Anti HCM IgG, Anti HCM IgM, IgM toxoplasmosis. After one week the patient returned with the result of the tests presenting VDRL 1 / 512 and IgG reagent for syphilis. The patient was referred to the same clinic of infectious diseases of the institution and the treatment was Penicillin G Benzathine - 2.4 million IU, IM, single dose (1.2 million IU in each gluteus) and Doxycycline 100 mg, 2x / day, for 15 days. After one year, the patient is in good general health and with complete remission of the lesions.

DISCUSSION

Syphilis is an infectious disease that is on epidemic conditions in the Brazilian territory in recent years.²⁰ There are a number of reasons why the recent large increase in this disease, such as the increased survival of HIV-positive patients, reduced young people's fear of



Figure 2C. Lingual detachment and whitish corrugated area on the back of the tongue.

sexually transmitted diseases; the advent of a generalized behavioral freedom, being responsible for a greater number of sexual partners, ignorance especially of the younger population, increased use of drugs such as crack and so on.²¹ The disease has spread and has become a challenge to national public health.

The discovery of acquired syphilis does not usually occur in its primary phase, characterized by the manifestation of a chancre that persists for about 14 days, but in its secondary variant, where the microorganism *Treponema pallidum* diffuses through the hematogenous pathways, determining several mucocutaneous manifestations that persist for longer, even staying for about 4 weeks.^{11,3,1} The two cases presented here consist of cases of acquired syphilis present in individuals with promiscuous sexual activity and diagnosed in their secondary phase.

Oral manifestations of syphilis occur in approximately 30% of patients with secondary syphilis, although oral lesions may very rarely be the only manifestations of the infection.^{22,10} The oral sites most commonly affected

by the disease are tongue, lips, mucosa and palate and the clinical expression of the “mucous plaques” type characterized by whitish and sensitive lesions with focal areas of exocytosis and spongiosis of the involved mucosa consists in the oral manifestation most frequently found. It is worth mentioning the varied symptomatology that accompanies mucocutaneous lesions, such as lymphadenopathy, fever, malaise, weight loss and etc.^{3,23} The syphilitic individuals of the presented cases complained of burning sensation and oral sensitivity in the areas affected by syphilitic lesions, such as the lower lip, tongue and palate.

The tertiary variant of syphilitic disease is fortunately the rarest to occur, because the diagnosis and treatment usually occur in previous stages (primary and secondary), avoiding this worsening of the disease. The role of the dental surgeon is fundamental as the health professional who has the most knowledge of the oral cavity and thus can identify the oral manifestations of the disease, regardless of the stage, allowing an adequate diagnosis.²¹ It is of fundamental importance that dentists know well the possibilities of oral manifestations of syphilis and conduct a good anamnesis so that they can arrive at a correct diagnosis hypothesis. In addition to knowledge of the oral clinical expression of the disease, the dental surgeon as a health professional should know and be able to request basic laboratory tests for the diagnostic hypothesis to be investigated and confirmed, such as VDRL and serology specific for syphilis. In the above cases, the diagnosis was found by requesting laboratory tests by the dental team by identifying suspicious lesions in the oral cavity. Thanks to these professionals, the patients were referred to the infectious service and treated on time with specific antibiotics avoiding the worsening of the disease and are in good general health and apparently cured of the syphilitic infection.

CONCLUSION

Syphilis is a worldwide infectious-contagious disease that is on a vertiginous increase in Brazil, becoming a public health problem nowadays.

Especially in the secondary stage, the oral manifestations of the disease are common and must be recognized by dental surgeons, who are responsible for mastering the lesions with oral manifestations. In addition, it is of fundamental importance that the dentist knows how to request basic laboratory tests for

diagnostic investigation of this disease, for subsequent referral to specialized medical treatment centers.

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