SECONDARY SYPHILIS BUCAL MANIFESTATIONS: CASE REPORT

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ABSTRACT

Syphilis is an infectious disease caused by treponema pallidum, which can be transmitted through the hematogenous or maternal-fetal pathways, resulting in polymorphous skin lesions. It is presented in three distinct stages, being: primary, secondary or latent and tertiary or late. Although oral manifestations of syphilis are more likely to be observed during the secondary disease, all stages of the disease can lead to oral lesions. The diagnosis of syphilis should be based on the stage of the disease and its treatment consists of antibiotic therapy. This paper aims to present a case report diagnosed at the University Dental Clinic of a patient with oral manifestations of secondary syphilis. It is essential that all dental surgeons are aware of the oral manifestations of syphilis in its different stages, so that a correct diagnosis can be made and then appropriate treatment can be made.

KEYWORDS: Syphilis, bucal manifestations, infectious diseases.

1. INTRODUCTION

The etiologic agent of syphilis is an anaerobic filamentous spirochete, *Treponema pallidum*. Since 1996 there has been a significant increase in the prevalence of syphilis in the developed world[1,2]. Most of the time this disease can be acquired through sexual contact with the partner with active lesions, although transmission may also occur through transfusion of infected blood or transplacental inoculation of the fetus by the infected mother[3,4].

The disease is divided into three different stages: primary, secondary and tertiary syphilis. Each stage has its characteristic signs and symptoms. Primary lesions appear at the site of infection and are characterized by scarring of the ulcer. Variable latency periods may occur between stages, with the risk of postponing appropriate medical treatment, or having a false idea of spontaneous resolution of the disorder. In the second and, thereafter, spirochetes can spread systemically beyond the site of the primary infection. The characteristics or signs / symptoms of oral manifestation of syphilis include ulceration, mucosal spots, maculopapular lesions, and are rare in the primary stage of the disease[2,5]. However, the increase in sexual habits with the practice of fellatio can lead to the appearance of cancer in the mouth, even in the primary stages.

When secondary syphilis is not treated or when therapy is inadequate, there is a latent period (latent syphilis) in which symptomatology disappears, causing the patient to feel cured, but the disease continues its course in the body and serology remains positive[6]. Tertiary syphilis is characterized in the mouth by chronic and destructive lesions (gum), commonly found on the hard palate and tongue. The clinical signs in this case may include nasal voice, difficulty in swallowing as a result of a buconasal communication in an extensive palate lesion[7].

Syphilis has therefore important implications that require the care of the dental surgeon. In addition to the oral manifestations, where the primary and secondary stages show a highly contagious pattern, it is possible that the disease is transmitted by direct contact with the oral lesions, saliva and blood. Thus, the dental surgeon may play an important role in the early diagnosis of this disease, allowing the patient to receive the correct treatment[8].

This study aims at the study of syphilis, seeking to explain a case report diagnosed from the oral manifestations of secondary syphilis so as to contribute to the dissemination and training of the dental surgeon so that a correct diagnosis can be made and appropriate treatment possiblev.

2. CLINICAL CASE

Patient A.S.B., male, 21 years old, presented to the Dental Clinic of the University of Paranaense with complaint of "scaling" on the labial mucosa and presence of wounds inside and outside the mouth. During the anamnesis, the patient reported painful symptoms mainly during food intake. In the medical history, the patient reported having had "chancre" for two years and had undergone medical treatment for this. In the physical examination, the presence of erythematous lesions surrounded by a whitish halo in the hard palate region (Figure 1) of the womb of the

tongue (Figure 2), and the right lower lip mucosa (Figure 3).

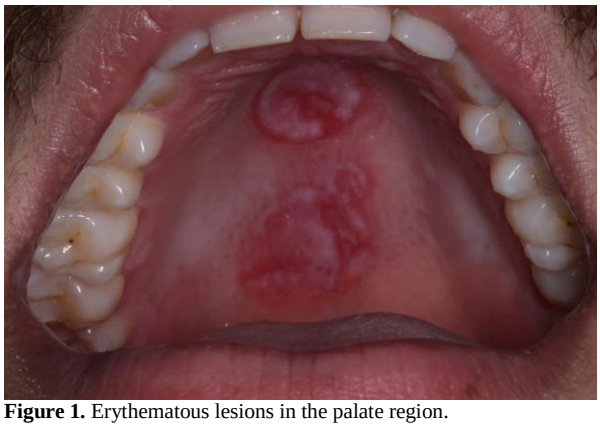

Figure 1. Erythematous lesions in the palate region.

Figure 2. Tongue lesions.

Figure 3. Labial mucosa lesion.

In view of these signs and symptoms, the diagnostic hypothesis was secondary syphilis. The patient underwent incisional biopsy and the specimen was sent for anatomopathological examination and submitted to the VDRL examination to complement the diagnosis. The results of the anatomic pathological examination were descriptive, where a fragment of palatine mucosa presenting epithelium with areas of hyperkeratosis and acanthosis was observed. The fibrous conjunctiva is found with mucous salivary glands, nerve bundles and intense chronic inflammatory infiltrate. The final diagnosis was made in association with the clinical and histological characteristics with the VDRL test, with positive result.

The patient was referred to the infectious physician, where treatment with penicillin was performed in two doses. The patient is currently preservation.

3. DISCUSSION

Syphilis presents systemic and chronic evolution, which can occur through sexual transmission and other intimate contacts. It can also be transmitted from the mother to the fetus (vertical transmission), or by the child's contact with the maternal lesions during childbirth[9,10]. Patients affected by syphilis are usually males in adulthood between the third and sixth decade of life[11].

It is estimated that in Brazil occur more than 900 thousand new cases per year, and in the world more than 12 million[12]. Because it is a pandemic disease, syphilis is an important public health problem. There is a high incidence among young people and young adults, perhaps due to greater sexual freedom, promiscuity, increased use of intravenous drugs, illegal drug exchange by sex, reduced use of contraceptive barrier methods and increasing prostitution activity. However, oral sex is the main cause of oral manifestations of syphilis[8,12,1,11].

Three clinical stages of syphilis can be recognized from the inoculation of microorganisms: primary, secondary and tertiary syphilis[12].

Primary syphilis appears 2 to 4 weeks after infection in the form of ulcer or erosion (syphilitic cancer); has a high incidence in the oral cavity reaching the tongue and lips, characterized by the appearance of deep ulcer, hardened base, raised, crateriform and painless lips. When installed on the hard palate, it shows lesion in the form of shallow ulcer of whitish background and erythematous halo around, of irregular contour without elevated edges. After 15 days, the hardened ulcer regresses spontaneously, causing the patient to believe that he is already cured[14].

Secondary syphilis appears within the next 2 to 4 weeks. Some authors report the onset of lesions within 12 weeks after exposure[15]. In the presented clinical case, the patient reported the appearance of the lesions after 24 months of chancre manifestation. At this stage, there are generalized muco-cutaneous manifestations, with generalized lymphadenopathy, malaise, fever, joint pains, headache and myalgias, and often mild pharyngitis. The most frequent lesions in the oral cavity are macules (white, irregular, slightly elevated and asymptomatic), or syphilitic roseola, which develop into infiltrates and papules the size of lentils. They may also manifest in the perioral region and, possibly, in the angles of the mouth, simulating the mouthpiece[4]. The presence of erythematous lesions surrounded by a whitish halo in the region of the hard palate, the bilateral posterior portion of the tongue, the upper and lower labial frenulum, and the lower right labial mucosa were detected in the intrabuccal physical examination of the patient in question. The literature reports that all these eruptions spontaneously involve

without sequelae even in the absence of treatment, following a period of latency, being able to remain in this state throughout life (spontaneous cure) or evolve to the late phase[16,10,6]. During the period of follow-up of the patient awaiting the results of the complementary examinations (about 20 days), the oral lesions remained unchanged.

Komeno *et al* (2018)[13] described the case of a patient with significant lymphadenopathy and syphilis manifestations in the mucosa of the oropharynx, which could pass as signs of a tonsillitis. In the case we reported, the patient at the time that sought care presented normal lymph nodes and did not report an important history of anterior lymphadenopathy.

Tertiary or late syphilis manifests 3 to 10 years after infection. At this stage granulomatous inflammations known as syphilitic gums (painless granulomatous tumors of elastic consistency and low infectivity) occur. They are preferentially located on the hard or soft palate, where those of the hard palate often lead to perforation of the palatine bone. Other regions affected are the lips, tongue and face[17].

Due to its manifestation in several parts of the body, the syphilis diagnosis has a multiprofessional nature covering different sectors and specialties, such as dentists, infectologists, nurses, neurologists, among others. Therefore, knowledge of oral manifestations at all stages should not be limited to dental surgeons, but all health professionals should be able to investigate and perform a correct diagnosis[18,7].

This diagnosis can be made in several ways: through direct microscopy in the dark field, which is performed at the moment of the consultation, direct immunofluorescence performed in the laboratory, since this method requires specific staining and a special microscope for its accomplishment, and impregnation by silver, performed after the dentist's care.

In addition to these methods mentioned above, there are serological tests that can be classified as specific or treponemic and non-specific or non-treponemic [16,10]. The specific serology is used to confirm the infection being performed through the MHA-TP tests (*Treponema pallidum hemagglutination*), FTA-ABS (*Fluorescent Treponemal Antibody Absorption*) and ELISA (*Enzyme Linked ImmunonoSorbent Assay*)[9,6]. Non-specific is used for screening and monitoring of infection through the VDRL (*Veneral Disease Research Laboratory*) or RPR (*Rapid Plasma Reagin*) being less used, although it presents execution and results similar to the VDRL[9,19].

The patient underwent incisional biopsy and the specimen was sent for anatomopathological examination. The serological test requested was VDRL, since it is the most used serology and a simple, quick and easily accessible examination for the population, being able to perform it both qualitatively and quantitatively. The VDRL can be seen as an important complementary examination since the biopsy alone may not be enough to define the diagnosis, considering that the anatomopathological examination reveals a chronic mononuclear inflammatory picture with a predominance of plasma cells, located mainly around the vessels which may aid in the diagnosis of syphilis[20].

Regardless of the stage of manifestation of the syphilis disease, the treatment consists of the use of penicillin g-benzathine in varying doses and duration; erythromycin, tetracycline or doxycycline are used as substitute for allergic patients[13,11]. Although an individual assessment is required to establish the antibiotic of choice, its dosage, posology and route of administration according to cost-effectiveness and safety[21].

More than 50% of the patients present the Jarisch-Herxeheimer reaction presenting fever, chills, myalgia and headache, which consists of an exacerbation of the anti-inflammatory response, 24 hours after the onset of antibiotic therapy, common in patients with recent syphilis. Therefore it recommends the prevention of the reaction with a single dose of corticoid[22,23,4].

A prevalence of the disease by the male sex is currently observed, especially in male patients who have sex with men, as described Komeno *et al* (2018)[13], where the patient reported having oral sex with several partners, and may also occur with women who have sexual relations with women[24]. However, patients may not always have the confidence or freedom to report details of their sex life, and the practitioner should be able to conduct anamnesis without embarrassing the patient, since many of these patients are unaware of the transmission of the disease via oral sex, and sometimes believe that it is unnecessary to pass this information on to the evaluator.

4. CONCLUSION

It is implausible that syphilis, a disease with the potential to become severe and fatal, known for more than 50 years and with laboratory tests and treatment so simple to perform, is having its diagnosis neglected. Possibly, this fact occurs because the teaching is leaving learning failures, influencing the qualification of the health professionals and those responsible for primary care not knowing the disease in its different manifestations and stages. Because its diagnosis is a challenge, because it has a multiform and polymorphic clinical pattern mimicking different diseases, it is also up to the dentist to diagnose and prevent the diseases and their manifestations that affect the mouth, since it fully studies the anatomical region. It is of fundamental importance that the diagnosis be as early as possible avoiding sequels to the patient. In addition, in view of the increasing incidence of cases in a male patient, a detailed assessment of the patient's sexual life should be conducted, with the necessary caution not to constrain the patient, but without neglecting to obtain information that may be diagnosis and delay the correct treatment of the patient.

REFERENCES

[1] Leão JC, Gueiros LA, Porter SR. Oral manifestations of syphilis. Clinics, London. 2006; 61(2):161-6.

[2] Naud P. Doenças sexualmente transmissíveis e AIDS. Porto Alegre: Artes Médicas Sul LTDA. 1993.

[3] Regezi JA, Sciubba JJ, Jordan RCK. Oral Pathology: Clinical Pathologic Correlations. 7. ed. St. Louis: Elsevier. 2017.

[4] Valente T, Scalercio M, Israel M, Ramos ME. Diagnóstico da sífilis a partir das manifestações bucais. Rev. bras. odontol. Rio de Janeiro. 2008; 65(2):159-164.

[5] Udd SD, Lund B. Oral Syphilis: A Reemerging Infection Prompting Clinicians' Alertness. Hindawi Publishing Corporation, Sweden. 2016; 1-3. Disponível em: <http://dx.doi.org/10.1155/2016/6295920>. Acesso em: 14 set. 2017.

[6] Tommasi AF. Diagnóstico em patologia bucal. 4. ed. Rio de Janeiro: Elsevier. 2014.

[7] Noronha ACC, *et al.* Sífilis Secundária: Diagnóstico a partir das Lesões Orais. DST - J bras Doenças Sex Transm, Rio de Janeiro. 2006; 18(3):190-193.

[8] Hertel M, Matter D, Schimidt-Westhausen AM, Bornstein MM. Oral Syphilis: A Series of 5 Cases. J Oral Maxillofac Surg, Germany. 2013; 1-8.

[9] Brasil. Protocolo para prevenção de transmissão vertical de HIV e sífilis. Brasília: Ministério da Saúde. 2006. Disponível em: http://www.aids.gov.br/system/tdf/pub/2006/59206/protocolobolso02web_1.pdf?file=1&type=node&id=59206&force=1.

[10] Passos MRL. Atlas de DST e Diagnóstico Diferencial. 2. ed. Rio de Janeiro: Revinter Ltda. 2012.

[11] Leuci S, Martina S, Adamo D, Ruoppo E, Santarelli A, Sorrentino R, et al. Oral Syphilis: a retrospective analysis of 12 cases and a review of the literature. Oral Diseases. 2013; 19:738–746.

[12] Paz A, Potasman I. Oral lesions as the sole presenting symptom of secondary syphilis. Elsevier Ltd., Israel. 2004; 2:37-39.

[13] Komeno Y, Ota Y, Koibuchi T, Imai Y, Lihara K, Ryu T. Secondary syphilis with tonsillar and cervical lymphadenopathy and a pulmonary lesion mimicking maligmant lymphoma. Am J Case Rep. 2018; 19:238-243.

[14] Boraks, S. Diagnóstico Bucal. 2. ed. São Paulo: Artes Médicas Ltda. 1999.

[15] Seibt CE, Munerato MC. Secondary syphilis in the oral cavity and the role of the dental surgeon in STD prevention, diagnosis and treatment: a case series study. Brazilian Journal Of Infectious Diseases, Salvador. 2016; 20(4):1-6.

[16] Passos MRL. DST, Doenças Sexualmente Transmissíveis. 4. ed. Rio de Janeiro: Cultura Médica. 1995.

[17] Ribeiro BB, Guerra LM, Galhardi WMP. Importância do reconhecimento das manifestações bucais de doenças e de condições sistêmicas pelos profissionais de saúde com atribuição de diagnóstico. Odonto 2012, São Paulo. 2011; 20(39):61-70.

[18] Gardioli DDS, Gouvea TVD, Nascimento AVS, Faria PFM, Silva IA, Silva JCS, *et al*. Sífilis Recente com Fase Papulomatosa: Quadro Clínico Típico, Diagnóstico Incorreto. Dst - J Bras Doenças Sex Transm, Rio de Janeiro. 2012; 24(2):118-121.

[19] Oliveira FL, *et al*. Manifestações Clínicas e Sorológicas Conflitantes de Sífilis em Coinfecção pelo HIV. Dst - J Bras Doenças Sex Transm, Rio de Janeiro.2011; 23(4):222-224.

[20] Barrett AW, Dorrego MV, Hodgson TA, Porter SR, Hopper C, Argiriadou AS et al. The Histopathology of syphilis of the oral mucosa. J Oral Pathol Med, London. 2004; 33:286-91.

[21] Watts PJ, Greenberg HL, Khachemoune A. Unusual primary syphilis: Presentation of a likely case with a review of the stages of acquired syphilis, its differential diagnoses, management, and current recommendations. International Journal Of Dermatology, Brooklyn. 2016; 55:714-728.

[22] Little J W. Syphilis: an update. Oral Surg. Oral Med. Oral Pathol. Oral Radiol. Endod. 2005; 100(1):3-9.

[23] Scott CM, Flint SR. Oral syphilis – re-emergence of an old disease with oral manifestations. Int. J. of Oral Maxillofac. Surg. 2005; 34(1):58-63.

[24] Campos-Outcalt D, Hurwitz S. Female-to-Female Transmission of Syphilis – A Case Report. Sex. Transm. Dis. 2006; 29(2):119-120.