Recent syphilis with oral manifestations: three case reports treated at a STD clinic

Sífilis recente com manifestação oral: relato de três casos atendidos em uma clínica de DST

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ABSTRACT

Introduction: The occurrence of sexually transmitted infections with oral manifestations, such as syphilis, remains a challenge in the era of rapid tests associated with an adequate clinical evaluation in the patients' approach. **Objective:** To describe the clinical and laboratory aspects involved, from the diagnosis to prognosis, of three case reports of recent syphilis with oral manifestations attended at a university clinic in the city of Niteroi, Rio de Janeiro, Brazil. **Case report:** Three cases of recent syphilis with oral manifestations in the tongue region. The first one, a 38-year-old female patient who presented syphilis in regions of the body other than the oral cavity (case I); the second one, a 31-year-old male patient with oral ulcerative lesions with associated genital lesion (case II); and, finally, a 49-year-old female patient suspected of oral human papillomavirus (HPV) lesions, in which syphilis was confirmed after a long path to obtain her diagnosis (case III). All cases were laboratory tested at the time of diagnosis and received appropriate treatment and guidance. **Conclusion:** It was possible to observe through the present study that some situations need attention: evaluation of the oral cavity should occur concomitantly with the investigation of genital lesions; diagnosis hypothesis of occurrence of syphilis with oral manifestation should be considered in the clinical evaluation; oral lesions may present similar clinical manifestations, suggesting investigation of their possible infectious etiology.

Keywords: oral manifestations; dentists; syphilis.

RESUMO

Introdução: A abordagem das infecções sexualmente transmissíveis com manifestações orais, tais como a sífilis, ainda permanece um desafio na era dos testes rápidos associados à adequada avaliação clínica na assistência de pacientes. **Objetivo:** Descrever os aspectos clínicos e laboratoriais envolvidos, do diagnóstico ao prognóstico, de três casos clínicos de sífilis recente com manifestações orais atendidos em uma clínica universitária do município de Niterói, estado do Rio de Janeiro. **Relato de caso:** Trata-se de três casos de sífilis recente com manifestações orais na região de língua, que ocorreram em: uma paciente do sexo feminino, 38 anos, em que as manifestações da sífilis foram observadas em outras regiões do corpo e na cavidade oral (caso I); um paciente do sexo masculino, 31 anos, que apresentava lesões ulceradas orais com lesão genital associada (caso II); e, por fim, uma paciente do sexo feminino, 49 anos, sob suspeita de infecção pelo vírus do papiloma humano (HPV) oral, em que foi confirmada sífilis após percorrer um longo trajeto até o estabelecimento do seu diagnóstico (caso III). Todos os casos realizaram testes laboratoriais por ocasião do diagnóstico e receberam tratamento e orientação adequados. **Conclusão:** Foi possível observar pelo presente estudo algumas situações que necessitam de atenção: a avaliação da cavidade oral deve ocorrer de forma concomitante e sistemática com a investigação de lesões genitais; a hipótese diagnóstica de ocorrência de sífilis com manifestação oral deve ser considerada na avaliação clínica; lesões bucais podem apresentar manifestações clínicas similares a outras doenças, sugerindo investigação de sua possível etiologia infecciosa ou não.

Palavras-chave: manifestações orais; cirurgião-dentista; sífilis.

INTRODUCTION

Aspects involved in the diagnosis of oral lesions pass by a series of ethical, subjective and professional factors in which odontology has a prominent role, as the oral cavity can signal or highlight disease systemic manifestations[1]. In this context, we find syphilis, a sexually transmitted infection known since the end of the 15th century whose etiologic agent is the *Treponema pallidum*[2,3].

Also known as the "great imitator", due to the diversity of differential diagnosis that it presents, syphilis is a public health world problem[4]. In Brazil the diagnoses are notifiable, and according to the Ministry of Health, in the epidemiological bulletin published in 2016, more than 84 thousand syphilis cases were notified, more than 37 thousand acquired by pregnant women and, finally, a number around 20 thousand cases of congenital syphilis, totaling 185 deaths[5].

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Oral manifestations may occur in any of the three stages of the disease evolution, found less frequently in the primary one. The fact of the primary lesion of syphilis (chancre) also evolves spontaneously tends to confuse health professionals about the diagnosis and the interruption of the investigation[6,7].

When syphilis is in the secondary stage, diagnosis through oral lesions may become more evident, since there are other systemic signs and symptoms that can be associated with the disease[3,7,8].

For the effective eradication of syphilis, it is necessary to interrupt the transmission, and so prevent new cases. For this to occur, early diagnosis and appropriate treatment become necessary, and the patient submitted to quantitative serological assessments (Venereal Disease Research Laboratory—VDRL or rapid plasma reagin—RPR) during the first year, evaluated in the third, sixth and 12th month after treatment[9]. The partners should also be investigated in case of quantitative serology through reagent treponemal test and prophylaxis held whenever possible.

The present study was previously approved by the Ethics and Research Committee (Comitê de Ética e Pesquisa—CEP) of Universidade Veiga de Almeida, no. 2424828, and aimed at describing the clinical and laboratory aspects involved in the diagnosis, treatment and prognosis of three recent clinical syphilis cases with oral manifestations.

CASE REPORTS

Case I

Female patient, 38 years old, student, married, black, from the city of Niterói, RJ, Brazil, attended a consultation with the main complaint of "bruises in the genital region and around the anus". According to the patient's own report, a small painless sore in the genital region appeared about six months before, followed by an adenopathy at the same side of the lesion. Patient also described an improvement compared to the initial lesion, followed by the appearance of reddish spots on the body that, according to her information, seemed allergic reactions, and lumps in various parts of the body, especially on the genitalia, that took a whitish aspect and associated pain.

Described herself heterosexual, with a history of the first intercourse at the age of 17, practicing vaginal, oral and anal sex, without condom, twice a month at this stage of the disease. According to the patient, the frequency of relations was three or four times a week. She told she had a single partner in a five-year relationship. Reported not having supplementary health plan, with family income between one to two Brazilian minimum wages, high school degree, studying to get into a university. Patient didn't know whether her partner had any kind of complaint about any disease.

Throughout the whole period of the disease evolution, the patient reported to be often in medical consultations. However, she presented no diagnosis for pathology. After approximately 30 days, VDLR was indicated, and when received the result the patient sought the Programa Médico da Família (Family Doctor Program), in which she was seen by a doctor who referred her to the gynecology service of a municipal hospital, being diagnosed with condylomatous HPV, and the treatment proposed was the cauterization of the lesions.

With this diagnostic hypothesis, patient was referred to the Sexually Transmitted Diseases Department of the Universidade Federal Fluminense University (Niterói, RJ, Brazil) recommending that patient was submitted to surgical excision of the lesions.

On physical examination, patient was collaborative and with good general appearance. Patient presented visible erythematous lesions in chest, mainly in the dorsal region, and disseminated papillomatosis; presence of mucous membrane plaques in the tongue; papillocrusted injuries that occurred in the mentonian area, corners of the mouth and nose wing. It was still possible to observe the presence of palpable lymph nodes in cervical posterior chain and in the inguinal region, which were movable and painless. In the inguinal, perineal and perianal regions, the syphilis lesions were verified with painful, whitish, humid compatible with the flat condyloma. The genitalia showed the presence of the same injuries in the regions mentioned, compromising mainly small and big lips and perineal region (**Figure 1**).

The VDRL was 1:256, and the treatment done with benzathine penicillin G was adequate for the stage. Patient was requested to return to the clinic for revaluation in 30 days. She returned three months after treatment and was uninjured.

The VDRL was 1:32. The patient reported that her partner, although asked, didn't attend to our service, but she reported that he was treated in a clinic close to his residence.

Case II

Male patient, 31 years of age, bank clerk, resident in Niterói, college degree, heterosexual, white, was referred to a public university clinic in the city of Rio de Janeiro, RJ, Brazil, complaining of "aphthae".

Patient reported that oral lesions, which he thought to be aphthae, had emerged about 30 days, approximately. Oriented by a

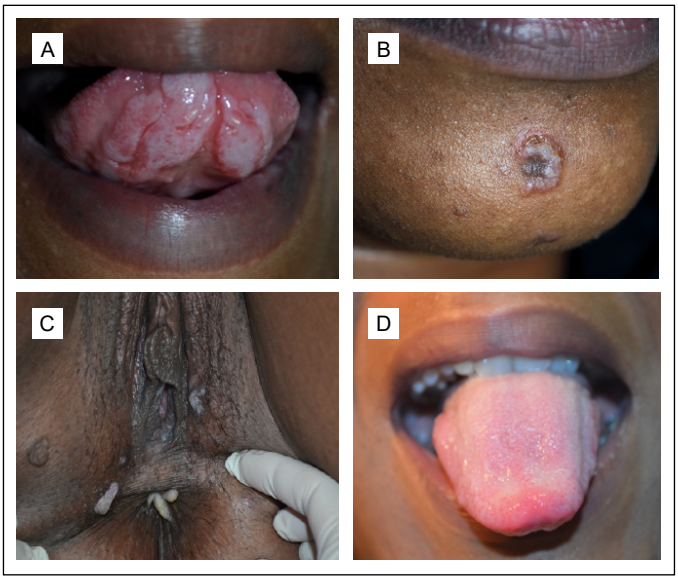

Figure 1 – (A) The mucous in the tongue back; (B) papillocrusted injury in mentonian region; (C) papillomatosis lesions in the genital region; (D) plaque on back of tongue.

pharmacy clerk, he made use of hydrogen peroxide, sodium bicarbonate, among other products, according to the patient. Not showing improvement, sought medical attention, being diagnosed with candidiasis, and it was recommended mouthwash with Nystatin and routine tests. Due to the persistence of symptoms, patient returned to the health unit, where he was prescribed fluconazole, and new tests were requested.

Aggravated the clinical symptoms, the patient searched for another medical center, where he was prescribed a medication for his stomach. Still not improving his physical condition, he sought the university clinic mentioned before and reported "bruise on penis for about five months and spots on the body that appeared and disappeared". In anamnesis, patient informed previous HPV and electrocauterization.

Patient described himself heterosexual, informed he had sexual activity with frequency of four times a week. According to the patient himself, he was insertive and receptive to oral intercourse and insertive in anal intercourse, without using condoms during intercourse. Patient reported first intercourse at 13 years of age.

In the oral cavity, he presented white plaques in the back of the tongue and in the lower lip mucosa (**Figure 2**), as well as atypical thorax and genitalia with framed injury to the penis, which according to his report disappeared after the use of medication.

The treponema rapid test was reagent. Patient was treated with benzathine penicillin G. The VDRL (1:64) took place two weeks after the treatment. In the following month, the VRDL was 1:32. On that occasion, it was observed in his clinical revaluation that lesions disappeared and he was in the stage of healing control (**Figure 2**).

Case III

Female patient, 49 years of age, married for five years (was separated from her husband for a year and reconciled one year before the assistance), attended a Basic Health Unit in the city of Niterói, referred to a dentist, worried about the presence of white lesions in both edges of the tongue, causing burning sensation and pain of medium intensity. Patient reported she was already seen by several professionals in the period of two months prior to this consultation without a diagnosis definition.

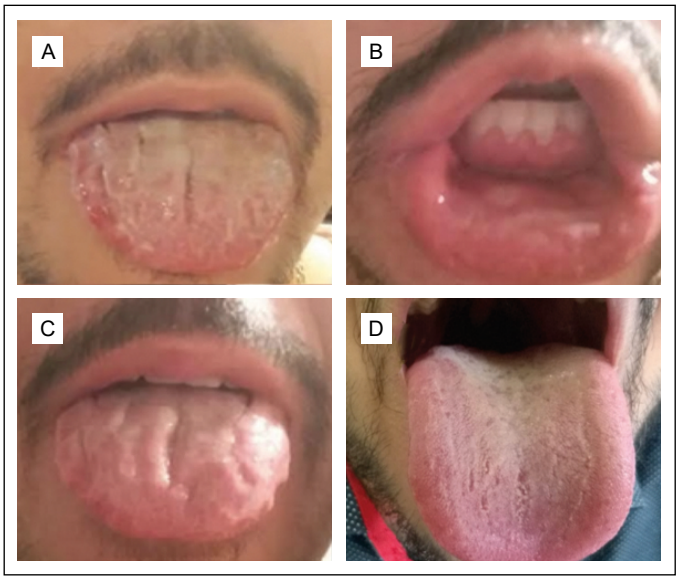

Figure 2 – (A), (B) and (C) Irregular white plaques in back of tongue and lower lip mucosa; (D) total regression of the lesion.

The patient reported spots on the body, for about five months, thinking they were caused by some allergy.

Patient' path until resolution of her case:

- First professional: doctor 1 was a dermatologist that tried to understand the spots on the body, prescribed prednisone 20 mg, without remission of symptoms after use;
- Second professional: surgeon-dentist 1, who was looked for after a month of the previous consultation, due to white lesions on the edges of the patient's tongue, right and left, with burning and pain. The professional referred the patient to an oral/maxillofacial surgeon;
- Third professional: doctor 2 was an otorhinolaryngologist. A week after the dentist 1 evaluation, the patient experienced intense discomfort in the throat and sought the professional, who was surprised at the changes that seemed to have been caused by corrosive agent. As the patient reported the use of sodium bicarbonate (on her own trying to heal the lesion on the tongue), the doctor prescribed pantoprazole sodium sesquihydrated 40 mg. Without clinical improvement, the patient returned to the doctor after a week and was oriented to perform mouthwash with Nystatin solution. There was no improvement with the use of the antifungal;
- Fourth professional: the surgeon-dentist 2 suggested an oral/maxillofacial surgeon for the removal of white lesions in hospital environment and requested some pre-surgery tests. Worried about the surgical indication, patient returned to surgeon-dentist 1, that referred her for further evaluation with a dentist-surgeon 3 at a public unit of basic health attention in the city of Niterói;
- Fifth professional: surgeon-dentist 3 conducted evaluation of the oral cavity and anamnesis. During the anamnesis, the patient reported the spots on her body, her path in search for diagnosis and the medications used, with no success. During oral examination, the patient presented not detachable and not bleeding white lesions at the right and left edges of the tongue (**Figures 3A, 3B and 3C**). The physical examination observed that patient had numerous pink coloring and papular lesions with discrete pruritus in abdomen, dorsal and lumbar regions and lower extremities for about four months. Before the oral lesions with concomitant skin changes, the professional suspected of a sexually transmitted infection. The rapid tests (human immunodeficiency virus — HIV, syphilis, hepatitis B and hepatitis C) and exfoliative cytology (tongue border fragments, right side) were carried out in the health unit. The rapid test for syphilis was reagent, and the others were non-reagents. The cytology had nonspecific outcome. Due to the positive result of the treponemal quick test, VDRL was requested and showed reagent with 1/512 dilution, and syphilis was the diagnosis.

The treatment was made with penicillin G benzathine, and after the first administration, the mouth and skin lesions completely regressed

in two weeks. Then, the patient underwent counseling consultation and guided about the need for investigation of infection of her partner, who carried out the VDRL with dilution of 1:1, and fluorescent treponemal antibody absorption test (FTA-ABS) was reactive, as he had been properly treated and oriented. Currently, the patient is under healing control.

DISCUSSION

As syphilis is a sexually transmitted infection, it is possible that the oral cavity is also one of the first manifestation sites — like chancre, although genitals are the most involved sites. The occurrence of chancre can indicate the location of inoculation of the microorganism (*T. pallidum*) in regions such as anal, genital, oral, amongst others[10].

Among the differential diagnoses of chancre, there are: infectious lesions whose etiologic agent is the herpes simplex virus (HSV), squamous cell carcinoma, some fungal lesions or even caused by trauma, and other types of ulcerative injuries[11]. In secondary syphilis, other injuries can also be considered as differential diagnosis, such as erosion, *Pemphigus vulgaris*, papular and nodular lesions, leukoplakia, among others[12]. The cases presented in this study showed that patients were at the stage of recent syphilis.

The VDRL result is able to be reagent from five or six weeks after infection and two or three weeks after the emergence of the initial injury, *i.e.*, chancre. However, this injury is not usually found in the mouth, but it can be observed in some cases. The sensitivity of the VDRL is quite high, especially in secondary syphilis. However, in late stages this sensitivity is considerably reduced from 100% to approximately 70%[13].

Non-treponemal tests become of extreme value with regard to the control of healing. The persistence of low titles present in patients undergoing proper treatment can be considered a serological scar, which can remain for many years[14].

Another important point is that, during the patient's monitoring and follow-up concerning the response to the proposed treatment, patient is submitted to the same diagnosis test. Whenever possible, preferably the same professional who made the diagnosis should interpret the results during monitoring and healing control[15,16].

Although in this study not all patients had the FTA-ABS (at least two made the quick test and one the FTA-ABS), it is possible to make use of other types of tests for syphilis detection, and the choice will normally be linked to the evolutionary stage of the disease. Both in primary and secondary syphilis, in the latter, only in some lesions, the diagnosis can be made through the direct test, *i.e.*, through the demonstration of the presence of *T. pallidum*, which is usually recommended in situations in which the lesion is in its initial stage, when the number of microorganisms is very high[17,18].

Another modality are the rapid tests, important in the diagnosis nowadays, since their reading occurs immediately[19], and should be used for screening[20], as observed in the reports of patients 1 and 3.

Differently from presented by the Ministry of Health in 2016, the most reported age group with diagnosis of acquired syphilis was from 20 to 29 years, corresponding to 34.1% of cases[5], while in the present study two of the three patients described in the reports were in the age group from 30 to 39 years. One of them was female (38 years old) and the other one male (31 years old). Another study from the Ministry of Health in 2016[15] showed that 42.02% belonged also to the age group between 20 and 29 years old[21].

Giacomozzi[22] reported that the use of drugs, whether legal or illegal, increases the probability of not making use of condoms or even engage in sexual activities with multiple partners. In the reports of the present study, the patients denied the use of drugs and declared they chose not to use condoms, even knowing about their risks. It is important to emphasize that the use of condoms not only reduce the risk of transmission of sexually transmitted infections, but also minimize unwanted pregnancy[23].

It is important that the individual is aware that s/he should worry not only about his/her health, but also with his/her partner, whether fixed or not, as in case III. A study conducted in Brazil, in the state of Ceará, syphilis appeared as the second infection with the highest number of diagnoses. In this study, all patients were women, and 80% of them reported having acquired the disease from their current partner[24].

A study from 2007 showed that 63.6% of the patients included and diagnosed with syphilis had acquired the disease previously, which may be a warning for the adoption of new measures related to safe sexual practices[25].

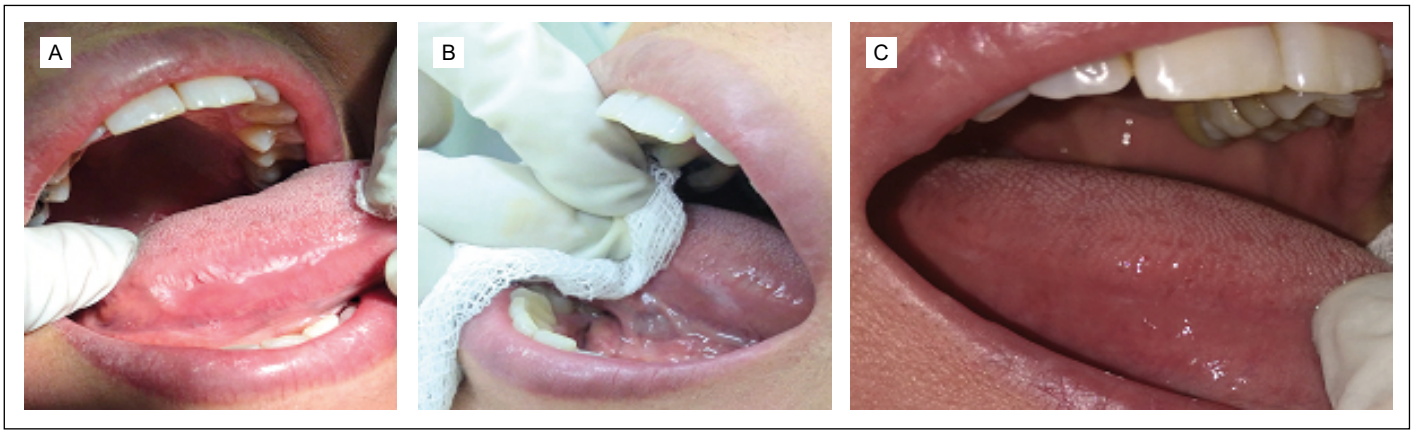

Figure 3 – (A) White plaque with linear filiform formation in the lateral edge of tongue; (B) white plaque only; (C) Lesion regression.

CONCLUSION

- Patients seeking care with complaints of genital lesions should also be examined regarding possible oral manifestations (including the evaluation of the oral cavity should be part of the routine of the clinical examination) (case I);
- Syphilis should be considered as a possible diagnostic hypothesis to be investigated in patients with oral lesions, especially ulcerative processes (case II);
- The search for care for a possible oral infection may, when clinically evaluated, present another pathology also of infectious origin, that is, may signal infections with similar clinical manifestations, which need to be better elucidated as to their etiology (case III);
- Regardless of the type of sexual practice (oral sex) and socioeconomic cultural level of the patients, cases of syphilis have occurred and still perpetuate in the sexually active population (cases I, II and III).
- In the current era of rapid tests, they are indicated as an effective tool in the initial diagnosis, allowing the appropriate approach of patients (cases II and III). It is emphasized that they are carried out in order to promote early screening of this sexually transmitted infection (STI), which still remains a challenge. Therefore, serological healing control should be performed with a qualitative and quantitative VDRL test.

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Conflict of interests

There is no conflict of interest to be declared.

REFERENCES

1. Chi AC, Neville BW, Krayer JW, Gonsalves WC. Oral manifestations of systemic disease. Am Fam Physician. 2010;82(11):1381-8.
2. Avelleira JCR, Bottino G. Sífilis: diagnóstico, tratamento e controle. An Bras Dermatol. 2006;81(2):11-26. http://dx.doi.org/10.1590/S0365-05962006000200002
3. Seibt CA, 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. Braz J Infect Dis. 2016;20(4):393-8. https://doi.org/10.1016/j.bjid.2016.03.008
4. Leão JC, Gueiros LA, Porter SR. Oral manifestations of syphilis. Clinics. 2006;61(2):161-6. http://dx.doi.org/10.1590/S1807-59322006000200012
5. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Boletim Epidemiológico. 2017;38(36).
6. Cawson RA. Cawson's Essentials of Oral Pathology and Oral Medicine. 8th ed. Philadelphia: Churchill Livingstone Elsevier; 2008.
7. Compilato D, Amato S, Campisi G. Resurgence of syphilis: a diagnosis based on unusual oral mucosa lesions. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;108(3):e45-9. https://doi.org/10.1016/j.tripleo.2009.05.013
8. Ban M, Ohtani M, Seishima M. A case of secondary syphilis with mucous patches on the hard palate. J Dermatol. 1995;22(1):52-4.
9. Passos MRL, Benzaken AS, Coelho ICB, Rodrigues GHS, Dutra Junior JC, Varella RQ, et al. Estudo de equivalência entre Azitromicina e Penicilina G Benzatina no tratamento da sífilis. J Bras Doenças Sex Transm. 2004;16(1):52-66.
10. Noronha ACC, Israel MS, Almeida DCF, Moreira GM, Lourenço SQC, Dias EP. Sífilis secundária: Diagnóstico a partir das lesões orais. Relato de caso. DST – J Bras Doenças Sex Transm. 2006;18(3):190-3.
11. Schechter M, Marangoni DV. Doenças infecciosas: conduta diagnóstica e terapêutica. 2nd ed. Rio de Janeiro: Guanabara Koogan; 1998.
12. Eyer-Silva WA, Freire MAL, Horta-Araujo CA, Silva GAR, Pinto JFC, Ferry FR. Secondary Syphilis Presenting as Glossodynia, Plaques en Prairie FauchAe, and a Split Papule at the Oral Commissure: Case Report and Review. Case Reports in Medicine. 2017;2017. https://doi.org/10.1155/2017/1980798
13. Brown DL, Frank JE. Diagnosis and management of syphilis. Am Fam Physician. 2003;68(2):283-90.
14. Sanchez MR. Syphilis. In: Goldsmith LA, Katz SI, Gilchrest BA, Paller AS, Leffell DJ, Wolff K, eds. Fitzpatrick's Dermatology in general medicine. 6th ed. United States: McGraw Hill; 2003. p.2163-88.
15. Brasil. Ministério da Saúde. Manual Técnico para o Diagnóstico da Sífilis. Brasília: Ministério da Saúde; 2016.
16. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de DST, Aids e Hepatites Virais. Diagnóstico de Sífilis. Brasília: Ministério da Saúde; 2014.
17. Azulay MM, Azulay DR. Treponematoses. In: Azulay MM, Azulay DR. Dermatologia. 3rd ed. Rio de Janeiro: Guanabara Koogan; 1994. p.240-51.
18. Rivitti EA. Sífilis Adquirida. In: Belda Júnior W, ed. Doenças Sexualmente Transmissíveis. São Paulo: Atheneu; 1999. p.9-21.
19. Sato NS, de Melo CS, Zerbini LC, Silveira EP, Fagundes LJ, Ueda M. Assessment of the rapid test based on an immune chromatography technique for detecting anti Treponema pallidum antibodies. Rev Inst Med Trop Sao Paulo. 2003;45(6):319-22. http://dx.doi.org/10.1590/S0036-46652003000600004
20. Siedner M, Zapitz V, Ishida M, De La Roca R, Klausner JD. Performance of rapid syphilis test in venous and fingerstick whole blood specimens. Sex Transm Dis. 2004;31(9):557-60.
21. Meneses MO, Vieira BDG, Queiroz ABA, Alves VH, Rodrigues DP, Silva JCS. The profile of risky sexual behavior of seropositive women for syphilis. Rev Enferm UFPE. 2017;11(4):1585-94. https://doi.org/10.5205/1981-8963-v11i4a15226p1585-1594-2017
22. Giacomozzi AI. Representações sociais da droga e vulnerabilidade de usuários de capsad em relação às DST/HIV AIDS. Estud Pesqui Psicol. 2011;11(3):776-95.
23. Michael K, Ben-Zur H. Risk-taking adolescents: associations with social and affective factors. J Adolesc. 2007;30(1):17-31. https://doi.org/10.1016/j.adolescence.2005.03.009
24. Araújo MAL, Andrade RFV, Cavalcante CS, Pereira KMC. Violência de gênero em mulheres com diagnóstico de doenças sexualmente transmissíveis no nordeste do Brasil. Rev Baiana Saúde Pública. 2012;36(3):713-26.
25. Signorini DJHP, Monteiro MCM, de Sá CAM, Sion FM, Leitão Neto HG, Lima DP, et al. Prevalence of HIV-syphilis coinfection in a university hospital in the city of Rio de Janeiro in 2005. Rev Soc Bras Med Trop. 2007;40(3):282-5. http://dx.doi.org/10.1590/S0037-86822007000300006

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