

## Letter

# The dentist's role in syphilis prevention and control

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### Dear Editor:

Syphilis remains a public health concern globally, and in Brazil, the disease has been presenting a significant increase in incidence since 2010. This infection affects more than 10 million people worldwide per year<sup>1</sup>, with 60% or more incident cases occurring in men who have sex with men (MSM), mostly associated with human immunodeficiency virus (HIV) co-infection and high-risk sexual behavior<sup>2</sup>.

The disease presents in four distinct stages that are characterized by particular symptoms, clinical manifestations, and levels of infectivity: primary, secondary, tertiary, and latent syphilis<sup>3</sup>. The clinical differentiation between the oral lesions in primary and secondary syphilis is based on the presence of painful symptoms and the number of lesions<sup>4</sup>.

Oral chancres in primary syphilis are characterized as painless ulcers, measuring 1 to 2 centimeters, with a firm and rolled border<sup>5</sup>. They manifest as a single ulcer, usually on the lip or more rarely on the tongue<sup>3</sup>. Oral chancres are observed in approximately 4% to 12% of patients with primary syphilis, located where the bacteria penetrate the mucosa<sup>6</sup>.

Secondary syphilis presents multiple and generally symptomatic ulcerations<sup>4</sup>. Oral ulcers are observed in 30% of cases of secondary syphilis, usually associated with other clinical manifestations. In these cases, the lesions are maculopapular, affecting the hard palate and, sometimes, the soft palate<sup>3</sup>.

Gumma-associated bony destruction and a possible predisposition to oral squamous cell carcinoma are associated with tertiary syphilis. A gumma manifests initially as one or more painless swellings, especially on the hard palate<sup>7</sup>.

Previous studies demonstrated that patients with syphilis present a higher risk of being infected by other sexually transmitted diseases (STDs), especially HIV, since syphilitic lesions are vulnerable sites for virus penetration<sup>8</sup>.

The clinical diagnosis of syphilis is challenging for the dentist due to the variety of clinical characteristics of oral lesions, which may be similar to other ulcerative injuries<sup>6</sup>. The differential diagnosis of oral lesions of secondary syphilis includes erythematous lupus, multiform erythema, stomatitis, pemphigus, idiopathic leukoplakia, lichen planus, and candidiasis, among others<sup>9</sup>.

Laboratory diagnosis confirmation of syphilis is performed using serological tests. Nevertheless, the diagnosis also needs a high index of clinical suspicion during anamnesis<sup>4</sup>, since clinical and histological findings may be subtle and imprecise, especially considering other more common diagnoses<sup>10</sup>. Therefore, dentists should include questions on a patient's recent sexual history in the anamnesis and be prepared to recognize and diagnose oral and systemic manifestations of STDs, especially syphilis<sup>3</sup>.

Dentists undergo academic training that makes their participation in multi-professional teams important for diagnosis and treatment of STDs<sup>11</sup>. Dental staff play a fundamental role in public health systems by guiding patients, performing accurate and early diagnosis, and referring patients to adequate treatment<sup>1,12</sup>. Since oral lesions are highly contagious, the reliability of correct diagnosis aids adequate management, reduces the infection chain, and reduces the risk of transmission to health professionals.

**Conflict of Interest:** The authors declare that there is no conflict of interest.

## REFERENCES

1. Sukumaran A. Resurgence of syphilis: Challenges for dental care providers. *J Dent Res Rev* 2016;3:115-6
2. Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2016. Atlanta: U.S. Department of Health and Human Services; 2017.

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3. Minicucci EM, Vieira RA, Oliveira DT, Marques SA. Oral manifestations of secondary syphilis in the elderly –a timely reminder for dentists. *Aust Dent J.* 2013;58(3):368-70.
4. Lim JHL, Chio MTW. Watch the Tongue. *Annals Academy of Medicine.* 2015; 44(12):575-6.
5. Lu DJ, Zbar A. Atypical presentation of syphilis as an aphthous ulcer. *CMAJ.* 2017;189:E748.
6. Fregnani ER, Perez-de-Oliveira ME, Parahyba CF, Perez DEC. Primary syphilis: an uncommon manifestation in the oral cavity. *J Formos Med Assoc.* 2017;116(4):326-7.
7. Leão JC, Gueiros LA, Porter SR. Oral manifestations of syphilis. *Clinics.* 2006;61(2):161-6.
8. 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 *Braz J Infect Dis.* 2016;20(4):393-8.
9. Santos IS, Bastos DB, Valente VB, D’Vila SP, Tjioe KC, Biasoli ER, et al. Reemerging syphilis: diagnosis from oral lesions. *J Oral Diag.* 2017;2(1).
10. Carbone PN, Capra GG, Nelson BL. Oral Secondary Syphilis. *Head Neck Pathol.* 2016;10(2):206-8.
11. Moleri AB, Lobo CB, Santos FR, Silva EJ, Gouvêas CVD, Moreira LC. Differential diagnosis of manifestations of syphilis and aids with lichen planus in mouth: case report. *J Bras Doenças Sex Transm.* 2012;24(2):113-7.
12. Strieder LR, León JE, Carvalho YR, Kaminagakura E. Oral syphilis: report of three cases and characterization of the inflammatory cells. *Ann Diagn Pathol.* 2015;19(2):76-80.