



PERIODONTAL DISEASE IN HIV PATIENTS

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ABSTRACT

This paper aims to report the case of periodontitis in a HIV-positive and smoker patient. A case attended at the UNORP dentistry college in the clinic of the periodontia discipline between August and September of 2016 that became a research. Procedures were performed to reduce the inflammation caused by periodontal disease in order to lower the patient's CD4, ie decrease viral load. Due to the patient's lack of cooperation, the expected results were not achieved because she smoked and did not stop during the treatment. There was no improvement in the patient's CD4 level, but periodontal disease was controlled. The patient is in periodontal maintenance phase.

INTRODUCTION

Periodontal disease is an inflammation caused by pathogens affecting the supporting tissues and tooth protection, ie, bone, gingiva, periodontal ligament and cement (Buczynski *et al.*, 2008; Flores, Jorge *et al.*, 2006). In seropositive patients, in addition to the pathogens of the disease itself as Aa, Pg and Tf, are also opportunistic pathogens such as *Candida Albicans*. Another relevant factor in these patients is the occurrence of high levels of inflammatory cytokines in the gingival fluid, which makes the disease more aggressive (Gaetti-JardimJúnior *et al.*, 2008). HIV infection leads to a progressive decrease in the number and activity of CD4 + T lymphocytes, compromising cellular immunity and leaving the host susceptible to the development of various opportunistic infections and neoplasms (Gaetti-JardimJúnior *et al.*, 2008). HIV-associated PD becomes more aggravated because the viral index of this patient is may be high and his immunity low and thus any inflammation or infection has very rapid progress and can cause great tissue destruction and tooth loss, besides increasing the viral index of the patient (Guimarães *et al.*, 2012; Lemos *et al.*, 2010; Maurício Roth Volkweis *et al.*,

2001). In addition, periodontal disease in a seropositive patient may be from HIV itself, ie its body showing that CD4 is at a very high level (Buczynski *et al.*, 2008; Gaetti-JardimJúnior *et al.*, 2008). The oral cavity is particularly susceptible to infection by having numerous microorganisms that proliferate under immunosuppressive conditions. Like many other diseases, HIV has oral manifestations and the follow-up of a dentist may help to control the viral index (Maurício Roth Volkweis *et al.*, 2001; Ribeiro *et al.*, 2002). With the advancement of the findings in the health area, the fight against AIDS with new therapies has contributed to the decrease of oral manifestations (Soares *et al.*, 2009; Souza *et al.*, 2000; Souza *et al.*, 2000; Tratado de Periodontia Clínica e Implantologia Oral, 2005). The present study aimed to present the case report of the patient with AIDS and its treatment of periodontitis.

Case Report

A 48-year-old female patient with HIV infection, smoker, presented chronic, generalized, severe periodontal disease, grade 3 dental mobility in the lower incisor region, supra and

subgingival calculus in all teeth of the mouth, gingival retraction, bone sequestration and intense pain in the lower arch. During the first sessions of treatment and scraping the pain picture presented significant improvement, the patient was advised not to smoke, but there was no collaboration. In all biweekly consultations, supra and subgingival scaling was performed, since plaque proliferation was very rapid. After a few sessions the patient presented improvement of the clinical picture, the inflammation regressed and the gingival margin returned to its normal state in most regions. In the antero-inferior teeth with extreme mobility, a splint was made with orthodontic thread and composite resin as a provisional solution until the extraction and oral rehabilitation of the same can be performed.

DISCUSSION

It is known that the immune system's involvement plays a fundamental role in the pathogenesis of these lesions, however, the exact mechanism by which this happens still remains uncertain (Ress, 2011; Peppes *et al.*, 2013). Along with other oral manifestations such as candidosis, hairy leukoplakia, Kaposi's sarcoma and non-Hodgkin's lymphoma, periodontal diseases play an important role both in the diagnosis and prognosis of HIV-infected individuals (Peppes *et al.*, 2013). These lesions may be the first clinical sign of AIDS and, according to severity, may indicate the level of disease progression (Peppes *et al.*, 2013). The prevalence of periodontal diseases in HIV-positive individuals is somewhat controversial. Age, smoking, pre-existing periodontal disease, poor oral hygiene, diet, CD4 T-lymphocyte count, viral load and changes in the oral microbiota are known risk factors for the development or progression of these diseases in HIV-positive (Peppes *et al.*, 2013; Ayala *et al.*, 2008; John *et al.*, 2013). However, the data resulting from the studies have varied considerably due to the lack of standardization in the diagnostic criteria and methods used, which usually do not take into account risk factors, stages of AIDS, antiretroviral therapy drugs, types and the severity of the periodontal lesions found (Peppes *et al.*, 2013; Ayala *et al.*, 2008; John *et al.*, 2013). Although most of the studies do not find a statistically significant association between the stage of HIV infection and the prevalence and severity of periodontal diseases, factors such as the frequency of brushing, flossing and tobacco use have already been associated with both outcomes. Which, together with the lack of standardization of the methodologies used in the studies, can lead to confusion of causal relationships (Ayala *et al.*, 2008; John *et al.*, 2013).

Conclusion

The oral cavity represents an area of frequent manifestations of AIDS, with candidiasis and periodontal diseases being the most frequent lesions. Periodontal disease was a clinical manifestation of moderate prevalence, its etiology being related to patient plaque control and CD4 level, showing a more aggressive pattern due to the fact that the patient is a carrier of the HIV virus. There was no improvement in the patient's CD4 level, but periodontal disease was controlled. The patient is in periodontal maintenance phase.

Competing Interests

The authors none declare.

REFERENCES

- Ayala EF, Rodríguez YH, Hernández LYP, González PLH. 2011. Salud periodontal en personas viviendo con VIH/sida. Pinar del Río, 2008. *Revista de Ciências Médicas de Pinar del Río, Out-Dez*; 15(4):179-200.
- Buczynski, Ana Karla, Glória Fernanda Castro, and Ivete Pomarico Ribeiro de Souza. 2008. "O impacto da saúde bucal na qualidade de vida de crianças infectadas pelo HIV: revisão de literatura." *Ciênc. saúde coletiva* 13.6, 1797-1805.
- Flores, Jorge Abel, *et al.* 2006. "Manifestações bucais e infecções oportunistas em pacientes HIV positivos no Hospital Universitário de Santa Maria (HUSM)-RS." *Saúde (Santa Maria)* 32.1 e 2, 45-52.
- Gaetti-Jardim Júnior, Elerson, *et al.* 2008. "Occurrence of yeasts, enterococci and other enteric bacteria in subgingival biofilm of HIV-positive patients with chronic gingivitis and necrotizing periodontitis." *Brazilian Journal of Microbiology* 39.2; 257-261.
- Guimarães, Gustav, *et al.* 2012. "Portadores do HIV apresentam pior condição clínica periodontal e maior prevalência de Porphyromonas gingivalis e Tannerella forsythia." *Rev. odontol. UNESP (Online)* 41.1.
- John CN, Stephen LX, Africa CWJ. 2013. Is human immunodeficiency virus (HIV) stage an independent risk factor for altering the periodontal status of HIV-positive patients? A South African study. *J Oral Pathol Med.*, 13(1):69.
- Lemos, S. S., Flávia A. Oliveira, and Eneida F. Vencio. 2010. "Periodontal disease and oral hygiene benefits in HIV seropositive and AIDS patients." *Med Oral Patol Oral Cir Bucal* 15.2: e417-21.
- Maurício Roth Volkweis, Rodrigo S. da Rocha, Leonardo L. N. Leonardo, João Carlos B. Wagner. 2001. Lesões bucais manifestadas em pacientes aids e tuberculosos, relacionadas com a contagem celular cd4+ / cd8+. *Brazilian Dental Science* v.4 n. 3 p. 137.
- Peppes CP, Lemos ASP, Araujo RLF, Portugal MEG, Buffon MCM, Raboni SM. 2013. Oral lesions frequency in HIV-positive patients at a tertiary hospital, Southern Brazil. *Braz. J. Oral Sci.*, 12(3):216-222.
- Ress TD. 2011. Patologia e manejo de problemas periodontais em pacientes com infecção pelo HIV. In: Carranza Jr *et al.* *Periodontia Clínica*. 11a ed. Rio de Janeiro: Elsevier; p.178-198.
- Ribeiro, Apoena de Aguiar, Maristela Portela, and Ivete Pomarico de Souza. 2002. "Relação entre biofilme, atividade de cárie e gengivite em crianças HIV+." *Pesqui. odontolbras* 16.2: 144-150.
- Soares, Maria Sueli Marques, *et al.* 2009. "Condição periodontal e dentária em pacientes HIV positivos." *RGO: Revista Gaúcha de Odontologia*, 57.4.
- Souza LB.; Pereira Pinto L.; Medeiros, AMC.; Araújo Jr., RF.; Mesquita OJX. 2000. Manifestações orais em pacientes com AIDS em uma população brasileira. *PesquiOdont Bras.* v. 14, n. 1, p. 79-85.
- Souza, Lélia Batista de, *et al.* 2000. "Manifestações orais em pacientes com AIDS em uma população brasileira." *PesquiOdontolbras.*, 79-85.
- Tratado de Periodontia Clínica e Implantologia Oral. Jan Lindhe, Thorkild Karring, Niklaus P. Lang. 4ed. Editora Guanabara Koogan 2005.

Trentin, Micheline Sandini, *et al.* 2010. "Doença periodontal e fatores de risco em pacientes HIV positivos." *Revista da Faculdade de Odontologia-UPF* 12.3.

Vieira, Thais Ribeiral, Adriana de Castro A. Péret, and Luciano Amédée Péret Filho. 2010. "Alterações periodontais associadas às doenças sistêmicas em crianças e adolescentes." *Rev Paul Pediatr* 28.2:237-43.

Volkweis, Maurício Roth, *et al.* 2010. "Lesões bucais manifestadas em pacientes aids e tuberculosos, relacionadas com a contagem celular cd4+/cd8+." *Brazilian Dental Science*, 4.3.
