

6th Clinical Microbiology Conference

October 20-22, 2016 Rome, Italy

Periodontal microbiota in HIV infected Brazilian adults

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The periodontal microbiota is composed of a highly complex bacterial multispecies community organized in biofilms. The composition of the periodontal microbiota in HIV- infection has demonstrated a higher prevalence of periodontal pathogens in non-HIV-infected than HIV-infected individuals. However, microorganisms not commonly associated with periodontitis have frequently been detected in subgingival sites of HIV-infected patients, including *Staphylococcus epidermidis*, *Candida albicans*, *Enterococcus faecalis*, *Clostridium difficile*, *Mycoplasma salivarium*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Dialister pneumosintes* and *Entamoeba gingivalis*. In particular, *E. faecalis* has been more prevalent in the subgingival microbiota of HIV-infected patients with reduced levels of TCD4+ lymphocytes (<200 cells/mm³), suggesting that HIV-related immunodeficiency can provide appropriate conditions for the colonization and growth of opportunistic pathogens that are unusual in the oral microbiota. In addition, it has been demonstrated that detectable plasmatic HIV viral load (PHVL) in HIV-infected patients is associated with elevated levels of known periodontal pathogens such as *Prevotella nigrescens*, *Tannerella forsythia* and *Eikenella corrodens*, as well as *Campylobacter concisus*, *Capnocytophaga gingivalis* and *Dialister pneumosintes* in the subgingival biofilm and that these associations are not related with CD4+ T lymphocytes levels. Another interesting microbiological finding is that HIV can be found in the subgingival biofilm. In a recent study, the detection and quantification of HIV in subgingival biofilm of 20 individuals with detectable PHVL, 40% showed detectable subgingival HIV viral load (SHVL). On the other hand, all patients with undetectable PHVL demonstrated also undetectable SHVL. This can be influenced by the CD4+ T lymphocytes levels.

Biography

Lucio Souza Goncalves is an Associate Professor of Periodontology at the Estacio de Sá University and Research Affiliate in Oral Microbiology at the Federal University of Rio de Janeiro (UFRJ-Brazil). He has received his Dental degree (1988), Master's degree in Periodontology (2000) and PhD in Oral Microbiology (2006) from the UFRJ, Brazil. He has also completed a Postdoctoral Research Fellowship at the University of Otago (2014) in a collaborative research with Dr. Gregory J. Seymour and Dr. Nicholas Heng on a study involving oral microbiome in HIV-infected Brazilian children using an Ion Torrent sequencing platform.

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