

OCCURRENCE OF *STAPHYLOCOCCUS* SPP. AND *CANDIDA* SPP. IN THE PERIODONTAL POCKETS AND ORAL CAVITY OF PATIENTS WITH CHRONIC PERIODONTITIS

**J.A.M.S. Jayatilake^{1*}, B.A.B.M. Bogoda², J.B. Kularatne²,
M.R.D.M. Senanayake¹ and A. Tilakaratne¹**

¹*Department of Oral Medicine & Periodontology, Faculty of Dental Sciences,
University of Peradeniya, Sri Lanka*

²*Ministry of Health, 385, Ven. Baddegama Wimalawansa Thero Mawatha, Colombo 10,
Sri Lanka*

**sumedhaj@pdn.ac.lk*

Periodontitis, characterized by inflammation of the tissues supporting the teeth is primarily linked with sub-gingival colonization of microorganisms and associated host immune response. *Staphylococcus* spp. and *Candida* spp. are human commensals that can appear in the oral microbial flora and their contribution to periodontitis is debatable. The aim of this study was to assess the occurrence of *Staphylococcus* spp. and *Candida* spp. in the oral cavity and periodontal pockets of patients with chronic periodontitis.

A total of 34 patients (11 males, 23 females) with chronic periodontitis were randomly selected. Subgingival biofilm samples were obtained using sterile paper points, and a sample from the oral cavity was taken by oral rinse technique. Samples were cultured on mannitol salt agar and Sabouraud's dextrose agar to assess the growth of *Staphylococcus* spp. and *Candida* spp., respectively. *Staphylococcus* spp. was identified by Gram stain, catalase and coagulase tests. *Candida* spp. was identified by Gram stain and colony morphology. Frequencies and associations were determined using non-parametric statistical methods. Mean age of the participants was 45.2 (SD=11.8) years. Fourteen patients (41%) had mild to moderate periodontitis while 20 (59%) had severe periodontitis. Of all patients, 32.4% (n=11) had *Staphylococcus* spp. in the periodontal pocket and 52.9% (n=18) in the oral cavity while 2.9% (n=1) had *Candida* spp. in the periodontal pocket and 17.6% (n=6) in the oral cavity. One patient (2.9%) carried both *Staphylococcus* spp. and *Candida* spp. in the oral cavity and periodontal pocket. Another patient (2.9%) carried both *Staphylococcus* spp. and *Candida* spp. in the oral cavity only. A significant association existed between the presence of *Staphylococcus* spp. in the oral cavity and the periodontal pocket (P<0.05) suggesting that oral presence of *Staphylococcus* spp. may lead to periodontal colonization. Even though *Candida* spp. was present in the oral cavities of patients, only a small percentage of them had *Candida* spp. in the periodontal pockets suggesting that *Candida* spp. may colonize periodontal pockets occasionally despite its presence as an oral commensal.

Hence, further studies with a larger population are warranted to ascertain the oral and periodontal presence of the above microorganisms. Due to the importance of these organisms in opportunistic infections, biofilm formation and antimicrobial resistance, it is beneficial to assess them in the oral biofilm of chronic periodontitis patients who are noncompliant during treatment.