



▼ POST GRADUATES ABSTRACTS

PG - 62 : PLAQUE MICROBIOTA AROUND RESTORATIONS ON NATURAL TOOTH AND IMPLANTS – A COMPARATIVE STUDY

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Aim: The aim of the study was to compare the plaque microbiota around prosthesis on natural tooth and on implants in healthy oral cavity.

Materials and Methods: 15 participants with prosthesis on natural tooth and 15 participants with prosthesis on implants were enrolled based on the inclusion and exclusion criteria. Plaque samples were collected and transferred to 100µl of a universal bacterial lysis buffer containing 36% to 50% guanidine hydrochloride and stored in the refrigerator at 4°C until being processed for DNA extraction. Following the collection of the 30 samples, they were transported for the 16S rRNA amplification and sequencing. The sequenced data was then compared with reference bacterial gene sequences deposited in Human Oral Microbiome Database (www.homd.org) using BlastN program. Finally, bacterial gene sequence having higher identity with the reference gene sequence was identified in both the groups and phylogenetic

tree was drawn to compare the bacterial profile around prosthesis on natural tooth and on implants.

Results: In the present study, the microorganisms dominated around prosthesis on natural tooth were *Streptococcus sp.*, *Fusobacterium sp.*, *Corynebacterium sp.*, *Micrococcus sp.*, *Aeromonas sp.*, *Leptotrichia sp.*, *Dechloromonas sp.* and around implants *Streptococcus sp.*, *Fusobacterium sp.*, *Corynebacterium sp.*, *Prevotella sp.*, *Eikenella sp.*, *Nisseria sp.*, *Rothia sp.*, *Aeromonas sp.*, *Leptotrichia sp.*, *Actinomyces sp.* were identified.

Conclusion: Our results suggest that while comparing the plaque profile around prosthesis on natural tooth and on implants, even in healthy oral conditions with plaque score of 0 - 1.9, the bacteria around implants tends to be of pathogenic in nature and hence the participants with implants are more likely susceptible to periodontal breakdown. This illustrates the need for supportive periodontal therapy and periodontal interventions at the earliest in patients with implants.