OMICS International
conferenceseries.com

Fredy Gamboa et al., Clin Microbiol 2015, 4:5
http://dx.doi.org/10.4172/2327-5073.C1.019

4th International Conference on
Clinical Microbiology and Microbial Genomics
October 05-07, 2015 Philadelphia, USA

Detection of periodonto pathogens in patients with chronic periodontitis: Culture versus real-time PCR

Fredy Gamboa, Luis García, Mayra Martínez, Alveiro Erira, Dabeiba-Adriana García and **Adriana Acosta**
Pontifical Xavierian University, Colombia

Introduction: Periodontitis is a chronic infectious disease associated with a complex microbiota. *Porphyromonas gingivalis, Aggregatibacter actinomycetem comitas, Prevotella intermedia* and other sub-gingival species have been related to periodontal disease.

Aim: The objective of this study was to investigate the presence of *P. gingivalis, P. intermedia* and *A. actinomycetes comitans* in patients with chronic periodontitis by the method of anaerobic culture compared to the real-time PCR technique.

Methods: Bacterial isolation by anaerobic culture and real-time PCR for *P. gingivalis, P. intermedia* and *A. actinomycetem comitans* was performed in 90 chronic periodontitis patients who attended clinics at the Pontificia Universidad Javeriana. Bacterial sampling was done with paper points in the gingival sulcus, transport took place in thioglycolate broth and primary culturing was carried out on Wilkins-Chalgren agar in anaerobic conditions. For real-time PCR technique, DNA extraction from clinical specimen was performed by the method DNAzol® and the real-time PCR was carried out according to a standardized protocol.

Results: By culturing *P. gingivalis, P. intermedia* and *A. actinomycetem comitans* were respectively present in 44(48.9%), 30(33.3%) and (4.4%) of the 90 samples. In contrast method by real-time PCR, *P. gingivalis, P. intermedia* and *A. actinomycetem comitans* were detected respectively in 78(86.7%), 52(57.8%) and 18(20%) of the 90 samples.

Conclusion: The three periodonto pathogens were most frequently detected by the method of real-time PCR; y 2. In some cases both techniques are complementary in detecting the periodonto pathogens.

Biography

Fredy Gamboa finished his Doctorate in 1997 at the Autonomous University of Barcelona-Spain. He is the coordinator of the Oral Microbiology branch at Dental Research Center, Javeriana University in Bogota-Colombia. Currently, he is working in the microbiological and molecular characterization of important bacteria in dental caries, periodontal and endodontic disease. In oral microbial ecology he is characterizing the micro-biome present in preschool children before and after a process of education. Also he has interest in the isolation and characterization of microorganisms of the oral cavity for use as probiotics and antagonistic action.

gamboa@javeriana.edu.co

Notes: