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0297 Detection of Bacteroides forsythus and Porphyromonas gingivalis from Root Canals

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Objectives: A 16S rDNA-based polymerase chain reaction (PCR) detection method was used to determine the occurrence of Bacteroides forsythus and Porphyromonas gingivalis in the root cancals of chronic apical periodontitis patients. Methods: One tooth each was collected from thirty-one Chinese patients with chronic apical periodontitis. DNA extracted from the pulp tissues was initially amplified using universal 16S rDNA primers. The pulp tissues collected from whether exposed or unexposed pulp were noted. A second round of amplification was performed to detect C. gracilis using oligonucleotide primers designed from species-specific 16S rDNA signature sequences. Results: B. forsythus and P. gingivalis were detected in 26% and 40% of the participants, respectively. 26% of the infected root canals demonstrated the existence of both type of bacteria. The Fisher's Exact test demonstrated that there was a statistically significant correlation between the presence of Bacteroides forsythus and Porphyromonas gingivalis and the root canals of chronic apical periodontitis patients. Conclusion: The utility of a 16S rDNA-based PCR detection method showed high sensitivity and high specificity to directly detect B. forsythus, P. gingivalis or other pulpal microorganisms from pulp tissues of infected root canals. The results indicated that B. forsythus or P. gingivalis may be a member of the microbiota associated with chronic apical periodontitis and there is a strong association between the study species and periodontitis in the tested Chinese population. However, its specific role in such disease requires further clarification.

Seq #23 - *Porphyromonas gingivalis*
1:00 PM-2:00 PM, Wednesday, 28 June 2006 Brisbane Convention & Exhibition Centre Exhibit Hall 1

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