

1385 Detection of *Treponema*, *Enterococcus*, *Streptococcus*, and *Candida* species in Root Canal Infections in Southern Chinese

[C.S.P. TSANG](#), F.C.S. CHU, and L.P. SAMARANAYAKE, The University of Hong Kong, Hong Kong

Objectives: There are only a few studies on the microbial composition of endodontic infections using molecular methods. Data in the South East Asia region is especially lacking. Therefore, the aim of this study was to determine the presence of *Treponema*, *Enterococcus*, *Streptococcus* and *Candida* species in root canal infections, before and after application of intra-radicular medicaments.

Methods: Samples were collected from 30 patients at two separate visits; one sample was collected right after pulp extirpation with minimal instrumentation and the other one collected after medicaments had been placed in root canals for one week. DNA was extracted from the samples using commercial kits (QIAamp DNA kit; Qiagen, Hilden, Germany). Species-specific PCR primers were designed, according to the 16S rRNA, for *Treponema denticola*, *Enterococcus faecalis*, *Streptococcus milleri* group. The primers for *Candida albicans* is specific for *C. albicans* 70kDa-heat shock protein gene, which is not only highly conserved, but can also be distinguished from other *Candida* species.

Results: *T. denticola* was isolated from 18 samples in the first visit (60%). *Streptococcus milleri* group was isolated in 15 samples (50%), 10 of which were isolated together with *T. denticola*. *C. albicans* was isolated in one sample only (3%) and *E. faecalis* was isolated from three samples (10%). In the second visit, *T. denticola* were isolated from eight samples (26.7%), whereas the *S. milleri* group and *E. faecalis* were isolated from six and two samples (20% and 6.7%), respectively. No *C. albicans* was isolated in the second visit.

Conclusion: The present study demonstrated that there was a difference in the composition of endodontic micro-organisms in Southern Chinese, e.g the low prevalence of *E. faecalis*, compared with other studies. Further studies using larger sample size are warranted to explain this. (Supported by the CRCG, the University of Hong Kong)

[Seq #151 - Microbiology and Materials: Immune Cells, NO and Neuropeptides](#)

11:00 AM-12:15 PM, Friday, 27 June 2003 Svenska Massan Exhibition Hall B

[Back to the Pulp Biology Program](#)

[Back to the 81st General Session of the International Association for Dental Research \(June 25-28, 2003\)](#)