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<th>Title</th>
<th>Profile changes of putative periodontal pathogens after non-surgical periodontal treatment</th>
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BACKGROUND:
- Bacteria are shown to be the etiological agents of periodontal disease (Haffajee and Socransky 1994).
- A number of microbial species like A. actinomyctetemcomitans, B. forsythus and P. gingivalis are implicated as the putative pathogens associated with adult periodontitis (Consensus report, AAP; 1996).
- Scaling and root planing is consistently shown to be effective in the prevention of further disease.

OBJECTIVES:
- To describe the profile of the 8 putative periodontal pathogens.
- To correlate the qualitative changes of the periodontal pathogens, if any, to the changes of the clinical parameters observed.
- To describe the changes of clinical parameters before and at 3 months after non-surgical periodontal therapy.
- To describe the changes of the profile of the pathogens after non-surgical periodontal therapy.

MATERIALS AND METHODS:
- Subjects: 4 male and 10 female patients (mean age 43.7) with moderate to severe chronic periodontitis.
- Microbial samples: Microbial samples were taken from the deepest sites of two separate teeth of each quadrant using sterile cotton pellets.
- Microbial identification: According to a protocol modified from Ashimoto et al. (1996), microbial samples were processed with a 16S rRNA-based polymerase chain reaction (PCR).
- Clinical parameters: Clinical parameters were measured using a custom-made soft acrylic occlusal guide at baseline and 1-month.

RESULTS:
- Clinical parameters: Table 1 shows the changes in clinical parameters 3 months after non-surgical periodontal therapy.
- Microbial parameters: At subject level, Figure 1 shows the changes in detection frequency of the 8 putative pathogens at baseline and 1-month after therapy.
- Microbial association: Significant association (p<0.001 Fisher’s Exact Test) was found in 3 pairs of the pathogens - namely T.d./P.g., T.d./C.r. and P.g./C.r. which yield odds ratios of 30.7, 43.7 and 38.5 respectively. The pattern of association could be illustrated in Figure 3 showing the possible co-occurrence of these 3 species.

CONCLUSIONS:
- The 3-month response to non-surgical therapy in this group of moderate to severe chronic periodontitis patients is comparable to other similar studies.
- The persistence of the complex at a site is associated with deeper baseline probing pocket depth.
- The presence of the complex at 1-month is associated with deeper residual PPD, less PPD reduction and less gain in PAL at 3-month.

References:

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