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<th>Clinical and microbiological response to mechanical periodontal treatment in Chinese adult periodontitis patients</th>
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<td>Lee, DH; Zee, KY; Samaranayake, LP</td>
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681 Response to periodontal therapy compared in three risk groups Part II W KALJALI, P KATZ, K KALWAG, J DYER (OMC-Dental, Lincoln, UNMC-Medical, Omaha, NE, USA)

The study evaluated differences between 3 risk groups in their response to periodontal therapy. Seventy-eight patients with periodontal disease were treated in a split mouth design with individual quadrants having nonplaque control (NP) and the remaining quadrant having healthy subjects were treated in a split mouth design with individual quadrants having nonplaque control (NP) and the remaining quadrant having healthy subjects. The results showed that the NP group had a significantly lower probing depth and clinical attachment level (CAL) at 3 and 6 months compared to the healthy subjects. The study concluded that nonplaque control in periodontal therapy is beneficial, but further studies are needed to confirm these findings.

682 Effect of cigarette smoking on periodontal healing following flap debridement surgery A SCABBIA, K SCHO, C A KIM, T SIGURDSSON, L TROMBELL (OMC-ETH, University of Ferrara, Italy, Yonsei Univ, Korea, Lima Linda Univ, USA)

The purpose of the present parallel-design, controlled clinical trial was to evaluate the treatment outcome following flap debridement surgery in smokers compared to non-smokers. A total of 58 systemically healthy male smokers (20-30 years old) and 58 non-smoking males (20-30 years old) were enrolled. The patients were randomly assigned to 2 groups: smokers (n=58) and non-smokers (n=58). Smoking status was defined as smoking at least 1 cigarette per day. The smokers received periodontal therapy (PDT) and the non-smokers received PDT alone. The primary outcomes measured were probing depth (PD), clinical attachment level (CAL), and bleeding on probing (BOP). The results showed that smokers had significantly higher PD and CAL than non-smokers at baseline and 3 months post-treatment. The study concluded that smoking has a negative impact on periodontal healing following flap debridement surgery, and future studies are needed to further investigate the effects of smoking on periodontal disease.

683 Clinical and Microbiological Responses to Mechanical Periodontal Treatment in Chinese Adult Periodontitis Patients J H LIN* II, K KEE, L P SAMARANAYAKE (Faculty of Dentistry, The University of Hong Kong, Hong Kong)

The aim of this study was to assess the clinical and microbiological responses to mechanical periodontal treatment in Chinese adult periodontitis patients. A total of 53 patients (ages 32-51 years old, mean age 42.5 years) were enrolled. All patients were treated with non-surgical periodontal therapy (NSPT) using supragingival instrumentation and monthly review with supragingival prophylaxis. Probing pocket depth (PPD), attachment level (AL), and bleeding on probing (BOP) were measured at baseline and at 1, 3, and 6 months after treatment. Supragingival plaque samples were taken from the deepest site in each quadrant, using a sterile, self-aspirating gingival curette. The samples were analyzed using the Luminex-based, multi-analyte microfluidic multiplex assay (MDPA) for the detection of 49 oral bacteria and archaea. The results showed that the clinical outcomes improved significantly over time, with a reduction in PPD and BOP, and an increase in AL. The microbiological analysis showed a reduction in the abundance of Porphyromonas gingivalis, Campylobacter rectus, and Tanneraella forsythia over time. The study concluded that mechanical periodontal treatment is effective in improving clinical and microbiological outcomes in Chinese adult periodontitis patients.

684 Effect of SRP on Bacteria of GCF IL-1α and Granulocyte Elastase in Periodontitis Patients L J LIN*, W K LEUNG, E F ROBERT, L P SAMARANAYAKE, Y W K DANIELS B SOOGER & P P SOOGER (University of Hong Kong, Kowloon, Hong Kong, China)

Neutrophil granulocytes play a key role in host response to periodontopathic bacteria. IL-1α is a potent pro-inflammatory cytokine with a wide range of immune functions. This study aimed to assess the effect of scaling and root planing (SRP) on IL-1α and neutrophil elastase levels in periodontitis patients. The patients were divided into 2 groups: SRP+GCF (n=20) and GCF (n=20). The GCF samples were collected before and after SRP, and the IL-1α and neutrophil elastase levels were measured using ELISA. The results showed that SRP significantly reduced the levels of IL-1α and neutrophil elastase, with a decrease of 35% and 40%, respectively. The study concluded that SRP is effective in reducing the levels of IL-1α and neutrophil elastase in periodontitis patients.

685 Perioperative Scaling. Effect on CD4+ T Lymphocytes of HIV+ AIDS Patients. P R CAMPBELL, C C LOACONIO, D W SPENCER, I P DIAUMOND (Baylor College of Dentistry, Dallas, Texas, USA)

The purpose of the study was to determine if perioperative scaling procedures are related to a change in the CD4+ T lymphocyte count in patients with HIV/AIDS. The study consisted of 33 patients who were diagnosed with HIV/AIDS and stabilized on antiviral medications for at least 3 months prior to participating in the study. All patients had an alpha-1-proteinase inhibitor (A1PI) level measured before and after scaling. The results showed that CD4+ T lymphocyte counts remained stable after scaling, with a mean change of 12 cells/mm³ compared to baseline. The study concluded that perioperative scaling procedures do not significantly affect the CD4+ T lymphocyte count in HIV/AIDS patients.

686 Influence of Calcium Removal on the Treatment of Adult Periodontitis R V OPPERMAN* and O BERND (Dept. Periodontology, UJMS, Brazil)

The aim of this study was to evaluate the clinical effects of plaque removal with and without removal of calculus, in the treatment of adult periodontitis. The protocol of this study was approved by the Committee of Ethical Affairs and the volunteers gave a written consent for their participation. Eight patients 15-60 years of age were selected. Clinical parameters were used as Plaque index (PI), Gingival index (GI), and pocket depth (PD) to assess oral hygiene, periodontal status, and the presence of inflammation, respectively. The data was registered after supragingival plaque control and up to 180 days following a modified Widman flap surgery. The supragingival plaque control was performed using a manually driven air-water syringe with low water pressure. The data was analyzed using the Wilcoxon signed-rank test and showed a significant difference (p<0.007) between the baseline and 180-day period. The clinical improvements were associated with no change in median plaque levels during the study period. The Pearson's correlation test was used to evaluate the correlation between the clinical parameters and the plaque levels. The results showed that there was no significant correlation between the plaque levels and the clinical parameters.

687 Root Surface Removal After Subgingival Preparation With Four Different Instruments. C ROBBINSON, M A EICHHEMANN-REIDY, R A RYNAK (Louisiana State University School of Dentistry, New Orleans, LA, USA)

A histological analysis of root surfaces previously subjected to treatment of clinical smoothness with either hand curettes (H), standard smooth ultrasonic tips (U), fine-grit (FG) or medium-grit (M) diamond coated ultrasonic tips were evaluated to compare root surface treatment. A previous study (Yunak et al. 1997) showed all performed equally well for calculus removal but there were concerns that this might result in a potential for soft tissue toxicity. Seven patients with four hopeless single-rooted teeth each (5 probing depth) were randomized to each of the 4 instruments. The teeth (N=5) were extracted, sectioned, and prepared for histological sectioning. SEM analysis of the root surfaces by cross-sections was performed to evaluate the root surface morphology. The results showed that the root surfaces treated with H and FG had significantly lower roughness than the other groups. There was no significant difference between M and G. The study concluded that root surface removal with different instruments resulted in similar histological outcomes for all instruments.

688 Fibrin Debridement with a New Diamond Coated Sonic Scaler G JUUSJALI, J H NORDIN, R D MOLES & H N NEWBERRY (Estonian Dental Institute, London, UK)

Recently, diamond coated sonic instruments have been developed for the purpose of removing fibrin deposits at the time of surgery. The aim of this study was to compare the efficiency of debridement of these new tips (Sonopore-Kavo) with conventional sonic instruments (Sonocure-Kavo) and hand instruments (Grace curettes) in both class II and III furcations. The results showed that the new instrument was more efficient in removing fibrin deposits on root surfaces and was also less traumatic to the root surface compared to the other instruments. The study concluded that the new instrument is more efficient in debridement of fibrin deposits.

689 Root Canal Debridement with a New Diamond Coated Hand Instrument A J GILLESPIE, J H NORDIN, R D MOLES & H N NEWBERRY (Estonian Dental Institute, London, UK)

The aim of this study was to compare the efficiency of debridement with a new diamond coated sonic scaler (Sonopore-Kavo) with conventional sonic instruments (Sonocure-Kavo) and hand instruments (Grace curettes) in both class II and III furcations. The results showed that the new instrument was more efficient in removing fibrin deposits on root surfaces and was also less traumatic to the root surface compared to the other instruments. The study concluded that the new instrument is more efficient in debridement of fibrin deposits.