

**1230** COMPARATIVE STUDY OF ACTION BY ETCHING MODALITIES AND Er:YAG LASER IRRADIATION ON THE ROOT SURFACE

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The aim of this study was to compare the effectiveness of citric acid, EDTA, citric acid with tetracycline, and Er:YAG laser to remove the smear layer from the root surface after scaling with manual instruments *in vitro* by SEM. Thirty specimens (n=30) of root surface before scaling were divided into 6 groups (n=5). The control group (G1) was not treated; Group 2 (G2) was conditioned with citric acid gel 24%, pH 1, during 2 minutes; Group 3 (G3) was conditioned with EDTA gel 24%, pH 7, during 2 minutes; Group 4 (G4) was conditioned with citric acid and tetracycline gel 50%, pH 1, during 2 minutes; Group 5 (G5) was irradiated with Er:YAG laser (2.94µm), 47mJ/10Hz, focused, under water spray, during 15 seconds and fluence of 0.58J/cm<sup>2</sup>; Group 6 (G6) was irradiated with Er:YAG laser (2.94µm), 83mJ/10Hz, focused, under water spray during 15 seconds and fluence of 1.03J/cm<sup>2</sup>. The microphotographs were analysed by scores and following statistical analysis with Kruskal Wallis (p<0.05) H=20.31. The results showed that the G1 was significantly less effective than all groups (28.0). The G2 (13.4), G3 (11.7) and G4 (13.6) showed no difference in relation to G5 (20.3) and G6 (6.0), but the G6 was significantly more effective than G5 in smear layer remove.

**1231** Level of AST in the saliva of patients with healthy periodontium and periodontal disease. CESCO, R.T.; ALBUQUERQUE JUNIOR, R. F.;

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The purpose of this study was to evaluate the levels of the enzyme aspartate aminotransferase (AST) in the saliva of individuals with healthy periodontium and different periodontal conditions. Fifty males and females subjects were selected, ranging in age from 22 to 72 years, without apparent systemic diseases, and who were not making use of antibiotics during the previous 90 days to the experiment. All patients were evaluated by the same professional, being submitted to the periodontal examination using a 621 periodontal probe (WHO) and divided in 4 groups based on the CPITN periodontal exam: in the group I, 10 patients were coded 0 (healthy periodontium); in the group II, 10 patients were coded 1 (bleeding on probing); in the group III, 15 patients were coded 3 (probing depth between 3.5 and 5.5mm); and in the group IV, 15 patients were coded 4 (probing depth >5.5mm). After rinsing the mouth with water, about 1,0 mL of the saliva was collected directly by mechanical stimulus in a sterilized test tube (15mmX100mm), and then, frozen at -20°C for posterior analysis. A biochemical analysis of the saliva samples was carried out in order to quantify the levels of the enzyme AST, using the Reflotron System of Diagnosis (Roche Diagnostics - Mannheim / Germany). The analysis of the results allowed concluding that there were no statistical significant differences between the AST levels in the groups I, II and III. However, group IV differed statistically from the others. High AST levels seem to be related to intense clinical signs in individuals presenting periodontal diseases.

**1232** Healing Pattern of autogenous Bone Grafts With or Without e-PTFE

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The aim of this study was to qualitatively evaluate the healing pattern of autogenous bone grafts used for alveolar bone reconstruction with or without e-PTFE membrane. Sixty wistar rats were used. 30 received autogenous bone graft and membrane (ME) while 30 more received only bone graft (E). Animals were sacrificed at zero hour, 7,14,21 and 45 days. Routine histological processing was performed. Descriptive histological analyses showed that the healing process developed similarly for both groups until day 14. Differences were revealed starting at day 21, group E showed extensive resorption at the lateral and superior borders of the bone graft, while ME revealed newly formed bone, originated from the receptor site, beyond the lateral borders of the graft and below the membrane. At 45 days, group E denoted extensive graft substitution and advanced resorption of its lateral borders. ME group depicted significant graft substitution by newly formed bone. In conclusion the healing pattern is similar for both groups until 14 day. At day 21 changes are revealed, group E shows extensive resorption of the graft while group ME depicts bone regeneration beyond the lateral borders of the graft. Both techniques showed satisfactory graft integration and initial graft substitution. Supported by FAPESP Grant 99/04367-7

**1233** Prevalence of aggressive periodontitis in young individuals

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Aggressive periodontitis, divided by localized (LAP) and generalized (GAP) forms, is a specific type of periodontitis with clinical findings differ from chronic periodontitis. The common features of LAP and GAP included individuals are otherwise clinically healthy, rapid attachment loss and bone destruction, and amount of microbial deposits are inconsistent with the severity of periodontal tissue destruction. The aim of the present study was to evaluate the prevalence of LAP and GAP in a population of young individuals from Vale do Paraíba, São Paulo. Six hundred patients, 244 males and 356 females, between 15-25 years old were included in this study. The mean age of the population was 19.4 ± 3.44. The periodontal status of the group study was determined by periodontal probing depth and attachment loss in 6 sites tooth evaluated by the same examiner. The periodontal diagnosis was established through clinical and radiographic parameters. Ten subjects (1.7%) showed LAP, 2 males (18.50 ± 2.12) and 8 females (19.25 ± 3.91) and 22 (3.7%) subjects were diagnosed as GAP, 6 males (19.18 ± 3.06) and 16 females (20.18 ± 2.71). Females showed a positive correlation with periodontal disease (χ<sup>2</sup> = 5.27, p = 0.02, OR = 1.65) and race showed a negative correlation with LAP or GAP (χ<sup>2</sup> = 1.96, p = 0.38, 2.g). In conclusion, we found that there was a high prevalence of LAP and GAP presented in the group of young individuals included in this study.

**1234** Deep periodontal pocket and presence of A. actinomycetemcomitans.

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Actinobacillus actinomycetemcomitans is an important pathogen in severe and recurrent forms of periodontitis. The prevalence of A. actinomycetemcomitans is nearly 90% in localized aggressive periodontitis and 30-40% in chronic periodontitis. The microorganism is frequently associated with deep periodontal pocket (DPP). The aim of the present study was to correlate A. actinomycetemcomitans and DPP. A total of 205 individuals, diagnosed according to AAP (1999) in chronic periodontitis (87), aggressive periodontitis (32) and incidental periodontitis (86) were included in this study. From each affected subject two sites that showed the most DPP were chosen to research A. actinomycetemcomitans. The subgingival bacterial plaque was obtained by paper points and processed by culture technique. To correlate A. actinomycetemcomitans and DPP confidential intervals were built (p < 0,05) for each mean group. The results showed a positive correlation between A. actinomycetemcomitans and DPP in individuals diagnosed by aggressive periodontitis expressed in generalized form, and incidental periodontitis. These results suggest that a positive correlation between A. actinomycetemcomitans and DPP could be observed in two types of periodontal disease.

**1235** Bone loss evaluation in diferent implants surface. One year follow up.

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This study evaluated the reaction of three different implant surfaces in regard to the bone loss during the natural progression of peri-implantitis. The surface used in the study were: titanium commercially pure (Ticp), titanium plasma spray (TPS), and acid attached surfaces (Ost). Six mongrel dogs had their premolars extracted. After 90 days, 27 implants (9 of each surface) were randomly placed and the dogs receive soft diet, chemical and mechanical plaque control; after the osseointegration period (90 days), the healing abutments were placed. After the healing period (45 days), the plaque control was suspended, and cotton ligatures were installed. These ligatures were changed every 20 days till the peri-implantitis was installed (60 days). At this moment the first radiographic exams were taken to access the bone loss, and then the disease induction was suspended. After 365 days of the natural progression of the peri-implantitis other radiographic exams were taken to evaluate the bone level. At the end of the study only Ticp and TPS could be evaluated, because only 4 Ost. remained in place. The statistical analysis showed that implants with a machined surface (Ticp) had a better behavior when compared to a rough surface (TPS). The Ticp implants had a mean bone loss of 0.47mm during the year and TPS 1.35mm in the same period.

**1236** Nicotine effect on the viability and morphology of fibroblasts.

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The aim of this study was to evaluate, *in vitro*, the effect of the nicotine on the viability and morphology of fibroblasts from a continuous lineage. Two experimental groups were formed, according to drug dosage (0-control, 10µg, 100µg, 0.5mg, 1mg) and conditioning time (1 and 24 hours). 12-well microplates were used. Each well received 2mL of fresh culture media and 1mL of a solution containing 1x10<sup>5</sup> cells/mL. Nicotine with the tested concentrations were then added to the wells. After the incubation period, cell viability was assessed by using trypan blue 0.4%. Cell viability and morphology were assessed on a inverted microscope. The experiment was repeated 5 times. The results using the Kruskal-Wallis test demonstrated that more non viable cells were found in groups exposed to nicotine in comparison to the control group, both after 1 and 24 hours of conditioning (p<0.05). Moreover, with increasing doses of nicotine there was a directly proportional increase of non viable cells, both after 1 and 24 hours of exposure (p= 0.0053 ; p=0.0001 after 1 and 24h). The morphology in the 1-hour conditioned group showed statistically significant differences in comparison to the controls and also when compared to the greatest dose of nicotine. These differences were also found between the control group and all nicotine concentrations after 24 hours. The conclusion of this study is that the nicotine can alter, *in vitro*, the viability and the morphology of fibroblasts in a dose and time of exposure dependent manner.

**1237** The presence of candida sp in gingival crivice of HIV infected children.

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The objective of this study was identify the presence of candida sp in the gingival crivice of 44 HIV infected children and evaluate the influence of the gengival health (GH), visible plaque (VP) and systemic condition (SC) in the colonization of this microorganisms. All patients had informed consent by their caregivers and the ethics committee of NESC - UFRJ approves this work. An index for VP was used where 0=no visible plaque; 1=thin visible plaque and gentle remove; 2=thick visible plaque. The GH was available according to bleeding after probing [0=no bleeding; 1=provoked bleeding; 2=spontaneous bleeding]. Material collect was made after supragingival plaque removed, under isolated with cotton rolls. Fine absorbent paper points were inserted to the gingival crivice was kept in place for 15 seconds. Candida sp was identified using CHROMagar Candida medium which allowed to identified the presence of candida sp in 34.1% of the children. There were no correlation between VP index, GH and candida sp colonization (CSC) (p>0.05). From the children with CSC, 79.9% presented some symptom of AIDS, wherever in the group with no CSC, this perceptual was 60.0% (p>0.05). An inverted correlation was observed in the mean of CD4<sup>+</sup>: 20.9(SD 13.1) and 25.4(SD 9.5), respectively. It can be conclude that although candida sp was presented in gengival crivice of HIV infected children, no correlation was found with VP index and GH; Candida sp is more frequent in patients with more advanced disease.

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