addition, 1-second and 2-second addition of post-irradiation water spray and temperature was monitored. Results : There existed significant temperature rise on the irradiated pulpal wall without addition of water spray after irradiation. However, addition of water spray for a second or two seconds after irradiation significantly decreased the temperature compared to no application of post-irradiation water spray and there was no significant difference between 1- and 2-second groups. Discussion and Conclusion : It is possibly suggested that addition of water spray for a second and more after irradiation reduces post-irradiation temperature rise which may lead to thermal damage on the dental pulp.

P92

A case report of photodynamic therapy on bacterial reduction before immediate implant.

Suzuki, L.C.; Yamada Júnior, A.M.; Hayek, R.R.A.; Ribeiro, M.S..

Recent studies have demonstrated that a number of oral bacteria can be killed by photodynamic therapy with low concentrations of dyes. Photodynamic therapy is the combination of light with appropriate wavelength and a photosensitizer. The antimicrobial activity is mainly mediated by singlet oxygen and/or free radicals generated by the photoactivated sensitizer. A flap surgery aiming an immediate implant was made in a residual root with periodontal lesion on upper first premolar. After the extraction, a microbiological sample with sterile paper points was harvested. Then, the photosensitizer was applied in the infected alveolus and irradiated with low-intensity laser, ?= 660 nm, P= 30 mW and E= 9 J . After the photodynamic therapy, a new microbiological sample was harvested. Subsequently, it was prepared the implant bed with conical burs and then the implant was placed. Patient was medicated with antibiotic after surgery. The microbiological analysis showed a significant reduction of Prevotella sp., Fusobacterium sp. and Streptococcus beta-hemoliticus. This finding suggests that photodynamic therapy is an alternative method to disinfect alveolus before implant placement. Therefore, this study highlights the need for future work in the area of photodynamic therapy to reduce bacteria without harming host tissue.

P93

Micro tensile bond strength of antibacterial self-etching adhesive system to Er:YAG Laser irradiated human dentin.

Suzuki, T.; Eguto, T.; Katsuumi, I.; Nara, Y..

The purpose of this study was to examine the μ-TBS of antibacterial self-etching adhesive system to Er:YAG laser irradiated human dentin. The standardized cavities were prepared finally with Er:YAG laser (L), DELight (HOYA ConBio) or steel bur (B) in the cervical region of 40 human premolars. The cavities were restored with a resin composite (Clearfil AP-X/Kuraray), and an antibacterial self-etching adhesives (P:Clearfil Protect Bond/Kuraray) or a self-etching adhesives (S:Clearfil SE Bond/Kuraray). A combination stress, thermal cycling (4?/60?, 2,500cycles) and simultaneous repeated load (12 kgf×105), was applied to four types (LP, BP, LS, BS) of restored specimen (n=10). Theμ-TBS of the specimens after the stress were measured. The data were analyzed by ANOVA and Tukey-Kramer test. The mean TBS(s.d.) in MPa were LP;6.96(4.61), BP;12.43(4.77), LS;9.02(4.92), BS;15.35(6.06). The μ-TBS of L was significantly lower than that of B. There was no significant difference in the μ-TBS between P and S. It was confirmed that the Er:YAG laser irradiation to the cavity wall decreased the dentin bond strength compared to the bur-preparation. The μ-TBS of Clearfil Protect Bond to Er:YAG laser irradiated dentin had similar value with Clearfil SE Bond.

P94

Effect of Er:YAG laser irradiation on the root surface treated with Edta. A SEM Study.

Theodoro, L.H. ; Santana, T.C.; Kabbach, W.; Marcântonio, R.A.C.; Sampaio, J.E.C.; Garcia, V.G..

Doutora em Periodontia- Araraquara-UNESP.

The aim of this study was to evaluate by SEM the effect of Er:YAG laser(2.94 um) irradiation on the closed of dentinal tubules on root surface.Were obtained two root samples of twenty human pre-molar and molars (n=40).The cementum was removed and the sample were treated with 24 % EDTA and divided into 4 groups. The samples were irradiated only in it half and another part were considered control group: G1-Er:YAG laser no focalized (60 mJ,2 Hz,30 s);G2- Er:YAG laser focalized (60 mJ,2 Hz, 30 s);G3 Er:YAG laser no focalized (80mJ,2Hz,30 s); G4- Er:YAG laser focalized(80 mJ,2 Hz,30 s.The sample were analyzed by SEM and the photomicrographs were analyzed by a score. The results showed that G1, G2 and G3 were not effective to close dentinal tubules and the G4 were effective in the tubules obliteration when compared to the control group (p=0.004). In conclu-