was moved perpendicularly from the apical portion of the root canal toward the canal orifice at a speed of 1mm/s. The root canal walls irradiated without staining were served as controls. Furthermore, the root surface temperature before and after the irradiation was measured, and the root canal walls were observed by scanning electron microscopy (SEM). The elevation of root surface temperature was within 10 ? in all groups. Therefore, we suppose that the periapical tissues may not be affected under the lasing condition used. The orifices of the dentinal tubules were sealed with melted dentin in the ophthagreen and methylene blue groups, while the root canal walls in the control group were rarely affected by laser irradiation under SEM observation.

P08

Effects of Nd:YAG and diode laser irradiation on the root surface with or without dye: thermal analysis.

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The laser absorption is dependent on the color of target material. The aim of this study was to investigate the effect of dye on temperature rise after Nd:YAG or diode laser irradiate. Methods: Root surfaces were irradiated for 1minute using 0.8W, 0.9W, 1.0W, 1.2W of Nd:YAG laser (1064nm) or 0.9W, 1.0W of diode laser (805nm). The temperature was monitored by using type K thermocouple positioned in the pulp chamber. The distance between samples and fiber was set at 0mm and 5mm. Indian ink was used for Nd:YAG laser and indocyanin green was for diode laser. Result: It was observed that the closer the distance between fiber and root surface, the higher the temperature of pulp chamber. We also found that the temperature of the pulp chamber rose rapidly after laser irradiate with dye over 10 seconds. In addition, at 60th second, the temperature of laser irradiation with dye was higher than that without dye. Conclusions: The results of this study suggest that it is desirable to perform combined use of laser and dye within 10 seconds. And it also suggests a need to irradiate carefully over 10 seconds.

P09

Spectroscopic analysis and interaction of different bleaching agents with 660n laser and 470 nm LED.

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Doutorando em Dentística USP.

The aim of this in vitro study was to verify the effect of different dental bleaching methods regarding the achromatic enamel color change. Forty-five bovine teeth were immersed in a darkening solution and then divided into nine experimental groups with five samples in each group. The color measurement was initially taken using a digital colorimeter. The teeth were submitted to the bleaching with three bleaching gels, without any activation source (control) and with two wavelengths (660 nm diode laser and 470 nm LED). The previous analysis of the absorption spectra enabled the choice of an adequate wavelength in order to enhance its photochemical action. The second color measurement was taken after all the treatments. The data were submitted to ANOVA and Tukey parametric statistical tests (p=0,05). It was observed that: 1) there was a statistical significant difference between the activation sources; 2) there was statistical significant difference regarding the interaction among the activation sources and the bleaching gels when compared with each other. The activation methods of the bleaching agents, even promoting color changes in distinct levels, still require further studies capable of detecting a higher absorption spectrum of a product and which presents significant clinical results.

P10

Effect of low power laser irradiation (660nm) on human fibroblasts growth.

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Doutoranda em Diagnóstico Bucal pela FOUSP.

The aim of this in vitro study was to analyse the effect of different power densities of a low-power diode laser on the biomodulation of human gingival fibroblasts. The cells were cultured in nutritional deficit. Laser irradiation was carried out with a low intensity GaAlAs laser (660nm; fluency of 2J/cm2). The irradiation was done twice with 12-h interval, using the punctual technique, at continuous mode and in contact. The cells were plated in Petri dishes (n=27) and randomly divided into 3 experimental groups, as follows: I- control group: not irradiated; II- power of 10mW and intensity -142,85mW and III- power of 29mW and intensity - 428,57mW. Growth curves were obtained by counting