250mJ/2Hz + FC. After treatment with phosphoric acid etching 15s and adhesive system Excite, inverted conical specimens were prepared with Tetric Ceram composite in 3 increments, photo-cured for 40s each, using or not previously FC Tetric Flow. After storage in distillated water (37 oC-24 h) was performed the tensile test using an universal testing machine Mini Instrom 4442. The mean bond strength values MPa were G1-13.54(±2.99); G2-14.67(±2.32); G3-9.49(±3.09); G4-14.60(±2.76); G5-8.97-(±3.89); G6-13.02(±2.18). The data obtained were submitted to Kruskal Wallis test (p=0,01). It can be concluded that high-speed drill treated surfaces showed statistically no influence of flowable composite, higher bond values than laser treated surface without flowable composite and similar effectiveness than laser surface with flowable composite; the flowable composite showed significant increase of bond values on surface treated by Er:YAG laser radiation with different energy parameters.

P68

Influence on the apical marginal permeability after laser irradiation with two wavelenghts associados with two Endodontics cements.

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The in vitro study aims to evaluate, quantitatively and qualitatively, the Nd:YAG and Diode laser irradiations having the EDTA-T irrigation as a reference on the root canal apical sealing when made previously to the root canal filling with two resin cements (AH Plus and Endo REZ). Qualitative and quantitative analyses were based respectively on the blue methylene apical marginal linear infiltration readings and on the morphological aspects readings of the cement adaptation on the apical region walls through SEM images. The apical marginal infiltration reading results after the analysis of variance and Tukey´s test showed statistical significant differences among the treatment types of the root canal walls independently from root canal filling cement used. The cements are significant different among themselves regardless the kind of treatment on the root canal walls. When the experimental group interactions were analyzed could be seen that the root canal filling cements did not present statistical significant differences when the root canal walls were treated with EDTA-T. The SEM analysis revealed a better AH Plus cement adaptation for the Nd:YAG laser irradiated root canal walls confirming the microleakage results. The best results were achieved with the Nd:YAG laser irradiation associated to the AH Plus cement.

P69

Local Treatment using high and low-power laser on herpes simplex.

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Herpes simplex (HSV) is commonly encountered in the dentistry practice disappearing after 10 to 14 days. Recently alternative treatments have been introduced, among those laser therapy. The aim of this study is to evaluate the efficacy of laser therapy in patients with perioral herpes simplex infection. A 32 years old female was treated with high-intensity laser therapy (HILT) in vesicle phase using a Nd:YAG laser, l= 1064 nm, P= 1,5 W, f= 15 Hz on days 1 and 2 to drainage the vesicles. Low-intensity laser therapy (LILT) was applied on the affected area in the 3 consecutive days with a GaAlAs laser, l= 830 nm, D= 5 J/cm2. On the other hand, a 7 years male patient, which presented the vesiculo-ulcerative stage, only LILT (l= 660 nm, D= 4 J/cm2) was carried out. For both cases, it was observed that the course of the infection was quicker than the normal. Seven days after treatment beginning the lesions were healed. These findings suggest that LILT associated or not to HILT is a efficient and promising treatment for HSV. Further larger studies aiming at confirming these data and investigating the LILT mechanisms of action should be performed.

P70

Effects of the low-intensity red laser radiation on the fluoride uptake in human enamel. A preliminary study.

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Fluoride has been the most important preventive method on development of the caries. This in vivo study evaluated the effects of low-intensity red laser radiation on the fluoride uptake in enamel. Ten healthy participants were recruited for this study. The two upper central incisors of each volunteer were used and divided into 4 groups: group GC (control), which was untreated; group GF (fluoride), which received topical acidulated phosphate fluoride (APF) 1,23% treatment for 4 minutes; group GLF (laser + fluoride), which was irradiated with a low-intensity diode laser (l= 660 nm and

dose= 6 J/cm²) with APF application after irradiation and group GFL (fluoride + laser), which received APF before irradiation using the same parameters as GLF. The determination of fluoride was performed using a fluoride ion electrode after an acid-etch enamel biopsy. The results showed a significant increase of the fluoride uptake in enamel for groups GF, GLF and GFL when compared to control group. Although a percentage increase of 57% was observed for GLF with respect to GF, there were no statistical differences among the treated groups. These findings motivate further studies in order to introduce low-power laser associated to APF as a protective method of dental caries.

P71

Morphological analysis of cavities preparations perfomed by Er:YAG laser using different parameters.

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The purpose of this study was to evaluate morphological changes in cavities performed by Er:YAG laser (2.94µm)(KaVo KEY 3)(LELO-FOUSP) and high-speed drill. In buccal and lingual surfaces of 27 human molars (Banco de Dentes-FOUSP) were performed cavities using different laser parameters (n=3): G1-15Hz/160mJ enamel/6Hz/200mJ dentin; G2-15Hz/180mJ enamel/6Hz/200mJ dentin; G3-15Hz/160mJ enamel/6Hz/250mJ dentin; G4-15Hz/180mJ enamel/6Hz/250mJ dentin; G5-15Hz/180mJ enamel/10Hz/180mJ dentin; G6-15Hz/160mJ enamel/10Hz/180mJ dentin; G7-15Hz/160mJ enamel/10Hz/160mJ dentin; G8-15Hz/180mJ enamel/10Hz/160mJ dentin and G9-high-speed drill. Samples were fixated (2.5% glutaraldheide, 12h, 4°C), dehydrated (25-100% ethanol), dried to a critical point and sputter-coated with gold for analysis under SEM. All laser parameters used demonstrated no evidence of thermal damage and signs of burning, cracks and melting, Er:YAG laser ablated dental hard tissues, with exhibition of enamel rods, like scales, dentin surface without smear layer and dentinal tubules opened. Conclude that Er:YAG laser parameters were effective on ablation of hard tissues, promoting morphological changes on irradiated tissues, creating irregular and microretentive morphological pattern.

P72

Comparative study of the microhardness and curing depth of composite resin with halogen lamp and argon laser.

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The aim of this study was to conduct an in vitro comparison of the Vickers microhardness on the surface an at 2 and 4mm of depth after curing of a posterior composite resin (P60 - 3M) by utilization of halogen lamp and argon laser at a wavelength of ? = 488 nm. Ninety specimens were employed, with two metallic matrix bands measuring 6mm in diameter and 2mm or 4mm in height. Curing of the specimens was conducted with a halogen lamp (400mW/cm²) on the specimen surface, by means of the conventional and soft-start techniques. Conventional light-curing was performed for 20 seconds. Soft-start curing was carried out for initial five seconds at a light intensity of 200mW/cm², followed by a 1-minute interval and further 15 seconds of light-curing at 400mW/cm². As to the argon laser, curing was performed on the specimen surface for 10 seconds at an intensity of 250mW/cm2. The specimens were submitted to reading of Vickers hardness on a microhardness tester (FGM Microhardness Tester), on which every test surface underwent three indentations with a 50-g load for 30 seconds, being the result represented by the mean of the three hardness measurements achieved. Just the soft-start curing group at 4mm exhibited a lower mean microhardness, which was quite different from that found for the other groups. The mean microhardness measurements on the surface of the specimens were also higher than those achieved at 2mm, with the highest mean hardness of the specimen by utilization of the soft-start technique. The argon laser revealed a statistically similar hardness on the specimen surface when compared to the discontinuous mode at 2mm of depth, with just 10 seconds of light-curing. The results achieved were submitted to statistical analysis by the parametric technique of analysis of variance (ANOVA) at a significance level of 5%, which demonstrated that microhardness was decreased with the increase in depth, regardless of the light source and curing technique employed. The argon laser displayed a lower mean microhardness compared to the halogen lamp.

P73

Clinical evaluation of the immediate effectiveness of gaaias laser on the therapy of dentin