Conclusion: Thus, efficacy can be completed in the obliteration of tubules and interruption of fluid movement within the dentinaur tubules with treatment of the exposed surface with the high-power diode laser.

EFFECT OF RED AND INFRARED LOW-LEVEL LASER THERAPY ON VIABILITY AND DIFFERENTIATION OF SHED

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Aim: The purpose of this study was to compare the effect of red and infrared low-level laser (LLL) on the viability and the expression of TGFb1 and RUNX2 mRNA of stem cells from human exfoliated deciduous teeth (SHED).
Method: SHED were irradiated with red laser (660 nm) or infrared laser (780 nm) set with the following dosimetries: 2.5 J/cm2 (10 mW, 10 s, 0.1 J) and 7.5 J/cm2 (30 mW, 10 s, 0.3 J). Control group comprised non-irradiated cells. Cell viability was assessed by trypan blue exclusion method after 24, 48 and 72 hours, and the expression of TGFb1 and RUNX2 mRNA was evaluated by real time RT-PCR after 1 and 7 days. Human odontoblasts and osteoblasts were used as positive controls for RT-PCR. Cell viability was analyzed by two-way ANOVA and Scott Knott' s post hoc test ($P < 0.05$). TGFb1 and RUNX2 mRNA expressions were descriptively analyzed.
Results: The average percentages of viable cells for all groups were 88.75%, 91.7% and 93.11% at 24, 48 and 72 hours, respectively. All samples expressed TGFb1 and RUNX2, except SHED irradiated with red laser at 7.5 J/cm^2 that did not express RUNX2. TGFb1 and RUNX2 were upregulated in cells irradiated with red and infrared LLL compared to non-irradiated SHED and the positive controls at day 1. At day 7, SHED irradiated with 7.5 J/cm2 by infrared laser expressed more TGFb1 than all groups, and non-irradiated SHED showed higher levels of RUNX2 than the others.
Conclusion: Therefore, the viability of SHED is not affected by irradiation with red and infrared LLL (2.5 and 7 J/cm2), while SHED irradiation with infrared LLL at 7.5 J/cm2 seems to upregulate the expression of TGFb1 and RUNX2.

EFFECT OF SIMULATED EROSIVE CHALLENGE ON DIFFERENT RESTORATIVE MATERIALS

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Aim: This study evaluated the effects of erosive challenge that simulates the intrinsic acid from gastroesophageal reflux, on surface roughness (Sa) and volume loss (VL) five of restorative materials with distinct compositions.
Method: Ten samples (4x4x1mm) were made from five materials (Filtek Universal Restorative, Charisma Classic, Admira Fusion, Equia Forte HT Fil, and Activa BioActive-Restorative). After curing (Valo) and polishing (#1200, 2400), half of the sample's surface was covered with adhesive tape to create a control area and treated area. The samples were submitted to the erosive protocol (5 mL of HCl, pH 1.2, 30 hours at 37°C) and evaluated for Sa and VL using confocal microscopy. Data were analyzed by ANOVA (two factors) and Tukey's test (α = 0.05).
Results: For most restorative materials, the erosive challenge did not affect the Sa values, except for the ionomeric material (Equia Forte HT Fil), which presented a significantly Sa increase ($p<0.001$). Regarding Sa evaluation, Filtek Supreme Ultra presented the lowest Sa value, while Equia Forte HT Fil showed the highest one ($p<0.001$) for both control and treated areas. Concerning VL evaluation, Equia Forte HT Fil also showed the highest VL values ($p <0.001$), while the other materials did not present significant differences among them.
Conclusion: Results suggested that Equia Forte HT Fil was the most affected material by erosive challenge regarding Sa and VL. The remaining materials did not show significant changes in Sa and VL following the erosive challenge.

EFFECT OF TAI CHI CHUAN PRACTICE ON STRESS, ANXIETY AND SELF-PERCEPTION OF HAPPINESS: PARCIAL RESULTS

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Aim: This study aimed to evaluate the level of anxiety and stress of Tai Chi Chuan practitioners or non-practitioners and to compare the level of anxiety and self-perception of happiness before and after practicing this art.
Method: The sample consisted of 123 individuals, young and adults, of both sexes, divided into two groups: G1 (n = 41): students of the specialization in preventive interdisciplinary care in early childhood at the Piracicaba Dental School (FOP-Unicamp) and G2 (n = 82): high school students participating in the Institutional Scholarship Program for Scientific Initiation for High School at FOP-Unicamp. The Perceived Stress Scale (PSS-14) was applied before Tai Chi practice. The State Anxiety Inventory (STAI-S) and the Faces Scale of Andrews (self-perception of happiness and well-being), were applied before and after the theoretical-practical Tai Chi class. Descriptive analysis was performed using tables of frequencies, mean, and standard deviation. The paired t-test was applied to compare the anxiety score before and after the activity.
Results: The average anxiety score decreased significantly after practicing Tai Chi ($p <0.0001$). It was observed that 45.5% of the individuals had a moderate stress level. Also, 82.9% considered themselves happy and 1.6% sad, and after practicing the activity, 97.5% were happy and no individual was sad.
Conclusion: The volunteers had a moderate level of stress and Tai Chi was effective in reducing the level of anxiety.

EFFECT OF TEMPERATURE ON PHYSICAL AND CHEMICAL ANALYSIS OF CALCIUM SILICATE-BASED ENDODONTIC SEALERS

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Aim: The aim of this is study was to evaluate physical and chemical properties after heating conditions of calcium silicate-based endodontic sealers.
Method: EndoSequence BC Sealer HiFlow (Brasseler, Savannah, Georgia, USA), Bio-C Sealer (Angelus, Londrina, PR, Brazil), BioRoot RCS (Septodont, Saint-Maur-des-Fossés, France), and the control AH Plus (Dentsply DeTrey, Konstanz, Germany) were comparatively evaluated regarding their material surface and chemical characterization using scanning electron microscopy (SEM) and energy dispersive-spectrometry (EDS). In addition, accordingly to ISO 6876/2012, flow, setting time (in dry and moist environments), solubility, radiopacity and pH were evaluated at 37° C and after 1-minute exposure at 100° C. Comparisons used with unpaired-T-test and Kolmogorov-Smirnov.
Results: SEM/EDS analysis exhibited peaks of tricalcium silicate, dicalcium silicate, and zirconium dioxide. Heating at 100° C significantly altered the flowability of all calcium silicate-based sealers with a wide variation between setting times for both tested temperatures, along with solubility levels above ISO-standard. For all tested sealers, radiopacity fulfilled the requirements, and pH exhibited alkaline values.
Conclusion: Tested calcium silicate-based sealers suffered minimal alterations after heating in simulated thermoplasticized obturation techniques. (CNPq 429721/2018-8; FAPESP 2019/22098-9; CAPES Code 001).

EFFECT OF THE COMBINATION OF DIURNAL EXPOSURE TO SUCROSE AND NOCTURNAL EXPOSURE TO LACTOSE ON ENAMEL DEMINERALIZATION

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Aim: the aim of the study was to evaluate in vitro the enamel demineralization in a cariogenic biofilm combining diurnal exposure to sucrose and nocturnal exposure to lactose.
Method: Cariogenic biofilms were formed on bovine enamel slabs with known surface hardness (SH) and were exposed 8 times a day for 3 min to solutions of 10% sucrose (cariogenic diurnal diet), or 50 mM NaCl solution. Then, the biofilms were maintained in a medium containing 0.7% lactose (nocturnal milk retention in mouth), or only in a medium for 2 h. Four conditions were evaluated (n = 12): Ctrl, negative control; Lac, nocturnal exposure to lactose only; Suc, diurnal exposure to sucrose only; and Suc → Lac, diurnal exposure to sucrose followed by nocturnal exposure to lactose. The culture medium was changed 3 times a day, at the beginning of the day, and after the diurnal and nocturnal treatments, being the pH evaluated. After 96 h of growth, biofilms were collected to evaluate viable cells (CFU), biomass, and extracellular polysaccharides (EPS). The percentage of SH loss (% SHL) was calculated. The data were analyzed by one-way ANOVA and Tukey's test (α = 5%).
Results: The %SHL differed between the groups ($p <0.05$), being higher for Suc → Lac (40.6 ± 6.8) when compared to the others, Suc (32.1 ± 7.2), Lac (6.6 ± 4.5), and Ctrl (2.4 ± 3.1). Only the Ctrl group showed lower CFU counts ($p <0.05$). For biomass and EPS, the groups Suc → Lac and Suc showed similar values ($p> 0.05$), but higher than Lac and Ctrl ($p <0.05$).
Conclusion: The data suggest that biofilm formed under diurnal exposure to sucrose may increase the cariogenicity of nocturnal exposure to lactose.

EFFECT OF THE COVID-19 PANDEMIC ON BEHAVIORAL AND PSYCHOSOCIAL FACTORS RELATED TO ORAL HEALTH IN ADOLESCENTS

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Aim: This study assessed psychosocial and behavioral changes related to oral health in adolescents during the pandemic period of COVID-19.
Method: This longitudinal study evaluated 290 adolescents, in the city of Santa Maria, southern Brazil. These adolescents were contacted until and during the pandemic by telephone calls to answer some questions related to behavioral and psychosocial issues in this period. Therefore, this study was divided into two different steps: baseline (T1 – November 2019 to February 2020) and follow-up (T2 – June to July 2020). The differences between the variables in T1 and T2, as well as the effect of social distance, were assessed using the McNemar and Chi-Square tests, respectively.
Results: From the 290 adolescents evaluated at T1, 207 were followed up and contacted during the pandemic period (response rate of 71.3%). During the period, the frequency of toothbrushing, the use of dental services, and the self-perceived need for dental treatment decreased among adolescents ($P<0.05$). Sugar consumption, bruxism, and quality of sleep did not change significantly. Adolescents belonging to higher-income families reported adopting a greater degree of social distancing ($P<0.05$).
Conclusion: Behavioral and psychosocial factors showed significant changes due to the COVID-19 pandemic in adolescents. In addition, adolescents belonging to families with a higher household income declares the adoption of a greater degree of social distancing.

EFFECT OF THE METAL ARTEFACT REDUCTION TOOL ON THE ARTEFACTS EXPRESSION PRODUCED IN REGIONS OF A TOOTH WITH METAL POSTS

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Aim: The aim was to evaluate the effect of the metal artefact reduction (MAR) tool on the expression of artefacts produced in different regions of a tooth restored with distinct metal posts, in cone-beam computed tomography (CBCT) images.
Method: Two alveolar sockets (anterior and posterior) of a mandible were enlarged to accommodate a single-rooted tooth. Images of the tooth without a metal post and with nickel-chromium (Ni-Cr), cobalt-chromium (Co-Cr) or silver-palladium (Ag-Pd) posts into the root canal were individually acquired using the OP300 CBCT unit. Scans were obtained with two conditions of MAR: disabled and enabled. Then, for each scan, 8 lines of interest (LOIs) were determined around the root canal: 4 in oblique (mesiobuccal, distobuccal, mesiolingual and distolingual) and 4 in orthogonal (buccal, lingual, mesial, and distal) directions. The expression of the beam-hardening artefacts was determined by calculating the difference in the mean of gray values (DMGV) between the experimental and the control groups for each LOI, within each post material. Positive DMGV meant hyperdense artefacts, whereas negative DMGV meant hypodense artefacts.
Results: In general, for the Ag-Pd posts, there were significant differences between "without MAR" and "with MAR" in most directions, both in the anterior and posterior regions; the