

ABSTRACTS

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ORAL PRESENTATION**AGRIN PROMOTES ORAL CANCER-ASSOCIATED EVENTS**

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Aim : Oncogenic processes that could associate agrin and oral cancer have been identified, but these findings have not been observed in the context of oral cancer progression. Here, we examined the role of agrin in progression of oral squamous cell carcinoma (OSCC).

Method : We evaluated the immunohistochemical expression of agrin in OSCC and dysplasias. Benign lesions were used as control. In subsequent experiments, we investigated whether the silencing of agrin interferes with tumor expansion, in vitro as well as in vivo. To gain insights into interaction partners in the agrin complex, we expressed its soluble C-terminus, and we identified its protein network using mass spectrometry-based proteomics and bioinformatics tools. Finally, we evaluated the clinical relevance of agrin network.

Results : Agrin was elevated in malignant and premalignant lesions. Agrin silencing suppressed cancer progression-associated events, including cell invasion, colony and 3D tumor spheroid formation, and it also decreased the mRNA levels of the OSCC oncogene, epidermal growth factor receptor. The silencing of agrin reduces the tumor severity in mice. A high expression of agrin network predicts adverse overall survival in patients.

Conclusion : Agrin is a histological marker of malignant and premalignant oral lesions. Furthermore, agrin promotes oncogenic events. The silencing of agrin offers a method for interfering with progression of oral cancer. The network of agrin is a source of potential prognostic markers for oral cancer. Our results open new perspectives for further investigations and therapeutic strategies.

ORAL PRESENTATION**ASSESSMENT OF THE INFLUENCE OF ARTIFACTS ARISING FROM METALLIC MATERIALS IN THE EXOMASS ON CBCT VOXEL VALUES**

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Aim : To evaluate the influence of artifacts arising from the exomass on Cone-Beam Computed Tomography (CBCT) voxel values.

Method : A phantom was made of 16 polypropylene tubes filled with a solution of dipotassium hydrogen phosphate (1.000 mg/mL). CBCT scans were obtained in three CBCT units: NewTom Giano, QR (90 kVp, 3 mA, 9 s, voxel 0.1 mm); CS 9300, Carestream (90 kVp, 3.2 mA, 20 s, voxel 0.09 mm) and Picasso Trio, Vatech (90 kVp, 3 mA, 24s,

voxel 0,2 mm) with the phantom centred in a field-of-view (FOV) of 5x5 cm, and under protocols with metallic materials of different composition and number in the exomass: one, two or three titanium dental implants, cylinders of cobalt-chrome or cylinders of amalgam. One observer, using the software OsiriX (Switzerland), obtained mean voxel values from 16 homogeneous regions-of-interest of the phantom and averaged. In order to measure voxel values variability of each scan, standard deviation was calculated. Mean voxel values and variability values were separately compared between protocols by analysis of variance (ANOVA) and post hoc Tukey's test ($\alpha=0,05$).

Results : In NewTom Giano unit, the mean voxel value was significantly higher in amalgam material. However, in the CS 9300 and Picasso Trio units, the mean voxel value was significantly lower in amalgam material. In all units, the presence of the metallic materials in exomass increased significantly the variability of the voxel values regarding the control.

Conclusion : The artifacts arising from metallic materials in the exomass influenced CBCT voxel values.

ORAL PRESENTATION**ASYMPTOMATIC/SYMPTOMATIC ENDODONTIC INFECTION BACTERIAL PROFILE AND ANTIMICROBIAL SUSCEPTIBILITY OF BLACK-PIGMENTED BACTERIA**

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Aim : The objectives were: 1) to study the microbiota (MO) of 3 sites: root canals (RC) of necrotic teeth with symptomatology (SYM); periapical abscesses (PA) associated with such RC; RC of necrotic but asymptomatic (ASYM) teeth and to correlate them to the clinical findings; 2) to determine the susceptibility of anaerobic black-pigmented bacteria (BPB) against specific antibiotics.

Method : Patients with a endodontic infection, necrotic pulp, with or without SYM were selected. Samples were collected from RC (10 SYM and 10 ASYM) and from the 10 associated PA. Part of the samples was analyzed by checkerboard technique; and another part was plated for isolation of BPB and their identification by genetic sequencing. The susceptibility of BPB was determined by E-test using selected antibiotics: benzylpenicillin, amoxicillin (AC), AC + clavulanic acid (XL), erythromycin, azithromycin (AZ), clindamycin (CM) and metronidazole (MZ). Pearson's Chi-square test or Fisher's exact test was used when appropriated.

Results : MO were present in the 3 sites and composed by anaerobic Gram-negative rods in positive and negative associations. There was no significant difference in the association between bacterial species and clinical

features in all groups ($p > 0.05$). XL, MZ, AC and CM were the most effective antibiotics, while AZ was the least.
Conclusion : MO of the 3 sites revealed a wide diversity of species, presenting positive and negative associations. Most of the BPB revealed resistance to all antibiotics tested. (FAPESP 2015/23479-5; 2016/23950-2; CNPq 308162/2014-5; CAPES e FAEPEX)

ORAL PRESENTATION

CHARACTERIZATION OF Ti-Zr AND Ti-Nb-Zr ALLOYS FOR DENTAL IMPLANTS

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Aim : This study developed and evaluated the structural, mechanical, chemical, electrochemical and biological properties of binary and ternary titanium (Ti) alloys containing zirconium (Zr) and niobium (Nb).

Method : The experimental alloys (in wt%): Ti-5Zr, Ti-10Zr, Ti-35Nb-5Zr and Ti-35Nb-10Zr were fabricated and machined into discs with 10 mm in diameter and 2 mm in thickness. CpTi and Ti-6Al-4V alloy discs were used as controls. The groups were characterized by means of X-ray diffraction, scanning electron microscopy, Vickers microhardness, elastic modulus, energy dispersive spectroscopy, atomic force microscopy, surface roughness and surface free energy. The electrochemical assessment consisted of standard tests conducted in a body fluid solution (pH 7.4). The albumin adsorption was measured by the bicinchoninic acid method. Data were evaluated through one-way ANOVA and Tukey test ($\alpha = 0.05$).

Results : All alloys had a superior microhardness when compared to cpTi, specially the α Ti-Zr alloys ($p < 0.05$). The incorporation of Nb and consequent precipitation of the β phase decreased the elastic modulus of Ti-Nb-Zr alloys ($p < 0.05$). Ti-Zr alloys presented superior electrochemical behavior relative to that of controls, presenting higher polarization resistance and lower capacitance, corrosion current density and corrosion rate ($p < 0.05$). The experimental alloys had no influence on albumin adsorption.

Conclusion : The experimental alloys are good alternatives for dental implant application, specially the binary system that showed better combination of mechanical and electrochemical properties without being detrimental to protein adsorption.

ORAL PRESENTATION

CITOTOXICITY OF NEW LAPACHOL DERIVATIVES IN ORAL SQUAMOUS CELL CARCINOMA

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Aim : The present study aimed to evaluate the cytotoxicity of new lapachol derivatives in oral squamous cell carcinoma (OSCC) cell lines.

Method : The new lapachol derivatives were obtained by synthesis. The cytotoxic activity was determined in five OSCC cell lines (HSC3, SCC4/9/15/25) and in the immortalized human keratinocyte cell line (HaCat) through the Alamar Blue method and IC50 values were obtained by nonlinear regression. For evaluation of cell viability by trypan blue, HSC3 was incubated with β -lapachone (0.5ug/ml), 3-i- α -lapachone (2 and 4ug/ml) and 3-i- β -lapachone (0.5 and 1ug/ml). Cell morphology was evaluated through HE stain. Cell cycle and annexin V/PI, rhodamine 123 and 2',7'-dichlorofluorescein diacetate staining were evaluated by the flow cytometer. The difference between the groups was assessed by ANOVA test for Student-Newman-Keuls test ($p < 0.05$).

Results : β -lapachone showed IC50 values from 0.02 to 4.9 ug/ml for SSC15 and SCC4, 3-i- α -lapachone presented IC50 from 1.88 to 3.61 ug/mL for the HSC3 and SCC9 and 3-i- β -lapachone showed IC50 from 0.35 to 1.07 ug/mL for SCC15 and SCC25, respectively. After 24 hours incubation of HSC3, both lapachol derivatives demonstrated to decrease the number of viable cells. Additionally, an increase in the number of cells in the G2/M phase was observed. The stain of cells with annexin V, increase ROS production, loss of mitochondrial membrane potential and typical morphology of cell death by apoptosis was also observed after treatment.

Conclusion : The new lapachol derivatives are cytotoxic to OSCC cells through cell cycle blockage in the G2/M phase and cell death by apoptosis.

ORAL PRESENTATION

DETERMINING FACTORS FOR PAPILLA FORMATION IN TEETH AND IMPLANTS IN PATIENTS WITH A HISTORY OF PERIODONTAL DISEASE

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Aim : The aim of the present study was to evaluate the systemic and determinant characteristics to obtain the formation of papilla between teeth and implants in patients affected by previous periodontal disease.

Method : Thus, periodontally healthy patients (Grp Sd; n = 27), with a history of chronic periodontitis (Grp Cr; n = 48) and aggressive (Grp Ag; n = 33) were included, receiving an implant adjacent to the tooth, with screwed prostheses Units. Patient parameters (age, gender, type of disease), implants (eg bone or tissue level, diameter, stage), tissue (eg thickness of mucosa) and prosthetic (presence and height of contact point, Width), at the time of surgery, of the installation of the prosthesis and after 6 months of function. All variables were analyzed by a linear

and multivariate regression analysis, considering the dependent variable the presence and extent of the papilla

Results : Results: The absence of complete papilla was observed in 85%, 96% and 75% of the cases in the Sd, Cr and Ag groups, respectively, ($p < 0.05$). Among the variables that influenced the absence of complete papilla, we can observe the history of periodontitis ($OR = 32.95$, $CI = 2.02-37.3$, $p = 0.014$) and the posterior region ($OR = 6.85$, $CI = 1.3-36.05$, $p = 0.023$). The other variables were not significant in the logistic model.

Conclusion : In conclusion, the region of implant insertion and history of periodontal disease can influence the presence of papilla between implants and teeth.

ORAL PRESENTATION

EFFECT OF SURFACE TREATMENT WITH LASER ER:YAG IN THE FLEXURAL STRENGTH OF ZIRCONIA

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Aim : It is considered fundamental to investigate whether the laser has a conditioning action that increases retention without altering mechanical properties of prosthesis. The aim of this study, therefore, was to analyze the action of the Er:YAG laser on the zirconia surface (Y-TZP), in particular flexural strength.

Method : Pre-sintered zirconia CAD CAM blocks were sectioned into 120 specimens with dimensions of 15 x 19 x 40mm. These slices were later transformed into 15mm diameter disks using diamond tips mounted in high rotation and then sintered (volumetric contraction of approximately 22%). As the variation factor was the surface treatment, the 120 specimens were divided into 4 groups, as follows: G1 received no treatment; G2 was treated with tribochemical abrasion (Particles of 30 μ m; 2.8 bar; 10s; 10mm of distance, 90°); G3 and G4 were irradiated with Er:YAG laser (80mJ/2Hz) with 50 μ s and 300 μ s, respectively. The flexural strength was determined by means of a piston-type device on three balls in a universal testing machine.

Results : The analysis revealed that G2 has the highest flexural strength, followed by G1. Groups G3 and G4 are similar in strength when compared to each other. The number of fragments was also higher in G2 when compared to the other groups. The results demonstrated that irradiation with the Er: YAG laser affected the flexural strength of the Y-TZP zirconia, regardless of the pulse width used.

Conclusion : The surface treatment with the Er: YAG laser, with both pulse widths tested, decreased the flexural strength of the zirconia. It is suggested that the most indicated surface treatment would be tribochemical abrasion.

ORAL PRESENTATION

EFFICACY OF BOTULINUM TOXIN A FOR MASTICATORY MUSCLE CHRONIC PAIN: A RANDOMIZED DOBLE-BLIND PLACEBO-CONTROLLED TRIAL

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Aim : Botulinum toxin type A (BoNT-A) has been used to treat muscular disorders and because of its cholinergic mechanism of action, BoNT-A became a new approach for masticatory muscle chronic pain (MMCP); however literature have not reach a consensus about its real efficacy for this kind of syndrome. The aim of this clinical trial was to evaluate the effects and efficacy of BoNT-A treatment on MMCP in temporomandibular disorders patients.

Method : One hundred volunteers were randomized into five groups: C+ (splint, $n = 20$), C- (saline, $n = 20$), T1 (BoNT-A low doses, $n = 20$), TII (BoNT-A médium doses, $n = 20$), and TIII (BoNT-A, high doses $n = 20$). Periods of evaluation were at baseline and 7, 14, 21, 28, 90 and 180 days after treatment. Dependent variables were: subjective pain measured by visual analogue scale (VAS), pain preasure treshold by algometry (superficial masseter and anterior temporal), electrical activity and muscle thickness of the same muscles by electromyography (EMG) and ultrasound (UT), and masticatory performance (MP). Statistical analysis was performed using generalized linear models.

Results : All groups improved over time in the VAS, with the C+ and all BoNT-A groups having the lowest scores after 180 days evaluation ($p > 0.05$). Algometry values also improved over time in all BoNT-A ($p < 0.05$) after 180 days evaluation. EMG values were lower for all BoNT-A groups after 28 and 90 days evaluation when compared with control groups ($p > 0,05$). MP and UT significantly decreased in all BoNT-A groups after 28 days evaluation.

Conclusion : Botulinum toxin type A is an effective treatment for the management of masticatory muscle chronic pain.

ORAL PRESENTATION

EXPERIMENTAL INFILTRANTS CONTAINING IODONIUM SALT AND CHITOSAN: ANALYSIS OF ANTIBACTERIAL AND PHYSICAL PROPERTIES

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Aim : This study aimed to evaluate the antibacterial and physical properties of experimental infiltrants containing iodonium salt and chitosan.

Method : For this, nine experimental infiltrants containing the monomeric base triethylene glycol dimethacrilate (TEGDMA) and bisphenol A ethoxylated dimethacrylate (BisEMA) in the proportion 75 and 25% by weight, respectively; 0,5 mol% camphorquinone and 1 mol% of

ethyl 4-(dimetilamino)benzoate (EDAB) were formulated by varying the concentration of the iodonium salt (DFI) to 0; 0,5 and 1 mol% and chitosan at 0; 0,12 and 0,25 g%. The degree of conversion (using Fourier transform infrared spectroscopy), flexural strength and modulus of elasticity (by three-point flexural test), water sorption and solubility and antimicrobial analysis (Minimum Inhibitory Concentration and Minimum Bactericidal Concentration - MIC and MBC, respectively) were evaluated. The data were analyzed statistically by two-way ANOVA and Tukey test ($p < 0.05$), with the exception of the antibacterial test, which was evaluated by the visual inspection method.

Results : Antibacterial activity was observed in all groups with DFI, regardless of the concentration of chitosan involved. Furthermore, the infiltrant group containing 0,5% DFI and 0,12% chitosan presented a high values of conversion degree, higher values of modulus of elasticity and flexural strength and lower values of sorption of water in relation to the others groups.

Conclusion : It was concluded that the addition of iodonium sal and chitosan to the experimental infiltrants are viable alternatives for the improvement of the antibacterial and physical properties of these.

SHIFTS IN THE BACTERIAL COMMUNITY OF SALIVA RISE INSIGHTS ON OBESITY AND ORAL MICROBIOTA IN ADOLESCENTS

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Aim : The study aimed determines the impact of obesity on the salivary microbiome of adolescent sample.

Method : Sixty subjects ranging 14-17 years old were enrolled (15 males and 15 females with obesity and 15 males and 15 females with normal-weight). Stimulated saliva was collected for denaturing gradient gel electrophoresis band patterns and massive 16S rRNA gene sequencing using the Ion Torrent platform.

Results : Data analysis revealed that the salivary microbiome of subjects with obesity presented a significant higher richness, diversity, a lower dominance and a distinct bacterial community structure as compared to normal-weight ones even considering the sex. Saliva's most abundant groups were: Proteobacteria, Firmicutes, Actinobacteria, Bacteroidetes besides Unassigned sequences. Six classes within those phyla presented high abundance among individuals, and some OTU (Operational Taxonomic Unit) were identified to occur differentially in obese regarding the abundance of sequences. Blast analyses revealed that such OTUs were closely affiliated to known oral pathogens, including *Actinomyces odontolytus*, *Neisseria mucosa*, *Pseudomonas putida*, *Pseudomonas multiresivorans*, *Rothia dentocariosa*, *Rothia mucilaginosa*, *Rothia narsimurium*, *Streptococcus merionis*, *Streptococcus pneumoniae*, *Veillonella parvula* and *Veillonella dispar*.

Conclusion : Our findings showed a distinct salivary bacterial community structure in adolescents with obesity.

In addition, their saliva was inhabited by a high diversity of bacteria, direct correlated with body mass index, and that such differential abundance is mostly represented by some OTU identified as known human pathogens.

POSTER PRESENTATION**4-YEAR RANDOMIZED CLINICAL EVALUATION OF FLOWABLE BULK-FILL RESIN RESTORATIONS IN POSTERIOR TEETH**

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Aim : The objective of this randomized clinical trial was to evaluate the behavior of composite resin restorations of low contraction (bulk-fill) in posterior teeth (classes I and II)

Method : Seventeen patients who required restorations on at least two posterior teeth were selected to participate in the study. The causes for indication of restorations were: replacement of deficient amalgam or composite resin restoration and/or caries lesion. In each patient, two restorations were performed. Randomly, one cavity was restored with Esthet-X HD nanohybrid resin (control group) and the other was restored with Esthet-X HD resin associated with the bulk-fill resin Surefil SDR Flow (test group). In both groups, a two-step total-etch adhesive system (XP Bond) was used. All patients received global treatment for carious activity. After a period of four years, the quality of the restorations was evaluated by a previously calibrated examiner, through a modification of the USPHS method and through the FDI method. The data were submitted to statistical analysis by the non-parametric Mann-Whitney test ($p < 0.05$) and the intra-observer agreement was evaluated by Kappa test.

Results : At the 4-year follow-up, 26 teeth (18 class I and 8 class II restorations) were evaluated, and no statistically significant differences between control and test groups were observed for both evaluation methods used. There were no failures in any of the restorations over time.

Conclusion : The quality of class I and II restorations with bulk-fill resin was similar to that of conventional nanohybrid resin. The bulk-fill technique showed good clinical performance during the 4-year follow-up.

6 MONTHS' ASSESSMENT ADHESIVE POTENTIAL AND PHYSICOCHEMICAL PROPERTIES OF NEW 2-STEP ETCH-AND-RINSE ADHESIVES

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Aim : The aim was to evaluate the adhesive potential and physical-chemical properties of a new commercial adhesive, compared to others that use the same adhesion strategy.

Method : Five commercial 2-step etch-and-rise dental adhesives were used (Single Bond 2, Amber, Magic Bond, Clearfill SE Bond and Ybond Mono). The degree of conversion was evaluated with an ATR-FTIR. 50 human molars were used to test the microtensile bond strength. Sticks of 0.9 x 0.9 mm were obtained and evaluated after 24 hours and after 6 months of aging in water. The flexural strength tests were carried out following ISO 4049. The

data were evaluated with the ANOVA test, being one factor for the mechanical properties and two factors for the bond strength.

Results : The results showed that the Ambar adhesive had bond strength after 24 hours different from the Clearfill SE Bond adhesive and after 6 months the Ybond Mono adhesive was the only one similar to the Clearfill SE Bond group. The mechanical properties showed a similar behavior of the new adhesive compared to the others.

Conclusion : It can be concluded that the new adhesive inserted into the market has acceptable adhesive properties. And adhesive potential remains after 6 months of storage.

A CASE OF CALCIFYING ODONTOGENIC CYST IN A UNCOMMON REGION OF THE MAXILLA

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Aim : The present study aims to describe the clinical case of a patient, 10 years old, male, with history of increased volume and painful symptomatology in the left side of the maxilla.

Method : At physical examination, there was a diffuse swelling on the left side of the face with associated facial asymmetry. On the panoramic radiograph, a unilocular and ill-defined radiolucent image with areas of calcification within the lesion was located in the posterior region on the left upper jaw, associated with the tooth 27 unerupted, superimposed radiographically on the upper region of the maxillary sinus. Cone beam computed tomography (CBCT) imaging showed cortical expansion, external root resorption in the tooth 26 and the tooth 27 retained in the posterior and superior region of the left maxillary sinus.

Results : After the first surgical approach, histopathological examination confirmed the diagnosis of COC. Six months later, during clinical and radiographic follow-up, in the CBCT examination, recurrence of the lesion was observed in the distal region of the tooth 26 and the patient was submitted to surgery for enucleation of the lesion.

Conclusion : A follow-up panoramic examination revealed an area of bone neoformation in the region and the patient was in good health condition.

ACUPUNCTURE AS A TREATMENT PROTOCOL IN THE CHRONIC PAIN OF HEMOPHILIC PATIENTS

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Aim : Chronic joint pain is one of the main causes of hemophilic patient limitation, who acquires an antalgic posture and as a result, deformities begin to settle. Acupuncture is indicated as pharmacological resource for pain reduction. The aim of this study is to observe the possible pain reduction and improvement in quality of life in hemophilic patients with chronic pain submitted to acupuncture sessions, according to a protocol of points selected specifically for the purpose.

Method : This is a randomized clinical trial with blinding of

the evaluator to be undertaken at the haemotherapy unit of the homocentric of Unicamp. As evaluator will apply sociodemographic, pharmacological and quality of life questionnaires, as well as functional joint assessment at the beginning and end of each of the five proposed sessions and pain intensity assessment through the visual analogue scale (vas). The selected acupuncture points are: points used for pain: gb-41 (lingji), te-5 (waiguan), bl-60 (kun-lun); to remove obstruction: st-40 (fenglong); to circulate qi:lv-3 (taichong), li-4 (hegu), lu-9 (taiyuan); to tone up: ki-7 (fuliu); to move blood sp-6 (sanyinjiao). Unilateral needling with up to 9 points.

Results : All points used for blood disorders and joint dysfunctions corresponding to the principles of traditional Chinese medicine (tcm). Collected data will be analyzed by appropriated statistical tests, at a 5% significance level.

Conclusion : The expected result of this study is of a reduction of chronic pain and improvement in the quality of life of hemophiliacs.

ACUPUNCTURE AS TREATMENT FOR AURAL FULLNESS RELATED TO TMD: CASE REPORT

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Aim : Acupuncture is a set of knowledge by Traditional Chinese Medicine (TCM) that aims to prevent and heal diseases by inserting needles in specific anatomic points. Otological symptoms are common in patients with Temporomandibular Disorders (TMD) such as otalgia, tinnitus and aural fullness. The objective was to report a case of a patient with Aural Fullness related to TMD treated with acupuncture.

Method : Patient of female gender, 53 years old, took treatment at the Piracicaba Dental School. The study was approved by the Research Ethics Committee of FOP-UNICAMP, under protocol 099/2008. Patient reported feeling those symptoms for approximately 18 months. It was realized the specific history of TCM to identify the energy imbalance. The diagnosis from TCM was Kidney Yin deficiency with Belt Vessel alteration. The acupuncture points used for the treatment, in this case were: CV3 (Ren Mai3- Zhongji), KI7 (Kidney7 - Fuliu), KI3 (Kidney3- Taixi), GV4 (Du Mai4- Mingmen) and GV14 (Du Mai 14- Dazhui). Four acupuncture sessions, lasting 20 minutes each, were realized once a week. In the end of the sessions, it was also done ear therapy using mustard seeds at the Shenmen, Anxiety, Kidney, Spleen, Liver, Bladder and Stomach points. The aural fullness sensation was evaluated through VAS (Visual Analog Scale), from 0 to 10, and were determined VASi (in the beginning of session) and VASf (in the end of session).

Results : The aural fullness related to TMD has decreased from the first session (VASi=7) to the last one (VASf=0).

Conclusion : The treatment brought a satisfactory result to the patient.

ACUPUNCTURE AS TREATMENT FOR THE TEMPOROMANDIBULAR JOINT DISORDER. CASE REPORT

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Aim : The purpose of this study was to report the efficacy of the acupuncture treatment in a patient who presented with headache and pain in the TMJ. This study has been approved by the Committee for Ethics in Research of the School of Dentistry, according to the Piracicaba / UNICAMP protocol 099/2008. Clinical case report of M.O.F, a 70-year old female patient referred to the acupuncture service offered by the School of Dentistry of Piracicaba by her attending physician

Method : The patient complained of pain in the TPJ in the anterior portion of the temporal and sternocleidomastoid muscles, with pulsating headache on awakening that persisted throughout the day. The pain was assessed according to the visual analog scale (VAS) before and after the treatment. The regime adopted was a 20 minutes session, once a week during eight weeks. The diagnosis according to the Traditional Chinese Medicine was Liver Yang Rising Syndrome with internal wind. Points KI 7, LR 2, GB 34+TE 17, GB 20, GB 39 were selected for unilateral insertion.

Results : The patient's initial VAS pain grade was 7, and after the eight weekly sessions, 1. In this clinical case, there was an improvement in the pain symptoms related to the TMJ and in the headache complaints.

Conclusion : In addition to the improvement in the ATM pain, the acupuncture treatment provided relief to the patient's headaches. She received recommendations to seek treatment for the occlusal adjustment that was still necessary.

ADENOMATOID ODONTOGENIC TUMOR: CASE REPORT AND LITERATURE REVIEW

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Aim : The objective of this study was to perform a case report of a female patient of 12 years with an unusual lesion of adenomatoid odontogenic tumor in the region of maxillary premolars, whom sought the service of the University of Dentistry of Piracicaba and perform enucleation of the lesion, prioritizing an adequate surgical treatment for the case as supported by the literature.

Method : Literature Review and case report of surgical treatment of maxillary cystic lesion.

Results : In the present study, a surgical procedure was performed to remove the tumor lesion in the right maxillary region, which was discovered in a routine dental evaluation, promoting a favorable outcome, without recurrence of the lesion, compatible with the planning described by tumor enucleation, as described by the literature for the treatment of cysts and tumors of the maxillofacial region, and the patient is currently being followed under clinical and radiographic follow-up by the

FOP-Unicamp Buco-Maxillo-Facial Surgery Area without complications and / or complaints.

Conclusion : The enucleation technique for the treatment of adenomatoid cyst has been described in the literature as a viable option and with predictable results. The patient was evaluated and then an enucleation of the lesion was proposed. The patient is currently being followed by the FOP-Unicamp Buco-Maxillo-Facial Surgery Area without complications and / or complaints, presenting no recurrence of the lesion to the treatment according to radiographic follow-up.

AESTHETIC AND FUNCTIONAL REHABILITATION IN A PATIENT WITH IMPERFECT AMELOGENESIS: A CASE REPORT

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CEARENSE ACADEMY OF DENTISTRY

Aim : This article aims to present a clinical case of a patient with imperfect amelogenesis, which was aesthetically and functionally rehabilitated by means of the direct restorative technique using composite resins.

Method : Case report: The report of the present case refers to a female patient, 11 years old, who presented a complaint of "dark teeth", "shame of smiling" and "difficult on oral hygiene", presenting a serious aesthetic and functional impairment. This case was carried out including the preventive, restorative and maintenance phases, returning aesthetics and function to the patient.

Results : This case of imperfect amelogenesis shows advances in the development of adhesive materials, combined with minimally invasive preparation techniques, and the solution of clinical situations with aesthetic and functional deficiencies.

Conclusion : The impairment of an individual's smile has a great impact on his life, generating from aesthetic and functional problems until the interference on the social interaction and personal relationships. To minimize these problems, diagnosis and treatment should be performed as soon as possible in a conservative and effective manner to maintain and return oral functions, to promote the patient general well-being and self-esteem, and consequently to improve their quality of life.

ANALGESIC AND ANXIOLYTIC EFFECT OF ACUPUNCTURE BEFORE DENTAL TREATMENT

TALITA BONATO DE ALMEIDA; MARIA DA LUZ ROSÁRIO DE SOUSA

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : In the dental area, many studies use acupuncture as an alternative tool to conventional methods for the control of various dental aspects, such as reduction of nausea, facial paralysis and relief of chronic pain caused by temporomandibular disorders. However, there is few literature related to acupuncture to relief of acute dental pain. Therefore, it was proposed to present results of the pilot study that compared the analgesic effect of acupuncture in patients with acute toothache who sought

the emergency care of the Piracicaba Center for Dental Specialties (CEO).

Method : Participating in the pilot study were 5 volunteers who were waiting for dental care between the ages of 23 and 38 years with tooth pain of greater than 4 on the VAS scale and who had not taken any medication for pain in the last 12 hours. The volunteers underwent an acupuncture session and answered the Corah questionnaire to check for anxiety.

Results : The mean VAS before the acupuncture session was 7.78 ± 1.69 . 4 patients reported reduction of tooth pain intensity to 0 only with the use of 1 acupuncture point and only 1 patient needed more than 1 needle to stop the pain. Only 1 patient was classified as "moderately anxious" by Corah and after acupuncture reported being quieter.

Conclusion : In the larger study, it will be confirmed whether acupuncture can be used in daily clinical practice, since the analgesia and the reduction of anxiety promoted in this pilot study was effective and quick in patients with toothache, providing more comfort and well being during waiting for dental care of emergency.

ANALYSIS OF PREVALENCE AND REASONS FOR ENDODONTIC REFERRALS FROM UNDERGRADUATE AND SPECIALIZATION CLINICS

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GOMES

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Different levels of technical difficulties in endodontic treatment and retreatment are recommended to be executed according to the operator's experience. Therefore, referrals to more qualified professionals are indicated to adequately solve anatomical difficulties, iatrogenicities or more complex retreatments. This study aimed to verify the prevalence and the reasons for endodontic referrals from the undergraduate clinic of Piracicaba Dental School/UNICAMP to the specialization clinic; and the most affected dental group.

Method : Referrals from the years 2015 and 2016 and their digital radiographs were collected.

Results : The results showed that 1226 endodontic treatments / retreatments were performed by undergraduate students, comprising 495 in 2015 and 731 in 2016. A total of 394 cases were referred, 147 in 2015 and 247 in 2016, however the difference in the last year was due to the increase of the number of the students caused by a change in the curriculum of the Dental School. The most frequent reasons for referrals were: endodontic retreatment of molars ($n = 115/394$, 34.2%); atresic root canals (76/394, 19%); and other reasons such as root curvature (149/394, 37.8%). In relation to the dental group, the highest number of referrals was in lower ($n = 137/394$, 31.42%) and upper molars ($n = 120/394$, 27.52%).

Conclusion : We concluded that the most prevalent reason for referrals were endodontic retreatment, and the

most affected dental group was molars. (Supported by FAPESP 2015/23479-5, CNPq 308162/2014-5, CAPES, SAE/UNICAMP)

ANALYSIS OF THE DEGRADATION, LONGEVITY AND IMAGE QUALITY OF PHOTOSTIMULABLE PHOSPHOR PLATES

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Aim : With the advances in imaging technologies, the digital radiography emerges as a tool of choice, aiding to diagnosis. Currently, the photostimulable phosphor plates (PSPs) have been used in dental practice. However, the longevity of PSPs has not yet been fully established. The aim of this study was to determine the service life and quantify the degradation of PSPs.

Method : A new PSP was exposed to x-rays and scanned through the system Digora Optime (Soderex, Milwaukee, WI). For imaging acquisition, an aluminum stepwedge with 12 incremental steps (each step presenting 1.3 mm thickness) was placed on acrylic holder, and the exposure time set at 0.08 seconds. The mean of the grayscale of each step and a portion control (out of the steps) was measured using a square ROI (region of interest) of 15x15 mm. The data were analyzed using t-Student test, with a significance level of 99%.

Results : A total of 799 images were acquired and analyzed by the same oral radiologist. Statistically significant differences were found between the aluminum steps, regarding the mean of the gray values in each defined ROIs. From the acquisition number 400, it was detected the drop in the average gray value.

Conclusion : The findings of this study revealed a deterioration of PSPs due to the amount of exposures.

ANESTHETIC EFFICACY OF 4% ARTICAIN AND 2% MEPIVACAINE IN MANDIBULAR BUCCAL INFILTRATION IN VOLUNTEERS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This study compared the solutions of 2% mepivacaine and 4% articaine, both associated with epinephrine 1: 100,000, in healthy mandibular first molars and premolars, applied as infiltration in the mucobuccal fold of the mandibular molars.

Method : Forty volunteers were selected. They were randomly divided into two experimental groups: AR-articaine and MP-mepivacaine (n = 40), totaling 80 injections. Before and after the anesthesia, the following tests were performed: electric with the aid of pulp tester, bite force with the aid of modified digital bite fork and monitoring of vital signs. After anesthesia, 1 minute was waited and the tests were done in the first minute, second minute and in sequence every 3 minutes. As a criterion of

success, two consecutive readings of 80mA. Anesthesia failure and failure after 10 minutes were considered.

Results : There was no difference between the success of anesthesia between the groups for lower molars and the total time of anesthesia in soft tissue. 4% Articaine obtained longer pulpal anesthesia than 2% mepivacaine. The evaluation of the discomfort generated by the anesthesia did not show any difference between the groups, but in general, the moments of injection were more painful than the postoperative periods. Measurements of blood pressure and bite forces found were not different between groups.

Conclusion : It was concluded that the efficacy of pulpal anesthesia is similar between 4% articaine and 2% mepivacaine in lower molars, although the 4% articaine has a longer time of pulpal anesthesia. Anesthesia in soft tissue or pulp does not interfere with the bite force of patients with healthy and asymptomatic molars.

ANTI-BIOFILM ACTIVITIES OF ELIONORUS MUTICUS (LEMON GRASS BRAZIL) AGAINST CANDIDA ALBICANS MYA 2876

DANIELE DE GODOY PENTEADO BRAGADO PUPPIN; BARBOSA JP; TEIXEIRA AL; BUSATO DE FEIRIA SN; BUSO-RAMOS MM; BONI GC; OLIVEIRA TR; JOSÉ FRANCISCO HÖFLING
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Aim : Researches of biologically active natural products as essential oils are becoming an option to be used in the treatment of various infections, including those frequently associated to *Candida albicans* biofilm. The goal of this study was to evaluate the antimicrobial effects of the *Elionurus muticus* essential oils on the biofilm formation and mature biofilm of *Candida albicans* (ATCC MYA 2876).

Method : Early and mature *C. albicans* biofilms were tested in 96-well plates, incubated for 24 h at 37°C with the concentrations of tested oils and stained with XTT [2,3-bis(2-methoxy-4-nitro-5-sulfo-fenil)-2H-tetrazolium-5-carboxanilida] and were measured in spectrophotometer to determine the disrupt biofilm concentration.

Results : The essential oil of *Elionurus muticus*, at concentrations of 500 µg / ml to 3,9 µg / mL, showed activity and a significant decrease of up to 53% of the structure of the early and mature *Candida albicans* biofilm compared to the control.

Conclusion : The essential oil *Elionurus muticus* had promising anti-biofilm activity against *Candida albicans*.

ANTIFUNGAL ACTIVITY OF SILVER PHOSPHATE AGAINST CANDIDA ALBICANS BIOFILM

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ARARAQUARA DENTAL SCHOOL - UNESP

Aim : To evaluate the antifungal activity of silver phosphate (Ag₃PO₄) microparticles against *Candida albicans* biofilm.

Method : After synthesis of Ag₃PO₄ microparticle by the co-precipitation method (silver nitrogen (AgNO₃) and diammonium hydrogen phosphate ([NH₄] 2HPO₄),

standard strain of *Candida albicans* (ATCC 90028) was activated and incubated for 16h and 9h, respectively, for pre-inoculum and inoculum formation. *Candida albicans* was standardized with an optical density of 1×10^7 (CFU/mL). Thus, 2 mL of the suspension was added in a 24-well plate, for 90 minutes in orbital shaking for cell adhesion and subsequent addition of the Ag₃PO₄ microparticle at different concentrations (50-3.1%), and incubation in an orbital shaker for 48 hours. Biofilms of *C. albicans* were formed, washed 3x with PBS solution (NaCl 140 mmol.L⁻¹, KCl 3.0 mmol.L⁻¹, Na₂HPO₄ 4.30 mmol.L⁻¹, KH₂PO₄ 1.40 mmol.L⁻¹) and diluted by the microdilution method in liquid culture medium, according to the respective protocols recommended by the Institute of Clinical and Laboratory Standards (CLSI), the different concentrations were plated and their MFCs (CFU / mL) values were determined after its static incubation for 24 hours at 37 °C.

Results : MFC values of 4000 µg / mL were determined.

Conclusion : Due to the different concentrations of microcrystals in contact with *Candida albicans*, a decrease of the CFU/mL was observed in comparison with the control. Silver phosphate show antibiofilm activity.

ANTIMICROBIAL ACTIVITY OF ESSENTIAL OILS AGAINST STREPTOCOCCUS SPP

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Bacterial dental biofilm early colonizers adhere to tooth surfaces and allow the attachment of late colonizers, a condition that might lead to caries and periodontal diseases. This study evaluated the antibacterial effect of essential oils (from bergamot, melaleuca, cornmint, rosemary, and grapefruit) on *Streptococcus* early colonizers: *S. gordonii*, *S. mitis*, *S. oralis*, *S. salivarius*, and *S. sanguinis*.

Method : The Minimum Inhibitory Concentration (MIC) and the Minimum Bactericidal Concentration (MBC) assays were done according to the Clinical & Laboratory Standards Institute protocol.

Results : Essential oils from rosemary, bergamot and grapefruit showed no significant antimicrobial activity against the species tested. Essential oils from melaleuca and cornmint showed a MIC of 2,71mg/mL and 2,65mg/mL, respectively. The species tested showed homogeneous susceptibility to the essential oils. Cornmint and melaleuca essential oils showed bactericidal activity on MBC assay.

Conclusion : As conclusion, cornmint and melaleuca essential oils could be used to inhibit the species *S. gordonii*, *S. mitis*, *S. oralis*, *S. salivarius*, and *S. sanguinis*.

ANTIMICROBIAL ACTIVITY OF GLASS IONOMERS AGAINST STREPTOCOCCUS SPP

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HOFLING; RENATA DE OLIVEIRA MATTOS-GRANER; ;
RAFAEL NOBREGA STIPP
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Fluorides released from glass ionomers have an antimicrobial activity, which contributes to the effectiveness of the material. The aim of this study was to evaluate the antimicrobial activity of conventional restorative glass ionomers against *Streptococcus mutans*, *Streptococcus gordonii*, and *Streptococcus sanguinis*.

Method : Specimens from glass ionomers Vigodente Contene, Unioglass, Maquira, Vitrofil, Ioniz, Maxxion R and Vitro molar were prepared accordingly to the manufacturer's instructions and UV-sterilized. Specimens are submerged in 2.5, 5, 10 and 20 mL of BHI broth containing bacterial inocula and incubated at 37°C. Cultures without glass ionomers were used as growth positive control. Cultures pH were measured using an electrode.

Results : In mean, Vigodente Contene, Unioglass, Maquira, Vitrofil, Ioniz, Maxxion R and Vitro molar respectively inhibited up to 42%, 33%, 40%, 18%, 58%, 54%, and 34% of the bacterial growth of the three species. Glass ionomers elevated culture pH by 9%, 20%, 21%, 6%, 3%, 18%, and 19%, compared to the control.

Conclusion : Different glass ionomers vary among their antimicrobial activity

ANTIMICROBIAL ACTIVITY OF MOUTH RINSES AGAINST EARLY MICROBIAL COLONIZERS OF HUMAN DENTAL BIOFILM

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Mouth rinses have differences in their compositions and antimicrobial activity, which might make professionals and consumers doubtful about which products are more effective for the complementary oral hygiene. This study evaluated the antimicrobial activity of 35 commercial mouth rinses widely available on Brazil market, against bacterial species mainly responsible for initiating the dental biofilm (*S. mitis*, *S. sanguinis*, *S. oralis*, *S. salivarius* and *S. gordonii*).

Method : The Minimum Inhibitory Concentration (MIC) and the Minimum Bactericidal Concentration (MBC) assays were done according to the Clinical & Laboratory Standards Institute protocol.

Results : About 70% of the mouth rinses achieved a high antibacterial activity and 30%, a low antibacterial activity. Mouth rises composed by essential oils as sole antimicrobial agent (25%) showed lower antibacterial efficiency compared to cetylpyridinium chloride-based products ($p < 0.01$). About 51% of mouth rinses showed a bactericidal activity and this was associated with the cetylpyridinium chloride compound ($p < 0.01$).

Conclusion : Based on our findings, mouth rinses have a wide antimicrobial efficacy. The majority of products available in the market is considered effective in vitro against early dental biofilm colonizers.

ANTIMICROBIAL ACTIVITY OF NITROCHALCONE ON DUAL SPECIES BIOFILMS, AND SYSTEMIC TOXICITY ON THE G. MELLONELLA MODEL

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim was to evaluate the effect of the nitrochalcone (NC-E08) on mixed (mature and forming) biofilms of *C. albicans* and *S. mutans*, through cell viability (XTT and plating), Microscopy Scanning Electron (SEM) and determine toxicity using the *Galleria mellonella* model.

Method : NC-E08 was synthesized and diluted in DMSO. The MIC/MFC/MBC were determined by CLSI. The effects of NC-E08 on mixed biofilms (mature and forming) grown in the presence of artificial saliva were assessed by XTT, CFU quantification and visualized using SEM. The toxicity was evaluated using *G. mellonella*. The dates were analyzed by ANOVA ($p < 0.05$).

Results : NC-E08 was able to inhibit planktonic cell growth of *S. mutans* and *C. albicans* with MIC values between 15.75 and 3.9 $\mu\text{g/mL}$, respectively. In forming biofilms, concentrations of 1xMIC and 10xMIC of NC-E08 reduced by 23% and totally inhibited *C. albicans*, respectively. *S. mutans* biofilms were reduced by 13% (1xMIC) and 42.5% (10xMIC). In mature mixed biofilms, there was a reduction in *C. albicans* [21% (1xMIC) and total inhibition (10xMIC)], and *S. mutans* [18% (1xMIC) and 30.5% (10xMIC)] biofilms. In mature biofilms, *C. albicans* was reduced by 20% (1xMIC) and 60% (10xMIC), *S. mutans* was reduced by 29% (1xMIC) and 38% (10xMIC). In relation to the mixed mature biofilm of *C. albicans* and *S. mutans*, there was a reduction in *C. albicans* [23% (1xMIC) and 41% (10xMIC)] and *S. mutans* [23% (1xMIC) and 46% (10xMIC)]. The results for toxicity demonstrated viability about of 80% of the larvae in the 10xMIC concentration.

Conclusion : NC-E08 demonstrated excellent antimicrobial activity on dual species biofilms, as well as low toxicity in vivo.

ANTIMICROBIAL ACTIVITY OF PLANT ESSENTIAL OILS ON STREPTOCOCCUS SPP

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Aim : Microorganisms considered as early colonizers adhere to tooth surfaces and allow the attachment of late colonizers, a condition that might lead to caries and periodontal diseases. This study evaluated the antibacterial effect of plant essential oils on early colonizers — *S. gordonii*, *S. mitis*, *S. oralis*, *S. salivarius*, and *S. sanguinis*. Essential oils from thyme, cardamom, lemongrass, cassia, oregano, cinnamon leaf, cinnamon bark, eucalyptus, cedar, birch, peppermint, and mint

spicata were tested.

Method : The Minimum Inhibitory Concentration (MIC) and the Minimum Bactericidal Concentration (MBC) assays were done according to the Clinical & Laboratory Standards Institute protocol.

Results : Essential oils from cardamom, eucalyptus, cedar, and birch had insufficient antimicrobial activity against the species tested. Essential oils from thyme, oregano, cassia, lemongrass, cinnamon bark, cinnamon leaf, peppermint and mint spicata showed a MIC of 0.18 mg/mL, 0.36 mg/mL, 0.41 mg/mL, 0.7 mg/mL, 0.8 mg/mL, 1.6 mg/mL, 1.4 mg/mL, and 5.93 mg/mL, respectively. The species tested showed homogeneous susceptibility to the essential oils. Cinnamon bark and the cinnamon leaf essential oils showed a bacteriostatic effect, while the others had bactericidal activity.

Conclusion : The essential oils from thyme, oregano, and cassia had bactericidal activity, even at low concentrations, and could be used to inhibit bacterial growth.

ANTIMICROBIAL EFFECT OF A SURFACE SEALANT CONTAINING QAMS SALT APPLIED ON COMPOSITE RESIN SUBMITTED TO BRUSHING CYCLES

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Aim : The objective of this study was analyze wear resistance and antimicrobial activity of a surface sealant, Biscover containing QAMS (ORMOSIL-SiQAI). Wear resistance was measured by brushing cycles and posterior SEM of the surface. Antimicrobial potential was evaluated by the formation of a zone of inhibition of *S. mutans* ORMOSIL-SiQAI was synthesized by sol-gel reaction. Wear resistance will be verified by 2500 mechanical brushing simulation cycles on the following groups: G1(Z350 XT + Biscover); G2(Z350 XT + ORMOSIL-SiQA); G3(Z350 XT + Biscover containing ORMOSIL-SiQAI); G4(Z350 XT).

Method : 1. Synthesis of ORMOSIL-SiQAI 2. Elaboration of proof-bodies 3. Halo Formation of Bacterial Growth Inhibition 4. Test of Mechanical Resistance to Brushing Cycles 5. Qualitative Analysis in SEM 6. Test of biofilm forming 24 h of *S. mutans* 7. Selection of counting plates for CFU/ml

Results : Considering the unbrushed groups, those containing ORMOSIL-SiQAI compound, G2(Z350 XT + ORMOSIL-SiQA) and G3(Z350 XT + Biscover + ORMOSIL-SiQAI), demonstrated the ability to inhibit *S. mutans* biofilm formation, differing statistically from G1(Z350 XT + Biscover) and G4(Z350 XT) groups. However, after simulated mechanical brushing, only G2 still presented antimicrobial potential, differing statistically from the others.

Conclusion : The ORMOSIL-SiQAI presents antimicrobial potential, being able to inhibit the formation of biofilm of *S. mutans* both in its pure form and inserted in Biscover surface sealant. This potential is lost through cycles of mechanical brushing, which indicates that the

compound needs to be re-applied so that its effect remains in the long term.

APICALLY EXTRUDED DEBRIS USING CONVENTIONAL IRRIGATION AND ENDOVAC IN ASSOCIATION WITH DIFFERENT ROOT CANAL IRRIGANTS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This study evaluated the amount of apically extruded debris after chemo-mechanical preparation (CMP) using conventional irrigation (CI) and EndoVac (EV) in association with different root canal irrigants [6% Sodium Hypochlorite (NaOCl), 2% Chlorhexidine gel + saline solution (CHXg + SS), 2% Chlorhexidine solution (CHXs) or Saline solution (SS)]

Method : Eighty mandibular premolars with single root canals were selected and randomly assigned into 8 groups (n = 10) according to the irrigation system and the root canal irrigant used during CMP: G1 (EV + NaOCl), G2 (EV + CHXg + SS), G3 (EV + CHXs), G4 (EV + SS), G5 (CI + NaOCl), G6 (CI + CHXg + SS), G7 (CI + CHXs) and G8 (CI + SS). Reciproc® R25 files (25/.08) were used during the CMP and the apically extruded debris was collected in pre-weighted Eppendorf tubes and dried. The average weight of debris was assessed using a microbalance, and the data were statistically analyzed using ANOVA and the post hoc Tukey's test ($\alpha = 0.05$). All groups were associated with debris extrusion.

Results : EV was the irrigation system with less extruded debris ($p < 0.05$). No differences were observed regarding the irrigant when EV was used ($p > 0.05$). Regarding CI, CHXg + SS were associated with lower debris extrusion ($p < 0.05$).

Conclusion : In conclusion, no irrigation protocol succeeded in completely prevent debris extrusion. EV resulted in lower levels of debris extrusion than CI. The use of CHXg + SS resulted in lower debris extrusion (Supported by FAPESP 2015/23479-5, CNPq 308162/2014-5 and CAPES).

ARGON PLASMA EFFECT ON BOND STRENGTH OF BULK-FILL COMPOSITE REPAIR

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Aim : This study evaluated the effect of atmospheric pressure plasma (PL), sandblasting with aluminum oxide (SA), and on the bond strength of fresh bulk-fill resin composite to water-aged restorative bulk-fill resin composite.

Method : Seventy pre-polymerized composite plates (15 mm long x 8 mm wide x 3 mm thick) were fabricated using Filtek Bulk Fill Posterior Restorative (3M ESPE) and stored in distilled water for 4 months. The aged plates were polished with 600-grit SiC paper and assigned to the

following groups: 1- SA with aluminum oxide (50 μ m) for 10 s; 2- PL (for 30 s); 3- SA + PL and 4- SA + silane + hydrophobic adhesive resin (control). After treatments, a silicone mold was used to construct a bulk-fill composite resin cylinder (1.5 mm high, 1.5 mm diameter) on each aged composite plate. Following water storage for 24 hours, samples were submitted to shear bond testing. Data were expressed in MPa (n = 6) and statistically analyzed by one-way ANOVA and Tukey test ($\alpha = 0.05$).

Results : Mean (SD) bond strengths were (in MPa): 1- 7.0(2.3)b; 2- 4.6 (1.8)c; 3- 5.6(1.2)bc and 4- 18.1(2.2)a. The highest bond strength of fresh bulk-fill composite to water-aged bulk-fill resin composite was obtained for control group, followed by SA, SA + PL and PL application.

Conclusion : The conventional method to repair composites that included SA, silane and hydrophobic adhesive resin yielded the highest bond strength of fresh bulk-fill composite to water-aged bulk-fill resin composite. PL alone and its combination with SA were not beneficial as control.

ASSOCIATION BETWEEN MATERNAL SELF-EFFICACY AND THE TYPE OF BREASTFEEDING AT HOSPITAL DISCHARGE

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The benefits of breastfeeding for children are widely known and publicized, however, adherence is below what is recommended by the World Health Organization. One of the causes for this low adherence is a lack of maternal confidence in the capacity to breastfeed, which can be studied within the self-efficacy construct. Therefore, this study aimed to investigate the influence of maternal self efficacy during pregnancy and in the immediate postpartum period and associated factors that may contribute to adherence to exclusive breastfeeding at hospital discharge.

Method : A total of 100 pregnant women attended by seven Family Health Units (USF) in the city of Piracicaba-SP participated in this study. The mothers were approached in two moments: in the last trimester of gestation, when socioeconomic and demographic questions were answered, and the Perceived General Self-Efficacy Instrument and the first week of the baby's life, to verify the practice of breastfeeding at the time of hospital discharge and to respond the instrument of Self-Efficacy in Breastfeeding -Short Form.

Results : Most of the women were aged up to 24 years old, with the presence of the partner, were primiparous and had a cesarean delivery. Regarding the use of pacifiers by the child and the presence of a high level of self-efficacy in breastfeeding, they were associated with exclusive breastfeeding at hospital discharge.

Conclusion : Therefore, we can conclude that the non-use of pacifier and the level of Self-efficacy in Breastfeeding were shown to be a predictive variable of exclusive breastfeeding practice at the time of hospital discharge

ASSOCIATION BETWEEN SCHOOL PERFORMANCE AND PSYCHOSOCIAL VARIABLES OF HIGH SCHOOL STUDENTS IN THE CITY OF PIRACICABA

ABIA REAMI ALVES; AGNES PEZZAN; LUANA TOGNI DE GOES; MIDIA MIDIA SABRINA FREIRE DE LIMA; JESSICA DA SILVA TEOTONIO AMOS; ANA CLARA SIMON; JUAN FELIPE PIRES DO PRADO; FÁBIO LUIZ MIALHE

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The objective of this study was to evaluate, through an observational cross - sectional study, the associations between school performance of adolescents and their psychosocial characteristics.

Method : 200 adolescents aged 14-18 years old of both sexes from 5 high school public schools in the city of Piracicaba, SP, participated in the study. Questionnaires about sociodemographic characteristics (gender, age, housing, etc.) and self-perception of school performance were applied in classroom. Data analysis was performed using descriptive statistics, chi-square test and univariate logistic regressions

Results : It was observed that school performance it was associated with socioeconomic and demographic variables of adolescents, as well as their self-perception of health.

Conclusion : Multiprofessional work and intersectoral policies should be developed to improve student achievement.

ASSOCIATION OF DENTAL ANXIETY OF ADOLESCENTS AND THEIR MOTHERS, SOCIOECONOMIC FACTOR AND TIME SINCE THE LAST DENTAL VISIT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Studies have shown that dental anxiety is associated with insufficient oral health. Knowing that this anxiety is often developed through socialization and a learning process, this research was conducted in order to investigate the dental anxiety and its association with socioeconomic factors and time since the last dental visit.

Method : The sample consisted of 200 adolescents who studies in public school and their mothers. The dental anxiety's score was evaluated by Corah's Dental Anxiety Scale. The other variables were investigated using self-administered questionnaires adapted from other studies. The association between variables were evaluated using bivariate analysis.

Results : About 71% (n=141) were female. About 71% of adolescents (n = 157) had low dental anxiety. After analysis, dental anxiety was associated with maternal dental anxiety and maternal education. There was no association between adolescent's dental anxiety and time since the last dental visit.

Conclusion : Adolescent's dental anxiety was associated with maternal dental anxiety and maternal education, indicating the need for more studies and greater attention and for anxious patients.

ASSOCIATION OF MALOCCLUSION AND PERIODONTAL CONDITIONS IN BRAZILIAN TEENAGERS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This study aimed to investigate the association between malocclusion and periodontal conditions in adolescents aged 15 to 19 years.

Method : It is a cross-sectional analytical study that had the sample taken from the epidemiological survey of the State of São Paulo (SB São Paulo 2015). A sociodemographic questionnaire was applied, besides that, dental characteristics were evaluated on malocclusion through components of the DAI index (Dental Aesthetic Index), Angle classification and periodontal changes through the CPI index (Community Periodontal Index).

Results : The multiple regression analysis used in the statistical treatment revealed that age ($p < 0.01$), black or brown skin color ($p < 0.01$), family income ($p < 0.01$), and occlusal conditions measured by the Angle classification and maxillary overjet were associated with periodontal changes.

Conclusion : It was concluded that sociodemographic and occlusal factors were related to periodontal problems, and this information was essential for the therapeutic approach and for oral health prevention and promotion actions.

AURICULOTHERAPY AS ADJUNCTIVE TREATMENT OF SYMPTOMS RELATED TO TEMPOROMANDIBULAR DISORDERS

LETÍCIA DUSSARRAT BRITO OLIVEIRA; TALITA BONATO DE ALMEIDA; MARIA DA LUZ ROSÁRIO DE SOUSA

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To evaluate the effects of Auriculotherapy in patients with symptoms related to temporomandibular disorders (TMD) and other associated changes in service offered at the Piracicaba Dental School (FOP / Unicamp).

Method : Queries occurred once a week and was performed by volunteers acupuncturists . A total of 93 consultations were performed during the period from March 2017 to August 2017, with an average of 7 patients per day. Thirty-two individuals, ranging in age from 5 to 62 years (26.53 years) who had various TMD-related complaints and who received an average of 2.93 attendances, were attended. The intensity of the symptoms was evaluated using VAS (Visual Analogic Scale), which was applied before and after the Auriculotherapy session in order to measure the pain and / or major discomfort of the patient. The main symptoms were anxiety (23.91%), neck pain (9.78%), stress (6.52%), bruxism (6.52%), low back pain (5.43%) and 35%).

Results : There was a mean reduction in VAS from 5.33 to 2.8095 (47.35%) after Auriculotherapy sessions.

Conclusion : The patients attended showed great acceptability and serviceability and the effectiveness of

auriculoterapia can be shown reduction of 47.3% of the final value of VAS.

BACTERIAL LEVELS ANALYSIS OF TEETH SUBMITTED TO TWO THERAPEUTIC PROTOCOLS OF PULP REVASCLARIZATION BY REAL -TIME PCR

ANA CAROLINA CORREIA LAURINDO DE CERQUEIRA NETO; JULIANA YURI NAGATA; ERICKA TAVARES PINHEIRO; ELIZABETH FERREIRA MARTINEZ; MARCOS ROBERTO DOS SANTOS FROZONI; BRENDA PAULA FIGUEIREDO DE ALMEIDA GOMES; JOSÉ FLÁVIO AFFONSO DE ALMEIDA; ADRIANA DE JESUS SOARES

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to evaluate the effectiveness of two therapeutic protocols for pulp revascularization in relation to microbial reduction.

Method : The microbiological samples were collected at three times: Before intervention (C1), after decontamination with sodium hypochlorite (6% NaOCl) (C2) and after 21 days with an intracanal medicament (C3). Root canals were divided into: Group 1 (n = 10) - Triple antibiotic paste (ciprofloxacin, metronidazole and minocycline) and Group 2 (n = 10) - Medication of calcium hydroxide + 2% chlorhexidine gel. Microbiological analysis was performed using real-time PCR, using 16S rRNA universal primers for quantification of bacteria after the different treatment steps. We also performed the study of microbial diversity through cloning and sequencing of 16S rRNA, before and after treatment.

Results : The presence of *Porphyromonas gingivalis* was detected in 66.7% of the initial collections, *Fusobacterium nucleatum* in 46.7% and *Enterococcus faecalis* in 13%. The Mann-Whitney test was applied to compare the amount of bacteria between the groups at each sampling stage. There was a reduction of 99.8% of the total bacteria of the root canals after treatment when compared to C1.

Conclusion : It was concluded that each step of the protocol, including irrigation with 6% NaOCl and intracanal medication, was effective in the decontamination of the root canals. There was no difference between the groups in reducing the level of bacteria. The action of both medicaments was similar in reducing bacterial species.

BIOLOGICAL DEGRADATION OF HIGH VISCOSITY BULK FILL COMPOSITES

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim was to evaluate the influence of the degradation by *S. Mutans* biofilm on the surface properties of high viscosity Bulk Fill composites

Method : Twenty composite discs (5mm x 2 mm) obtained from each material: Filtek Bulk Fill (FBF), Tetric Evo-Ceram Bulk Fill (TEC), X-tra Fil (XF) and Filtek Z350 (Z350) were distributed in 4 groups. After 24 hours of incubation at 37°C, the specimens were polished and

initial assay of roughness (Ra), Knoop hardness (KHN) and Gloss (G) performed. All specimens were sterilized in ethylene oxide and subjected to degradation by *S. mutans* for 7 days. The final analyzes of Ra, KHN and GU were performed. The data were submitted to repeated measures two factors ANOVA and Tukey test ($p < 0.05$).

Results : Initially, XF (0.1251) presented higher values of Ra, when compared with the others materials. After biodegradation, XF (0.3100) showed highest values of Ra and Z350 (0.0449) the lowest. Higher values of KHN were obtained by XF (151.7; 106) and the lowest for the TEC (62.2; 51.8) before and after biodegradation. All the groups presented reduction of the surface KHN and increase of the Ra values after biodegradation. Higher values of gloss were obtained by Z350 (71.7; 62) and FBF (69; 64.6), before and after the biodegradation, when compared to TEC (61.4; 53.3) and XF (58.5; 53.5). All the groups presented reduction of the gloss after biodegradation.

Conclusion : Degradation by *S. mutans* biofilm changed negatively the surface properties of high viscosity Bulk Fill composites.

BLOOD PRESSURE MEASUREMENT: EXPERIENCE OF STAFF TRAINING AND NEED IN COMMUNITY ACTIVITIES

PAULO AFONSO ANDRE; DAGMAR DE PAULA QUELUZ

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To demonstrate the need to offer, in the community, activities of blood pressure measurement addressing hypertension, statistics in Brazil and in the world, with multiprofessional approach.

Method : It was a study carried out by means of a bibliographical survey.

Results : Hypertension is a condition that can cause damage and even death when undiagnosed and controlled. According to the 2015 study, Brazil ranks sixth among countries with the highest death rate from heart disease, heart attacks and hypertension, among men and women aged 35-74 years. According to a World Health Organization survey, blood pressure affects 30% of the Brazilian adult population, reaching more than 50% in the elderly and is present in 5% of children and is responsible for 9.4 million deaths worldwide. adolescents in Brazil. High blood pressure is easy to diagnose and can be treated and the patient has a chance to go about life quietly including new habits in their daily lives. Given the scarcity of resources, the multiprofessional team should seek to encourage, through patients, representatives of the community and civil society, the development of community activities, which will have great pressure for the implementation of various governmental actions, benefit of community health.

Conclusion : It can be recommended preventive measures to be adopted from childhood and with emphasis on the familiar approach to lifestyle changes. Weight management, balanced diet and regular physical exercise are simple measures that, when implemented from early stages of life, represent a potential benefit on the cardiovascular risk profile of these individuals.

BOND STRENGTH OF RESIN CEMENTS TO INTRARADICULAR DENTINE WITH DIFFERENT POLYMERIZATION PROTOCOLS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Evaluate the bond strength of resin cements to the intraradicular dentine associated or not to a universal adhesive system with different polymerization protocols

Method : Ninety bovine incisors were divided into 2 groups according to the resin cement used - RelyX Ultimate (Ultimate), RelyX U200 (U200). A subdivision was performed according to the different photoactivation (P) protocols: A: adhesive + cement without P; B: adhesive + P + cement without P; C: adhesive + P + cement + P; D: adhesive + cement + P of both together; E: U200 + P. The specimens were submitted to push-out test. Analysis of the fracture pattern was performed in a stereoscopic loupe. Data were submitted to ANOVA at two criteria and Tukey's test ($\alpha = 0.05$)

Results : The results showed that there was a statistical difference between the mean bond strength of the Ultimate B group in relation to the Ultimate A, U200 A, U200 D, U200; there was also a difference between the U200 B and U200 groups. In relation to the thirds, in the Ultimate B group the bond strength of the cervical region was statistically superior to the apical, as in the Ultimate group D. In the U200 B group the cervical and middle thirds were superior to the apical ones

Conclusion : Photoactivation was an influential factor in bond strength. The photoactivation only of the universal adhesive system proved to be a relevant factor in bond strength. The association between the universal adhesive system and the self-adhesive cement showed good bond strength results only when the adhesive was photoactivated and cement were not. The use of self-adhesive resin cement promoted the lowest values of bond strength

CAN SIMULATION OF THE INSERTION OF AN ACUPUNCTURE NEEDLE CAUSE PAIN?

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Some clinical studies on the therapeutic effect of acupuncture use non-penetrating needles (Streitberg's Needle) for the composition of a placebo comparison group, which simulate the insertion of the real needle. The aim of this study was to verify how painful acupuncture treatment, whether real or placebo.

Method : The sample consisted of 40 patients of both genders, from 20 to 50 years old, with muscular TMD (RDC / TMD), divided into 2 groups with 20 patients: Real (Insertion of true needle) and Placebo (Simulation of needle insertion penetrating). Both received 4 acupuncture sessions, once a week, of 20 minutes, in the

points: ST6 (Jiache), ST7 (Xiagan), SI18 (Quanliao), GV20 (Baihui), GB20 (Fengchi), BL10 (Tiaozhu), LI4 (Hegu). To evaluate the intensity of pain felt in the insertion of the needles, the Visual Analog Scale (VAS), marked by the patient after insertion of the needles at all points in the 1st session (initial VAS = VASi) and in the 4th session (final VAS = VASf). The insertion was unilateral.

Results : The female gender was the majority in the groups being in the real acupuncture group 90% with a mean age of 38 ± 8.7 years and in the Placebo group 75% with a mean age of 35.1 ± 8.5 years. The intensity of pain felt in the needles was higher in the Real group (VASi = 3.87 ± 2.22 and VASf = 2.43 ± 1.99) than in Placebo (VASi = 2.04 ± 1.78 and VASf = 2.14 ± 2.04).

Conclusion : Although in the Placebo group the needle did not penetrate the skin, it was found that some patients experienced insertion pain and this may be related to the visual effect of the simulation of the needle insertion and / or to the skin mechanoreceptors.

CHARACTERIZATION OF THE CULTIVABLE MICROBIOTA OF SYMPTOMATIC ENDODONTIC INFECTION WITH ACUTE APICAL ABSCESS ASSOCIATED

EZEQUIEL GABRIELLI; LETÍCIA MARIA MENEZES NÓBREGA; FRANCISCO MONTAGNER; ADRIANA DE JESUS SOARES; ALEXANDRE AUGUSTO ZAIA; MARINA ANGÉLICA MARIANO; JOSÉ FLÁVIO AFFONSO DE ALMEIDA; BRENDA PAULA FIGUEIREDO DE ALMEIDA GOMES
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to investigate the cultivable bacterial composition present in root canals (RC) of teeth associated with acute apical abscesses (AAA) by molecular identification (16S rRNA).

Method : Ten patients with necrotic pulp and AAA were selected. Samples were collected from RC, diluted and plated for bacterial isolation. Eighty strains isolated by culture were submitted to DNA extraction and amplification of the 16S rRNA gene, followed by sequencing. The resulting nucleotide sequences were compared to the GenBank database from the National Center of Biotechnology Information using BLAST. Associations between microorganisms and clinical features and between microbial species were also investigated.

Results : Thirty-two different cultivable bacteria were identified by 16S rRNA gene sequencing, belonging to 6 phyla, in an average number of 6 species per RC. Molecular approaches allowed identification of 99% of the isolates. The most frequently identified bacteria were *Prevotella buccae*, *Pseudoramibacter alactolyticus*, *Dialister invisus*, *Prevotella nigrescens*, *Propionibacterium acnes* and *Olsenella uli*. No statistical difference was found between bacteria and clinical features, or between the bacterial species identified ($p > 0.05$).

Conclusion : It was concluded that the microbiota of infected RC with AAA is diverse and heterogeneous. It is composed mainly by anaerobic Gram-negative bacteria, the majority belonging to the phylum Firmicutes followed

by Bacteroidetes.(FAPESP 2015/23479-5; CNPq 308162/2014-5 & CAPES).

CHEMICAL-PHYSICAL ANALYSIS OF FACTORS THAT INFLUENCE THE ABRASIVE AND EROSIVE POTENTIAL OF COMMERCIAL DENTIFRICES VITÓRIA MASSONETO PICCOLLI; WALDEMIR VIEIRA-JUNIOR; JÉSSICA THEOBALDO; NÚBIA PINI; DÉBORA LIMA; FLÁVIO BAGGIO AGUIAR PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To evaluate the chemical-physical properties of whitening dentifrices.

Method : Twenty dentifrices with different bleaching actives were selected as chemical agents (H2O2), physical / abrasive (silica, calcium carbonate) and / or optical (blue covarine). The dentifrices were submitted to descriptive analysis, pH analysis and % solids content (n = 3). The morphology of the inorganic composition of the dissected dentifrices was analyzed by scanning electron microscopy (SEM). The data were evaluated qualitatively and statistically using ANOVA and Tukey's test ($\alpha = 0.05$).

Results : 85% of the dentifrices present silica in the composition; 45% have pyrophosphates or derivatives and only 5% have H2O2 or sodium hexametaphosphate. In general, the dentifrices evaluated had a neutral or basic pH. The Colgate Total 12 Whitening Professional dentifrice showed pH = 6.0. The % solids content of the dentifrices showed a minimum value of 40.2% and a maximum of 65.1%, with an amplitude of 24.9%. 60% of the dentifrices studied presented solids content > 50%, the highest values found in the dentifrices: Close up Diamond Attraction (65.1%) and Sorriso Xtreme White 4D (64.4%). SEM analysis demonstrated different shapes, uniformities and particle sizes, even for commercially similar abrasive compositions.

Conclusion : Some dentifrices studied had pH < 6.5, % solids content > 50% and particles with irregular and non-uniform morphology.

CHINESE TRADITIONAL TECHNIQUES APPLIED IN THE TREATMENT OF FACIAL PARALYSIS SYMPTOMS- CASE REPORT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Acupuncture and other Chinese techniques aim to stimulate anatomical points and Specific areas for therapeutic effects. This paper reports on the case of a patient with facial paralysis, 35 years old, presenting good general state of health, without the use of any medication treated with traditional Chinese traditions and their results.

Method : The patient reported having episodes of cold sores; Have low self-esteem due to facial paralysis from early childhood. Through the MTC's the patient had a yellow face, slightly reddish cheeks, loss of taste. The pale, red-tipped tongue with teeth, edemaciada, with central fissure, deviated, dry and white thick; Lips and pale gums. She was treated with 10 sessions of acupuncture, of 20 minutes, once a week in the following points: CV2 (Qu Gu); CV8 (Shen Que); CV24 (Cheng Jiang); ST4 (Di

Cang); ST5 (Da Ying); ST6 (Jia Che); ST7 (Xia Guan); ST30 (Qi Chong); ST36 (Zu San Li); ST45 (Li Dui); LR3 (Tai Chong); GB2 (Ting Hui); GB34 (Yang Ling Quan); GB37 (Guang Ming); GB40 (Qiu Xu); LI4 (He Gu); TE3 (Zong Zhu) and Yin-Tang. At the end of each session was used auricular therapy with mustard seeds in the following points: Shen Men; Kidney; Friendly; Heart; Jaw; Jaw; Liver and Anxiety, Being encouraged to stimulate these points 3 times a day and withdraw the Seeds after the 4th day. It was used on the face in all sessions the Flower Hammer Of Threshing.

Results : Each session showed an improvement in muscle tone, as well as Self-esteem and the taste buds.

Conclusion : Chinese techniques may be useful in reducing the symptoms of Paralysis Facial.

CIVIL EXPERTISE REPORT: FROM BAD PLANNING AND EXECUTION TO CONDEMNATION

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The objective of this study was to identify the flaws and defects in the planning and execution of a prosthetic rehabilitation (core and crown) that culminated in the loss of the rehabilitated tooth, in addition to causing the posterior loss of the dental implant placed to replace the missing tooth.

Method : The patient was submitted to the expertise and all documentation of the medical record with the radiographic examinations were analyzed and presented in the form of a report by the experts,

Results : which served as the basis for the judgment to justify the conviction.

Conclusion : The dentist must maintain the quality of his professional services in the execution of the planned treatment, as well as having an assertive attitude towards the interferences in order not to aggravate the problems generated and their correct registration in the dental records.

CLINICAL FEATURES AND SURGICAL APPROACH OF A PATIENT WITH CORONARY PROCESS HYPERPLASIA- A CASE REPORT

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ARAÇATUBA DENTAL SCHOOL - UNESP

Aim : Hyperplasia of the coronoid process is a congenital or developmental disorder consisting of the non-neoplastic enlargement of the coronoid process invading the infra-temporal fosse, so that during the buccal opening the structure is impacted in the posterior region of the zygomatic bone, resulting the limitation of mandibular movements.

Method : A male patient, melanoderma, 43 years old, presented to clinic, complaining of limitation of oral

opening, no facial trauma recurrent. During clinical examination, the patient had a maximum mouth opening of 11 mm, accompanied by auditory noise without painful symptoms, being diagnosed after an examination evaluation, with bilateral coronoid process hyperplasia.

Results : The proposed treatment was bilateral coronoidectomy through intraoral access, and complete excision of the patient coronoid process was performed. The clinical and radiographic postoperative follow-up showed an improvement in the limitation of mandibular movements.

Conclusion : The surgical treatment promoted quality of life to the patient restoring the masticatory function, without any aesthetic or functional impairment.

COMMUNITY EDUCATIONAL ACTIVITIES FOR ORAL HEALTH PREVENTION

POLYANA VEIGA; DAGMAR DE PAULA QUELUZ
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To discuss preventive educational actions, focusing on brushstrokes: dental biofilm disclosure, child brushing techniques and oral antiseptics.

Method : It was a study carried out by means of a literature review.

Results : The educational and preventive activities promoting oral health in the community are extremely relevant to prevent various oral diseases, especially caries. The evidences of dental biofilm act as agents that motivate oral hygiene in community preventive educational actions, since it is a method that motivates the child to practice the brushing technique. When they visualize the regions of the teeth where they have greater accumulation of biofilm, the children end up learning and improving the technique of brushing. The use of oral antiseptics on a daily basis is very frequent, since they act as bactericides of microorganisms that cause various diseases, including caries. The mouth rinses reach places that brushing, have more difficulty, so they act directly in the control of the formation of dental biofilm, but this practice, even if efficient does not replace mechanical oral hygiene.

Conclusion : In order to carry out preventive community educational activities, aimed at guiding children about oral hygiene habits, through brushing techniques, among others, it was noticeable that these actions were tools to improve the oral hygiene of the population.

COMPARISON OF THE EFFECTS OF DIFFERENT FASN INHIBITORS ON THE CELL CYCLE, APOPTOSIS AND MORPHOLOGY OF SCC-9 CELLS

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BASTOS

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to compare the effects of pharmacological inhibition of three different catalytic domains of the metabolic enzyme FASN on the cell cycle and apoptosis and associate with the morphological alterations in SCC-9 cells derived from squamous cell carcinoma oral human.

Method : SCC-9 cells were treated with C75, TCS and

ORL (inhibitors of the KS, ER and TE domains of FASN, respectively) for 24h or 48h and then the cells were analyzed by flow cytometry and phase contrast microscopy.

Results : The inhibition of the different catalytic domains of FASN with C75, TCS and ORL, induced different effects on the morphology of SCC-9 cells. We observed that cells treated with ORL showed a fusiform pattern. Instead, cells treated with TCS had an increase of cytoplasmic granules and C75 promoted a decrease of the nucleus/cytoplasm ratio. Also, the treatments reduced the number of cells in the S phase and increased the number of cells in the G0 / G1 phase, specially with TCS and ORL. Regarding to the apoptosis analysis, we observed an increase in the number of apoptotic cells and a decrease in the number of viable cells, which was observed in three different concentrations of the drugs. However, TCS showed higher effectiveness in the apoptosis of SCC-9 cells.

Conclusion : In summary, the morphological changes of each inhibitor was linked not only to the specific inhibition of FASN activity but also could be due to adverse effects caused by the drugs.

CONDITIONING, IDENTIFICATION FOR OBTAINING COMPUTERIZED TOMOGRAPHIES

PAOLA INÊS BOLDRIN; LETÍCIA GABRIELE PERON;
VALMIR DIAS RAMOS; CRISTHIANE MARTINS
SCHMIDT; VIVIANE ULBRICHT; EDUARDO DARUGE
JÚNIOR; LUIZ FRANCESQUINI JÚNIOR

PIRACICABA DENTAL SCHOOL - UNICAMP
Aim : This research project aimed at the organization, cataloging and the aid in bone Anthropometry next to the osteological and tomographic Biobank Prof. Dr. Eduardo Daruge of FOP / UNICAMP.

Method : The packaging, cataloging and identification to obtain CT scans followed current international standards (Coma 1999).

Results : In the present study the students initially organized the collection (urns with bones, in ascending numerical Arabic order from number 24 to number 513). After this stage, cataloging and preparation for obtaining CT scans (the Discurs promoted the articulation of the mandible with the maxilla, with the insertion of the teeth with wax, and in the sequence they enveloped the skull articulated with plastic film). After this stage, and back to the Biobank, the Students discouraged the plastic film and returned the skull and jaw in the corresponding urns. During this period, they had classes of human identification, photography course, and practice of anthropometry and computed tomography, besides doing searches in magazines and specific sites (national and international).

Conclusion : All the work developed by the Student will facilitate the use of the tomography for the realization of new mathematical models.

CONDUCT AND STANDARDIZATION OF CATALOGING METHODS OF A NATIONAL BIOBANK

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LETÍCIA GABRIELE PERON; CRISTHIANE MARTINS
SCHMIDT; VIVIANE ULBRICHT; EDUARDO DARUGE

JÚNIOR; LUIZ FRANCESQUINI JÚNIOR
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Standardization of international methodology aiming to catalog bones and tomographies of the Dr. Eduardo Daruge's osteological and tomographic biobank from FOP/UNICAMP and give assistance in bone anthropometry.

Method : For cataloging bone a binder that contains all the drawing of all bones was designed and should register absence and presence, in addition to the photographic record with an 840 L coolpix Nikon camera.

Results : In the present study, the students initially organized the collection (urns with bones, in ascending Arabic numerical order from number 24 to number 513). After this stage, the cataloging began (organization of bones in the anatomical norm, with insertion of numbering by means of marker pens for overhead projectors in all bones and in the files designed for this purpose). They then carried out the photographs (in seven different positions), arriving in the 321st ballot box. They were also able to help undergraduates and graduate students to measure bones with the aim of future mathematical formulas. During this period, they had classes of human identification, photography course, anthropometry and computed tomography and searched literature in specific sites (national and international) for small revisions.

Conclusion : All the work developed by the student facilitated the use of new mathematical models.

CORRELATION BETWEEN MUSCULAR PAIN AND QUALITY OF LIFE WITH PARAFUNCTIONAL HABITS IN TMD PATIENTS

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Aim : To evaluate the correlation of the presence of sleep bruxism in wakefulness and both with quality of life, pain, and excessive daytime sleepiness.

Method : One hundred and thirty (130) patients from the Nucleus of Diagnosis and Treatment of TMD (NDTDTM) Clinic of the Faculty of Dentistry of Araçatuba, Paulista State University "Júlio de Mesquita Filho", were evaluated and submitted to the inclusion and exclusion criteria of the study.

Results : A variation of 0.45 to 21.84 points was observed for the evaluation of the impact of pain on quality of life, with an average of 8.95 and a standard deviation of 5.83. All presented values different from zero. Consequently, 100% of the sample had some negative impact on at least one question. The worst pain experienced in the last 3 months and the average pain reported in the last three months was higher in the groups with bruxism in the waking state and with both bruxisms. There was a positive correlation between the presence of bruxism and the high scores in the quality of life index, showing that bruxism correlated positively with the highest scores (lower quality of life). There was also a positive correlation between the presence of bruxism in wakefulness and the worst pain experienced in the last three months and the mean pain

in the last 3 months.

Conclusion : Waking bruxism correlated positively with the average pain and the worst pain experienced in the last 3 months; Bruxism (sleep, waking or both) correlated with the lower quality of life in the study population.

CORRELATION BETWEEN SPHENOIDAL SINUS VOLUME AND GENDER, SKELETAL CLASS AND FACIAL TYPE USING CBCT EXAM

MARIANE MICHELS; LEONARDO VIEIRA PERONI; YURI NEJAIM; AMANDA FARIAS GOMES; ELIANA DANTAS DA COSTA; CAROLINA VALADARES VIEIRA SOUZA; FRANCISCO CARLOS GROPPPO; FRANCISCO HAITER

NETO
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to correlate sphenoidal sinus volume with sex, skeletal class, facial type and presence of septa using CBCT images.

Method : We selected 172 patients, 87 women and 85 men, with a mean age of 29.2 years. All patients were classified by two evaluators regarding gender, skeletal class and facial type. In addition, they measured the volumes of the sphenoid sinuses and reported the presence of septa. After this step, two-way ANOVA and chi-squared statistical tests were performed.

Results : No significant statistical differences were found in sphenoidal sinus volumes in relation to gender, skeletal class and facial type. However, a greater volume of the sphenoid sinuses was observed when there was presence of bone septum.

Conclusion : It is concluded that there is no need for an individualized evaluation protocol for sphenoid sinuses.

COUNSELING INCREASES THE EFFECTIVENESS OF OCCLUSAL SPLINT FOR MYOGENIC TEMPOROMANDIBULAR DYSFUNCTION WITH CHRONIC PAIN

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The present study aimed to evaluate and compare the degree of efficiency between the use of an occlusal splint therapy (OS) and the use of a combined therapy (counseling and OS) in the control of myogenic Temporomandibular disorder(TMD) with chronic pain

Method : Ethics committee number: 073557/2017. Twenty volunteers with myogenic TMD involving chronic pain, diagnosed using RDC / TMD (Axis I and II), were recruited and divided into two groups (n = 10): group A (treated with occlusal splint); and group B (treated with occlusal splint and counseling). Pre-treatment evaluations were performed using visual analogue scale (EVA), algometry test (LDP) and Electromyography (EMG). Both therapies were applied for each group and post-treatment evaluations were performed after 1, 3 and 6 months using the same pre-treatment tests.

Results : In both groups, LDP results after three and six months showed a significant increase on pain threshold in almost all evaluated muscles (ANOVA, p <0.05). The

results of EMG test (rest and maximal voluntary contraction), as well as those from VAS, presented no significant differences between groups (ANOVA, $p > 0.05$). Results suggest a significant increase in the pain threshold of patients with myogenic TMD with chronic pain after the application of the combined therapy when compared to the isolated OS therapy.

Conclusion : In conclusion, the association of treatments should be used as a first line treatment modality for the control of myogenic TMD involving chronic pain, since it increases the efficacy of the OS therapy, without presenting an economical increase for patients or clinicians.

CREATING OF VIRTUAL AND PHYSICAL MODELS OF TEETH FOR DENTAL ANATOMY STUDY

WALLACE MENDES; YASMIN GALANI GASPARINO; NATHIELI THALITA PERES DO NASCIMENTO; FERNANDA FELIPE DE ANDRADE; JULIANA HADDAD; ALEXANDRE RODRIGUES FREIRE; FELIPE BEVILACQUA PRADO; ANA CLÁUDIA ROSSI; ANA CLÁUDIA ROSSI

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this work was to create didactic material including physical and virtual models of superior premolars for Dental Anatomy study

Method : The construction of models was performed in 4 steps: a previous study of Dental Anatomy using images of teeth from dental anatomy atlas and natural teeth; the teeth reproduction through wax sculpture; construction of teeth mold to create the plaster model; finishing and a specific painting for marking the dental structures used for dental anatomy study. To perform the virtual models, the 3D surface of the teeth were obtained manually using the Mimics v18 software. For modeling, the images of the same teeth for study were used as reference. A new study on the physical and virtual material to evaluate the correct presence of dental structure were performed.

Results : Both models presented all anatomical structures correctly.

Conclusion : The process of creation of physical and virtual models contributed for the consolidation of Dental Anatomy learning and offers different alternative for studying and teaching in practical classes for students in Dentistry

CRITICAL LITERACY AND DEVELOPMENT OF EDUCATIONAL MATERIAL OF ORAL HEALTH IN ADULTS

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Aim : It was evaluated critical health literacy (CHL) among adults and developed an educational material on oral health (EMOH).

Method : A longitudinal study conducted on 117 adults (26-70 years), selected by probabilistic sampling from Piracicaba-SP. An EMOH that represented oral health conditions was developed and included natural or restored teeth, orthodontics, periodontal disease, fixed

prosthesis and implant, removable partial denture and total denture and tooth loss. CHL was assessed using Health Literacy Scale (HLS-14) questionnaire. The EMOH was presented to volunteers and it was checked the identification with their oral health condition and comprehension about contents. The descriptive analysis was performed with STATA 11.0.

Results : Regarding CHL, most participants knew when health information was good (56% CI 95%: 47.3-65.5), true (64.1% CI 95%: 55.2-72, 9), reliable (39.3% CI 95%: 30.3-48.2) and also applied this information to improve their health (73.5% CI 95%: 65.4-81.6). Respect to EMOH, 58.6% (CI 95%: 49.5-67.7) recognized their oral health status and 94.8% (CI 95%: 90.7-98.9) recognized that material information were good for their health. In addition, 32.5% of participants had knowledge about oral health care, health rights and treatments provided by dentist from Family Health Unit.

Conclusion : The CHL allowed the participants recognize their oral health condition and understanding the health information found in daily life and those contained in the EMOH, being important to improve autonomy of self-care in order to promote oral health.

CYTOTOXICITY EVALUATION OF TWO MTA-BASED ROOT CANAL SEALERS: AN IN VITRO STUDY

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Aim : This study evaluated the cytotoxic effects of two MTA-based root canal sealers (Endoseal and MTA Fillapex) on human MRC-5 fibroblasts by comparing cell viability with an epoxy resin-based sealer (AH Plus) and negative control.

Method : MRC-5 human fibroblasts were incubated with four different elutes of Endoseal, MTA Fillapex, and AH Plus for 24 hours. The cytotoxicity of tested materials was determined using the MTT assay. The results were analyzed using ANOVA and Tukey tests using SPSS software 15.0 (SPSS Inc, Chicago, IL). The level of significance was $P < 0.05$.

Results : At 1:1 dilution, there was no statistical difference between all root canal sealers tested ($P > 0.05$). AH Plus showed significantly more cell viability (mitochondrial activity of cells) than Endoseal and MTA Fillapex at 1:2 dilution ($P < 0.05$). At 1:4 and 1:8 dilutions, MTA Fillapex showed less cell viability than AH Plus and EndoSeal ($P < 0.05$). At these same dilutions, no statistically significant differences were observed between AH Plus and EndoSeal ($P > 0.05$).

Conclusion : The cytotoxicity effects of all endodontic root canal sealers were dose-dependent. Endoseal showed significantly more cell viability than MTA Fillapex in two of four dilutions tested. AH Plus showed statistically lower cytotoxicity than the two MTA-based root canal sealers in one of four dilutions evaluated.

DENTAL ANKYLOSIS IN PRIMARY MOLARS: A CASE REPORT

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SCUDINE; KELLY MARIA SILVA MOREIRA; REGINA
MARIA PUPPIN RONTANI
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Aim : Dental ankylosis is recognized as the principal etiological factor of infraocclusion in patients with primary and mixed dentition. When it is early identified, it is presented as a potential to the establishment of effective preventive and/or invasive intervention, associated with patient monitoring, which will contribute to an adequate reestablishment of eruptive process. This case report describes a therapeutic approach for a patient with stagnation of primary inferior first molars eruptive process, assisted in pediatric dentistry clinic of the Piracicaba Dental School – FOP/UNICAMP, followed from seven to nine years old.

Method : After anamnesis and clinical exam, infraocclusion was observed in those teeth, suggesting dentoalveolar ankylosis. Panoramic and intraoral periapical radiographs were requested. It was diagnosed with slight dentoalveolar ankylosis. Treatment planning included indirect restorations of composite resin, providing functionality to those teeth.

Results : In this case report, clinical and laboratorial steps are presented. Results after two years show that necessary space to guarantee dental eruptions from permanent dentition were maintained, resulting in a normal occlusal pattern and success of approach done. The patient is still in clinical monitoring and eruptive process of permanent dentition is in normality conditions.

Conclusion : Dental ankylosis should not be neglected. An early recognition and adequate intervention are essential to guarantee normality of eruptive process.

DENTAL EROSION: A LITERATURE REVIEW
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MARCHI; JULIANA FELIPPI DE AZEVEDO BANDEIRA
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Aim : The aim of this paper was to review and discuss the etiology, diagnosis and treatment of dental erosion affecting a growing population.

Method : A PubMed search was carried out from 2012 to 2017 to assess information about etiology, diagnosis and treatment of dental erosion.

Results : Dental erosion is caused by acid, without bacterial involvement, which may be of intrinsic or extrinsic origin. The extrinsic origin acids are derived from the diet, drugs and the environment. The causative factors of intrinsic origin are associated with gastroesophageal reflux disease, anorexia and bulimia. Dental erosion treatment can range from preventive measures to restorative treatments, and still act in a multidisciplinary way with different specialties.

Conclusion : Aspects related to the diagnosis, etiology and treatment of dental erosion are well described in the literature. A detailed clinical history and a careful clinical examination are essential for an early and accurate diagnosis.

**DENTAL NEOFORMATION AFTER EXODONTIA OF
NATAL AND NEONATAL TEETH**

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CASTELO BRANCO LIMA; CAROLINA VELOSO LIMA;
LÚCIA DE FÁTIMA ALMEIDA DE DEUS MOURA;
MARINA DE DEUS MOURA DE LIMA; TERESINHA
SOARES PEREIRA LOPES; MARCOELI SILVA DE
MOURA

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Natal teeth erupt in the oral cavity prematurely and, in most cases, belong to the normal series. The therapeutic conduct adopted in these cases depends on several factors, among them the degree of insertion of the tooth in the mucosa, being possible the option for extraction. Due to the permanence of tooth structure cells, Epithelial Rests of Malassez, a dental neoformation is possible to occur. This study aims to report two clinical cases of dental neoformation after extraction of natal teeth in patients attended at the Preventive Program for Pregnant Women and Babies from Federal University of Piauí, Brazil.

Method : In the first case, difficulties were reported in breastfeeding a child with Down Syndrome. At the clinical examination, the presence of the tooth 71 with brown heart and with extensive mobility was observed. The clinical conduct adopted was extraction. At the second visit, one mother reported that 81 had erupted, being removed in another office. After three months, the patient returned to the PPPWB and a residual natal tooth was found in the region of 81, which was removed.

Results : In the second case, the patient had four natal teeth: 51, 61, 71, and 81. The upper ones had a marked mobility, whereas the lower ones were hypoplastic and had good implantation. Extraction of the superiors and maintenance of the inferiors were chosen. During follow-up, dental neoformation was observed in the region of 61, and was also removed.

Conclusion : Follow-up and therapeutic management are essential in cases of natal and neonatal teeth.

**DEPRESSION SYMPTOMS AMONG DENTAL
STUDENTS AND ITS ASSOCIATION WITH THE
COURSE PERIOD**

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CASATI LODI; ADRIANA DANTAS DA COSTA; ROSANA
DE FÁTIMA POSSOBON
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Aim : Depression symptoms are getting more frequent among undergraduates students mainly those are in health courses. Depression may affect their academic performance and disturb their social life. The goal of this research was to investigate if students from Piracicaba Dental School (Unicamp) are having depression symptoms and if the level of these symptoms are specifically higher in some period of the course.

Method : The participants (261 students) had filled the Beck Depression Inventory (BDI) and answered a questionnaire about socioeconomic and demographic data. Descriptive and bivariate analysis (chi-square test) at the significance level of 5% were conducted to verify association between depression symptoms levels and period of course.

Results : The sample was predominantly female, with

average age of 21 years old and majority living away from the parents. In opposite to what was expected, all students showed some depression symptoms, being 83% classified in moderate level and 17% in moderate to severe. The moderate level of depression symptoms was higher in the end of the course.

Conclusion : As depression is a serious condition that affects physical and mental health, these results stand up for the importance these students have some kind of follow up throughout all course period. This attitude could be avoid school dropout and the lack of interest in working in the profession, besides much suffering of the student.

DEPTH OF CURE OF BULK FILL RESIN COMPOSITES: A SYSTEMATIC REVIEW

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Aim : To evaluate scientific evidence regarding depth of cure of bulk-fill resin composites (BFRC).

Method : This systematic review was conducted according to PRISMA statement and registered on PROSPERO (International prospective register of systematic reviews). PubMed, Embase, Scopus and ISI Web of Science databases were searched until May 2017 using the keywords "bulk fill resin composite", "polymerization", "depth of cure", "microhardness" and "degree of conversion". Studies published in English language, assessing depth of cure of BFRC by microhardness test and/or degree of conversion (DC) were included. Studies using ISO 4049, assessment less than 4 mm as well as those that did not report exposure time and/or irradiance were excluded.

Results : In total, 742 studies were found from which 33 were included. Ten reports showed acceptable bottom/top microhardness ratio (≥ 0.8) for all tested BFRC. However, material-dependent results and non-satisfactory bottom/top microhardness ratio (< 0.8) were showed in 9 and 2 studies, respectively. Regarding DC, acceptable results ($\geq 50\%$) were presented in 11 studies while 8 showed that proper DC depended on BFRC. More favorable depth of cure results were achieved using light curing units (LCU) with irradiance ≥ 1100 mW/cm² and exposure times ≥ 20 seconds. Polywave LCU were not essential for some BFRC containing alternative photoinitiators.

Conclusion : BFRC can achieve acceptable depth of cure, depending on material, irradiance from LCU and exposure time. Polywave LCU were useful but not strictly necessary on the polymerization process of some BFRC containing alternative photoinitiators.

DETECTION OF INCOMPLETE ROOT FRACTURES IN ENDODONTICALLY TREATED TEETH USING HIGH-RESOLUTION CBCT IMAGING PROTOCOLS

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Aim : To compare different high-resolution CBCT imaging protocols in the diagnosis of incomplete root fractures of endodontically treated teeth.

Method : Twenty single-rooted human teeth were endodontically treated and incomplete root fracture was induced. The teeth were scanned with the CBCT unit PreXion 3D operating at two different protocols: High-resolution/Standard (HI-STD) (19 seconds and 512 basis images) and High-resolution/Hi-density (HI-HI) (37 seconds and 1024 basis images). Three oral radiologists evaluated all images using multiplanar reconstructions. The diagnostic tests and the Receiver Operating Characteristic (ROC) curve were calculated.

Results : The HI-STD and HI-HI protocols presented an accuracy of 0.90 and 0.93, respectively, and both protocols had sensitivity of 0.97. The HI-HI protocol showed higher positive predictive value and slightly higher areas under the ROC curve.

Conclusion : Both high-resolution imaging protocols presented high accuracy in the detection of incomplete root fracture of endodontically teeth. Thus, the HI-STD protocol should be indicated this reduces the radiation dose.

DETERMINATION OF ANCESTRALITY AND SEX IN BRAZILIANS

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Aim : To determine the skin color and sex by means of measurements of 198 Brazilian skulls existing in the Biobank of FOP / UNICAMP and in these studies the following measures: glabella-opstocrânio; Basal-bregma; Maximum cranial width; Bregma-lambda; Lambda-opstio; Násio-bregma; Maximum alveolar width; Násio -the baseline; baseline-prosthion.

Method : Linear measurements were performed on 198 skulls, 86 females and 112 males, with known sex, age, ancestry and cause of death.

Results : The analysis showed that all measurements were higher in men, except the Basion - Prospect Length, which did not show statistically significant differences between the sexes. With the exception of Alveolar Maxilloframes, which was higher in black men than in whites ($p = 0.0132$) and Basion - Prospect Length, which was higher in black women than in white women ($p = 0.0086$), skin color did not influence Other measures. The regression revealed that the model composed of the measurements of Max Length Cranial Glabella - Opistoc., Max. Cranial Width and Nasion - Basion Length was better (Chi - square = 67.7, $p < 0.0001$) to predict sex. Nagelkerke's R² showed that the variables are responsible for 40.6% of the variation found in the sex. The Hosmer and Lemeshow test showed that the model was adequate ($p = 0.48$). Method (mathematical model

sex) = 74.5% of accuracy.

Conclusion : It was possible to create a mathematical model $Sex = -37.8 + (0.10 \times \text{Max Length Cranial Glabella} - \text{Opistoc.}) + (0.06 \times \text{Max Cranial Width}) + (0.14 \times \text{Nasion Length} - \text{Basion})$, obtaining a 74.5%. The mathematical models for the determination of ancestry produced no or little contribution to this theme.

DETERMINATION OF ANTIMICROBIAL ACTIVITY IN MIXED BIOFILMS, VIRULENCE AND TOXICITY OF PENTYL CAFFEATE (C5)

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to evaluate the virulence and antimicrobial potential of C5 in mixed biofilm of *C. albicans* and *S. aureus*, in addition to toxicity in macrophages (in vitro) and *G. mellonella* (in vivo), respectively.

Method : Minimal Inhibitory Concentration of C5 (MIC) and its effects on the formation and morphology (SEM) of mature mixed biofilms and in formation of *C. albicans* and *S. aureus* were determined. In addition, the virulence in *G. mellonella* and the quantification of the extracellular matrix present in the biofilms by the safranin dye. In the mature mixed biofilm there was a lower biofilm reduction, with values of only 28% and 45% for *S. aureus* and *C. albicans* respectively, whereas in the mixed biofilm in formation there was a reduction of 75% for *S. aureus* and totally eliminated the cells of *C. albicans*, affecting the architecture / structure of biofilms in all situations studied ($p < 0.001$).

Results : Regarding the mixed infection, we observed the death of all the *Flarvae* in 24 hours. The treatment with C5 showed a reduction of the biofilm matrix and showed no toxicity in macrophages and *G. mellonella* larvae.

Conclusion : Therefore, C5 reduced biofilm and showed low in vitro toxicity and it can be used mainly in the prevention of the formation of mixed biofilms of *S. aureus* and *C. albicans*.

DETERMINATION OF SKIN COLOR AND SEX: IN SAMPLE OF OSTEOLOGICAL BIOBANK DR. EDUARDO DARUGE FOP - UNICAMP

VIVIANE ULBRICHT; MARÍLIA SOUZA DE CARVALHO; CRISTHIANE MARTINS SCHMIDT; EDUARDO DARUGE JUNIOR; ALICIA PICAPEDRA; DEBORA COSTA RUIZ; MARIA JULIA ASSIS VICENTIN; VANESSA GALLEGGO ARIAS PECORARI; LUIZ FRANCESQUINI

JUNIOR PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Forensic Anthropology seeks means of human identification when bodies have been found to be in an advanced state of decomposition and / or skeletonized, making identification by primary methods impossible (INTERPOL 2014). The Brazilian population is miscegenated, and as tables in the IMLs for identification,

induce errors. In this study, the skin color was determined by means of cranial measurements in lateral and basal norm of 200 ossates of the Southeast region of Brazil, in the file of bones of the area of Legal Dentistry of FOP / UNICAMP. The measurements: lambda-oral point, basal-oral point, zygomaxillary basal-point (right), frontal norm (maximum aperture) and nasal height.

Method : Measurements on the 200 skulls were made with the aid of a precision caliper brand and the data were noted in a card for this purpose. Statistical analysis was performed by the Kolmogorov-Smirnov and Levene tests, and the unpaired T test was used to compare the sex and ethnic groups. The findings of the study will be presented descriptively and through tables of absolute / relative frequency and graphs.

Results : Statistical analysis was performed by the Kolmogorov-Smirnov and Levene tests, verifying homoscedasticity, and the unpaired T test was used to compare sex and ethnicity. The logistic regression (Foward Stepwise-Wald) was calculated to observe the degree of dependence of sex on the measurements, considering the male as "1" and the female as "0" for the purpose of the calculation.

Conclusion : It was possible to determine a mathematical model for determining sex. The mathematical models for determining ancestry have produced little contribution to this theme.

DIAGNOSTIC VALUE OF MAGNETIC RESONANCE IMAGING IN THE ANALYSIS OF AMELOBLASTOMA: REPORT OF TWO CASES

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Aim : Ameloblastoma is an odontogenic tumor that shares clinical and imaging characteristics with other lesions of the jaws, such as odontogenic keratocyst, which makes the diagnosis difficult.

Method : However, in addition to radiographic and tomographic examinations, Magnetic Resonance Imaging (MRI) has been increasingly used, contributing with relevant additional information about the differentiation between solid and liquid components of the lesion. This case report was conducted to present two variations of ameloblastoma and discuss the radiographic, tomographic and MRI contribution in the differential diagnosis between ameloblastoma and odontogenic keratocyst.

Results : The signal intensity in T1-weighted MRI revealed internal fluid content in both cases, which was important in the differential diagnosis with other intraosseous lesions such as odontogenic keratocysts. This is probably due to the presence of keratin that increases the viscosity of the content and also for an intermediate signal intensity signal in T2-weighted MRI.

Conclusion : Therefore, MRI revealed important internal characteristics of the reported lesions, which was very

useful in the establishment of the differential diagnosis with other lesions.

DIFFERENT CRYSTALLINE TiO₂ PHASES AFFECT THE ANTIBACTERIAL PHOTOCATALYTIC ACTIVITY IN ORAL MULTISPECIES BIOFILM

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Aim : This study aimed to investigate the photocatalytic and antimicrobial activity of different crystalline TiO₂ phases deposited on commercially pure titanium (cpTi) discs by magnetron sputtering.

Method : The studied groups were: (1) cpTi machined (control); (2) A-TiO₂ (anatase); (3) M-TiO₂ (mixture of anatase and rutile) and (4) R-TiO₂ (rutile). The surfaces were analyzed as for morphology, crystalline phase, chemical composition, hardness, elastic modulus, roughness and surface free energy. The photocatalytic potential were evaluated by the degradation of methylene blue dye. The antibacterial activity was analyzed as for morphology and colony forming units on a multispecies (*Streptococcus sanguinis*, *Actinomyces naeslundii* and *Fusobacterium nucleatum*) early biofilm (16.5 h). After adhesion period, experimental groups and cpTi-light were exposed to UV-A light during 1 hour (2x15 watts) while cpTi-dark has no light exposure.

Results : M-TiO₂ and A-TiO₂ films promoted a bacterial reduction of ~99.9% and 99% respectively ($p < 0.001$ vs. control), while R-TiO₂ had no antibacterial activity ($p > 0.05$ vs. control).

Conclusion : A-TiO₂ and M-TiO₂ showed antibacterial activity on the biofilm model, being less prone to peri-implantitis and promising coatings for dental implants.

ECONOMIC EVALUATION OF FAMILY HEALTH PROGRAM

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Aim : The economic evaluation in health seeks to guide public policy makers to use scarce resources available in an equitable manner, leading to the greatest possible social benefit. The purpose of this study was to provide a basis for planning, and managing the Unified Health System.

Method : The methodology adopted was a narrative review with the purpose of answering the question: the Family Health Program is more cost-effective than the traditional model of organization Primary Care? The selection of the study was carried out in two phases: (1) abstracts and titles were selected and (2) the complete texts of the selected titles were obtained and read to determine the final sample set. The entire process of

searching, selecting and extracting the data of the articles was done in pairs. The databases used to trace the articles were the Virtual Health Library (BIREME), Scientific Electronic Library Online (SciELO) and Google Scholar.

Results : The articles found during the review showed that the Family Health Program was more cost-effective than the traditional model

Conclusion : Therefore, this care organization model was more appropriate for the municipalities.

EFFECT OF AT-HOME BLEACHING WITH DIFFERENT THICKENERS ON COLOR CHANGE AND MICROHARDNESS OF DENTAL ENAMEL

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Aim : This study aimed to evaluate the effect of at-home bleaching containing different thickeners on color change and superficial microhardness of enamel.

Method : Seventy blocks of bovine teeth (5.0mm x 5.0mm x 3.0mm) were prepared and randomly distributed into seven groups (n=12) according to the bleaching/thickening treatment: Carbamide peroxide 10% (CP) with carbopol (FGM- Whiteness Perfect); CP + carbopol (Manipulated); CP + natrosol (experimental); carbopol; natrosol; PC 10%; and no treatment (control). The bleaching and microhardness were evaluated by means of CIE Lab method using reflectance spectrophotometer and microhardness test, respectively.

Results : Carbopol group had the lowest microhardness values, differing statistically from the others, except from group FGM. Natrosol group showed similar microhardness values comparing to control. Increased lightness (L*) and decreased yellowness (b+) were found in group with CP and CP + thickeners (FGM, carbopol manipulated and natrosol experimental). Enhanced values of redness (a+) was found in group CP + natrosol differing statistically from the FGM and PC + carbopol, though not differing statistically from the other groups.

Conclusion : Carbopol reduced the hardness of dental enamel. Natrosol did not reduce the hardness. Bleaching efficacy was found in all groups that contained CP + thickener, regardless of the thickener used (carbopol or natrosol).

EFFECT OF BLEACHING GEL ENRICHED WITH CALCIUM OR FLUORIDE ON WHITENING EFFECTIVENESS AND ENAMEL PROPERTIES

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The objective was to evaluate the commercial bleaching products with 35%-40% hydrogen peroxide (HP), enriched with calcium (Ca) or fluoride (F), in relation to the whitening effectiveness, surface roughness and

enamel microhardness.

Method : Forty-eight bovine blocks of enamel/dentin (4 x 4 x 3 mm) were randomly allocated into the following groups (n = 12): unbleached enamel (negative control - NC), bleaching agents based on: 35%HP (Whiteness HP, FGM – positive control); 35%HP + Ca (Whiteness HP Blue, FGM); and 40% HP + F (Opalescence Boost, Ultradent). Color changes were determined using the CIE L*a*b* system (ΔE , ΔL^* , Δa^* , and Δb^*), and a roughness (ΔRa) analysis was performed before and after treatment. Surface microhardness (SMH) was performed after treatment. The data were submitted to ANOVA and Tukey's test ($\alpha = 0.05$).

Results : Color changes were statistically similar in the bleached groups ($p > 0.05$). The ΔRa values increased in all bleached groups differing statistically from NC ($p < 0.05$). 35% HP decreased SMH differing from NC ($p < 0.05$). However, 35% HP + Ca did not differ statistically from NC ($p > 0.05$).

Conclusion : The addition of calcium or fluoride to bleaching gels did not affect the whitening efficacy of the treatment. However, the presence of calcium was able to reduce the negative effects on microhardness of bleached enamel.

EFFECT OF CHEMICAL-MECHANICAL PREPARATION ON THE ENDOTOXINS AND CYTOKINES LEVELS IN PRIMARY ENDODONTIC INFECTIONS

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Aim : This study investigated: a) The LPS levels in teeth with chronic apical periodontitis and their relationship with clinical signs and symptoms; b) The effectiveness of the chemical-mechanical preparation (CMP) with different irrigants in the elimination of LPS; c) The inflammatory potential of endodontic contents, before (C1) after instrumentation (C2) and after the use of 17% EDTA (C3) in culture of macrophage cells for the production of cytokines IL-1beta; and TNF-alfa;.

Method : Thirty root canals were randomly assigned into 3 groups: GI: 2.5% sodium hypochlorite (NaOCl), GII: 2% chlorhexidine (CHX) gel, and GIII (control group): saline solution. Samples were collected using sterile/apyrogenic paper points.

Results : LPS was detected in all of cases (18.70 EU/mL). Teeth with presence of pain to percussion and intracanal exudation were related to elevated LPS levels. After CMP, significant LPS reduction was obtained in the groups: 2.5% NaOCl + 17% EDTA (99.75%), 2% CLX gel + 17% EDTA (98.27%), SS + 17% EDTA (71%). IL1-beta; and TNF-alfa; were produced by macrophages in the different phases, being (C1> C2> C3).

Conclusion : It was concluded that LPS were present in all cases, presenting higher levels in the teeth with pain to percussion and intracanal exudate. The CMP was effective in reducing the LPS, regardless of the auxiliary

chemical substances tested. The inflammatory potential was demonstrated by the production of IL-1beta; and TNF-alfa;, exerting greater activity in the initial samples. (Supported by FAPESP 2015/23479-5, CNPq 308162/2014-5 & CAPES).

EFFECT OF CLEANING METHODS ON BOND STRENGTH AFTER CONTAMINATION WITH SALIVA IN GLASS CERAMIC

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Aim : Evaluate different cleaning methods on the microshear bond strength (μ SBS) of a lithium disilicate glass ceramic (EMX) to a resin cement (RC) after contamination of the surface.

Method : Sixty ceramic blocks (n=10) were fabricated. The groups were divided according to the cleaning methods: 37% phosphoric acid (PA), 5% hydrofluoric acid (HF), water / air spray (AW), Ivoclean (IC) cleaning paste, no cleaning method (NC) and control (no contamination – CT). The ceramic surfaces were sand blasted and conditioned with 5% HF. Then the surfaces were contaminated with saliva and cleaned according to each cleaning method. After contamination, all blocks were treated with a silane coupling agent followed by a thin layer of an unfilled resin. Three RC cylinders were made on each EMX surface, which was then stored in deionized water at 37°C for 24 h before testing. The μ SBS was carried-out in a universal testing machine at a crosshead speed of 1 mm/min until failure. The fractured specimens were observed under optical microscopy at 40x magnification and mode of failure was classified as: adhesive, cohesive within ceramic, cohesive within resin cement and mixed. Data were submitted to one-way ANOVA and Tukey test ($\alpha=0.05$).

Results : IC (20,9 MPa) and CT (23,4 MPa) presented higher μ SBS values and no significant difference from AP (17 MPa) . AW (11,6 MPa) and NT (9,9 MPa) presented the lowest μ SBS values and no significant difference was found for HF (12,4 MPa) . The most observed fracture type was mixed, followed by adhesive.

Conclusion : Cleaning methods can improve μ SBS of EMX to the RC when the surface is contaminated with saliva.

EFFECT OF DIFFERENT MODES OF PHOTOACTIVATION IN THE MECHANICAL PROPERTIES IN THE LUTING OF CERAMICS LAMINATES

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Aim : The purpose of this in vitro study was to evaluate the effects of different modes of photoactivation in the nanohardness and elastic modulus of adhesive system and resin cement.

Method : The factors of the studies were: two levels of

light curing units (VALO – Ultradent, Radii-Ca I- SDI) and three modes of photoactivation (without prior curing the adhesive system in the tooth surface and inside of the ceramic laminate, prior curing the adhesive system only in the tooth surface, and prior curing of the adhesive system in the tooth surface and within the ceramic laminate). Eighteen ceramic blocks (7x8x0,6mm) of lithium disilicate (IPS e-max CAD) were made, which were cemented on the enamel of bovine teeth, and distributed into 6 groups according to the light curing units and methods of procedures (n=3). Single Bond Universal adhesive system and RelyX Veneer (3M/ESPE) resin cement were used. The mechanical properties of nanohardness and elastic modulus were measured using a nanohardness tester (Anton Paar) under load of 1000 μ N. Data of mechanical properties were submitted to statistical tests of normality and analyzed by two-way ANOVA and Tukey's test ($\alpha=0.05$). **Results :** The results showed that, for the Single Bond Universal/RelyX Veneer adhesive system, previous activation adhesive system contained only in the dental enamel with Valo polywave light curing unit showed more satisfactory results. **Conclusion :** In general, Valo polywave light curing unit promoted better mechanical properties than Radii-Cal singlewave light curing unit.

EFFECT OF FLUORIDATED TOOTHPASTE AND SUPPLEMENTED WITH HEXAMETAPHOSPHATE NANO-SIZED ON CARIES: AN IN SITU STUDY

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Aim : The aim of this study was to evaluate in situ the ability of a toothpaste containing nano-sized sodium hexametaphosphate (HMPnano) associated with fluoride (F) to reduce the demineralization of bovine dental enamel.

Method : This crossover double-blind study consisted of four phases (7 days each) and 12 volunteers who wore oral appliances containing four enamel bovine blocks. The cariogenic challenge was performed by 30% sucrose solution (6x/day). The toothpaste treatments (3x/day) were as follows: no F/HMP/HMPnano (Placebo), 1,100 ppm F (1100F), 1100F plus 0.5% micrometric or nano-sized HMP (1100F/HMP; 1100F/HMPnano). **Results :** In the enamel blocks, the final surface hardness (SHf) was determined for the calculation of the percentage of surface hardness loss (% SH). The data of %SH in the enamel were submitted to analysis of variance (1-criterion), followed by Student-Newman-Keuls test ($p < 0.001$). Treatment with 1100F/HMPnano toothpaste reduced the %SH by 49% when compared to 1100F ($p < 0.001$). However, the addition of micrometric HMP in conventional toothpaste decreased SH% by 36% when compared to the Placebo group ($p < 0.001$), being similar to 1100F ($p = 0.695$).

Conclusion : It was concluded that the toothpaste containing 1100F/HMPnano demonstrated a greater

protective effect against the demineralization of dental enamel.

EFFECT OF HYDROFLUORIDIC ACID CONCENTRATIONS AND ADHESIVE LAYER ON BOND STRENGTH PERFORMANCE TO DENTAL CERAMIC

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Aim : This study investigated the influence of different concentrations of hydrofluoric acid (HF) and the application or not of a thin layer of adhesive on micro-shear bond strength (mSBS) of a lithium disilicate glass ceramic to resin cement.

Method : Forty rectangular samples of IPS e.max Press ceramic (15 x 6 x 0.6mm thickness) were divided into 2 groups (n = 20) according to HF concentration: 5% and 10%. The etching time was set at 20s. Half samples for each HF concentration received a thin layer an unfilled resin (Scotchbond Multi Purpose) after treatment with silane coupling agent of all ceramic blocks. Four resin cement cylinders (RelyX U200) were made on each ceramic surface using Tygon tubes as matrices (0.75mm diameter x 1.0mm height), light-cured for 40s using a LED curing device (Bluephase G2) and then stored in deionized water at 37°C for 24h before testing. The μ SBS was performed in a universal testing machine at a crosshead speed of 1mm/min until failure. After an exploratory analysis, the data were submitted to two-way ANOVA and Tukey post hoc test ($\alpha=0.05$).

Results : For the control groups, the values of μ SBS (MPa) of 5%HF (13.1 ± 1.5) were statistically higher than 10%HF (11.1 ± 1.3) ($p < 0.05$). The application of adhesive did not influence μ SBS of 5%HF. The application of adhesive at 10%HF significantly increased μ SBS values from 11.1 ± 1.3 to 13.9 ± 1.4 .

Conclusion : HF concentrations and a thin layer of adhesive showed have influence the bond strength.

EFFECT OF INTRACANAL MEDICATIONS ON THE PUSH-OUT BOND STRENGTH OF MTA ANGELUS WHITE® AND BIODENTINE®

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Aim : The aim of this study is to evaluate the effect of application of three intracanal medicaments: calcium hydroxide P.A and chlorhexidine 2% gel (HCX), triple antibiotic paste - metronidazole 400mg, ciprofloxacin 250mg and minocycline 50mg (TAP) and calcium hydroxide P.A with distilled water (HCA) on the push-out bond strength of MTA Angelus White® and Biodentine®.

Method : The chemical-mechanical preparation of 70 extracted human lower premolars was performed and

these were randomly divided into 7 groups according to the intracanal medication and the cervical sealing material: group A (HCX + M), group B (HCX + B), group C (TAP + M), group D (TAP + B), group E (HCA + M), group F (HCA + B), control group G1 (without intracanal medication + M), control group G2 (without intracanal medication + B). The cervical third of the specimens were divided into 5 samples of 1mm and push-out bond strength was performed in a universal testing machine. The data were analysed statistically using two-way ANOVA and Tukey's test.

Results : The results showed that Biodentine® obtained, significantly, the highest bond strength compared to MTA Angelus White®, independent of the intracanal medication ($p < 0.05$). Calcium hydroxide intracanal medications had the highest values of bond strength, but only obtained statistical difference in relation to the triple antibiotic paste in the MTA Angelus White® group ($p < 0.05$).

Conclusion : It was concluded that intracanal medications did not affect the bond strength of MTA Angelus White® and Biodentine®, except when the triple antibiotic paste was used with the MTA Angelus White®.

EFFECT OF PRIOR APPLICATION OF DESENSITIZING AGENT ON TOOTH BLEACHING IN THE ENAMEL MICROHARDNESS

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Aim : To evaluate the effect of the prior application of desensitizing agent associated with remineralizing agents on tooth bleaching using surface (KHN) and subsurface microhardness (subKHN).

Method : Forty eight tooth blocks were divided into four groups ($n=12$), according to the application of desensitizing agent (DA). G1: without bleaching treatment (BT) and DA; G2: only BT; G3: application of DA of potassium nitrate (PN) and BT; G4 application of DA of nano-hydroxyapatite (nHA) and BT. The DA were applied prior the BT following the manufacturer's instruction. As for BT, three whitening sessions were conducted using 35% hydrogen peroxide. The KHN measurements were taken before (t_0) and after (t_1) treatment protocols. SubKHN specimens were evaluated to a depth of 125µm, with an interval of 25µm. KHN results were analyzed by PROC-MIXED and Tukey-Kramer test. SubKHN was analyzed by ANOVA multi-factor split-plot method and Tukey test ($\alpha=0.05$).

Results : There was only statistical difference between t_0 - t_1 in KHN reduction in G3. On subKHN G4 presented the highest values, differing statistically from the other groups. G1 and G3 were similar to each other and showed the intermediate values of subsurface KHN. G2 presented the lowest values of subKHN differing statistically from G1, G3 and G2.

Conclusion : The application of desensitizing agent affected the KHN and sub KHN. The application of PN may negatively influence the KHN after BT, however it has contributed to the maintenance of the subKHN. The

application of the nHA in addition contributed to the non reduction of KHN after BT, led to an increase of the subKHN after bleaching treatment.

EFFECT OF SIMVASTATIN ON REPAIR OF BONE DEHISCENCE IN OSSEOINTEGRATED IMPLANTS IN MINIPIGS - PILOT STUDY

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Aim : A simvastatin is a medication used systemically for the treatment of high cholesterol and also for osteoporosis due to your potential for bone formation. The objective of this study was to evaluate histometrically the effect of simvastatin on bone repair in dehiscence bone defects around dental implants in minipigs.

Method : For this aim, three Minipigs have been submitted to extraction of the first and second bilateral mandibular premolars. After 6 weeks, it was performed a preparatory osteotomy for one implant on each side of the mandible, followed by the creation of a dehiscence defect on the vestibular face of each perforation (3.5 mm x 6.0 mm), and fixation of the titanium implants (3.75 x 8.5mm). Each implant was randomly selected to receive a simvastatin in 2% loaded microspheres or placebo. After 6 weeks, the animals were sacrificed and blocks of undecalcified ground sections were processed for the histological analysis of the bone implant contact (BIC) and bone filling the implant corrections (BF).

Results : Healing process occurred in both groups, with greater findings in concurrent losses with simvastatin, as evidenced by the higher percentage of CO - 77.14% and PR - 77.99%, when compared to placebo 11.86 and 30.66%, respectively.

Conclusion : Thus, the microspheres loaded with simvastatin 2% allowed osteogenesis around implants, resulting in their osseointegration and repair of the defect bone dehiscence area.

EFFECT OF TOOTHPASTES ON MICROHARDNESS AND SURFACE CHARACTERIZATION OF ERODED ENAMEL EXPOSED TO CIGARETTE SMOKE

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Aim : This study evaluated in vitro the hardness and surface characterization of different toothpastes on dental enamel exposed to cigarette smoke and submitted to the erosion cycle.

Method : For the in vitro simulation of smoking, half of the groups underwent an exposure cycle of 20 cigarettes per day for 5 days. Afterwards, all groups were submitted to a 5-day erosion cycle intercalated demineralization (1min, 1% citric acid, pH=3.5) and remineralization (2min in toothpaste slurry) according to the group: NaF; SnF2; F/Sn/Chitosan; F/CaSiO3/Na3PO4; F/bioactive glass. Control group was immersed in distilled water. Surface

microhardness (SMH) was measured initially, after exposure to cigarette smoke, and after the erosive cycle. At the end of the experimental cycle, surface roughness, profilometry and atomic force microscopy (AFM) were performed.

Results : SMH increased in the groups exposed to cigarette smoke ($p<0.05$). For SMH and roughness, according to the toothpaste used, there was no difference between the exposure or not the smoke of the cigarette ($p>0.05$). The F/Sn/Chitosan and F/CaSiO₃/Na₃PO₄ groups presented the highest values of SMH ($p<0.05$). For profilometry and roughness, the lowest values were for the groups treated with SnF₂ and F/Sn/Chitosan ($p<0.05$). AFM showed a lower demineralization pattern and depth of mineral loss for the F/CaSiO₃/Na₃PO₄ and F/Sn/Chitosan.

Conclusion : The dentifrice based on F/Sn/Chitosan presented promising results in the protection of the enamel during erosive cycles, for all analyzes.

EFFECTS OF BISPHOSPHONATE ON MICROARCHITECTURE AND COLLAGENOUS MATRIX OF ENDOCHONDRAL AND INTRAMEMBRANOUS BONE OF RATS

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Aim : To analyze and compare the microarchitecture of endochondral (EC) and intramembranous (IM) bones and their collagenous matrix under the influence of intravenous bisphosphonate.

Method : Fourteen male Wistar rats, 12 months old, were divided in two groups according to the treatment: Control – 0.1 ml of intravenous (IV) 0.9% saline solution, and ZL – 0.035 ml/Kg of IV zoledronic acid in the tail vein, treated every 15 days. After the eighth dose of both substances, all the animals were euthanized and the right-sided maxilla, hemi-mandible and femur were scanned by a micro computed tomography (microCT), and the left-sided maxilla, hemi-mandible and femur were demineralized to be stained with Picrosirius-red, for birefringence analysis of the collagen fibers.

Results : Statistical treatment of the data obtained from the analyzed parameters from microCT – bone volume (BV), bone volume fraction (BV/TV), trabecular number (Tb.N), thickness (Tb.Th), and separation (Tb.Sp) did not reveal statistically significant differences, considering $p<0.05$. Results obtained from the birefringence analysis, considering the presence of green and yellowish/red fibers (area %) detected significant differences only in femoral neck, with a decrease of green fibers in ZL group ($21,10\pm9,99$) in comparison to C ($54,46\pm14,33$) and increase of red fibers in ZL ($78,9\pm9,995$) in comparison to C ($45,54\pm14,33$).

Conclusion : The administration of IV bisphosphonate causes different effects on EC and IM bones, improving

the quality of collagenous matrix of femoral neck in this specific animal model.

EFFECTS OF CELECOXIBE ON REACTIVE OXYGEN SPECIES PRODUCTION IN METASTASTIC MELANOMA CELLS

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Aim : In the current study, we evaluated the ROS production in B16F10 cells treated or not with a COX-2 inhibitor (celecoxib).

Method : We evaluated the ROS production in B16F10 cells treated or not with a COX-2 inhibitor (celecoxib). In addition, these data were correlated with damage to the genetic material by expression of bromodeoxyuridine (5-bromo-2'-deoxyuridine, BrdU) and with the cellular viability assessed by 3-(4,5-Dimethylthiazol-2-yl)-2,5-Diphenyltetrazolium Bromide (MTT)-test.

Results : After 24 hours with celecoxib treatment, B16F10 cells demonstrated an altered morphology, with nuclear pyknosis and cytoplasmic degeneration, these aspects were compatible with cell death process. The IC₅₀ of this drug was 7.5 μ M, in this dose, the treated groups demonstrated considerable reduction of the number of cells. A decrease in rates of cell proliferation and a significant reduction of ROS in celecoxib treated cells at their IC₅₀ indicate that this drug has cytotoxic activity, reduces ROS production and consequently is able to reduce cell proliferation.
Conclusion : We concluded that celecoxib is an indicated drug for the treatment of aggressive melanomas.

EFFECTS OF DIFFERENT SURFACE TREATMENTS ON SHEAR BOND STRENGTH AND FRACTURE MODE OF THE CAD/CAM SYSTEM POLYMERS

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Aim : This study investigated the influence of surface treatments on shear bond strength (SBS) and fracture mode of two composite resin blocks for CAD/CAM

Method : Two ceramic blocks for CAD/CAM were tested: Lava Ultimate (3M Espe) and Vita Enamic (Vita). Four experimental groups were tested: Sandblasting with aluminum oxide; Hydrofluoric acid 5%; Hydrofluoric acid 10% and sandblasting with silane. Silicon molds were positioned over treated composite resin block surfaces and a resin cement (Rely X Ultimate, 3M Espe) was placed into hole of molds to form a resin cylinder (1.2 mm diameter and 2.0 mm height) after light activation ($n=10$). Ceramic blocks were stored in distilled water for 24h and tested in universal testing machine (1.0mm/min). SBS data were analyzed by one-way ANOVA and Tukey test ($\alpha=0.05$). The fracture mode of the samples was classified as adhesive, cohesive in resin, cohesive in cement and mixed by Scanning Electron Microscopy (VP 435 Leo, Cambridge, UK) with magnification of 100x.

Results : The blasting followed of the application of the

adhesive system presented better SBS for Lava Ultimate than the Vita Enamic. For Lava Ultimate, the blasting was similar to the 5 and 10% hydrofluoric acid conditioning. Whereas for Vita Enamic, 5% or 10% hydrofluoric acid etching presented higher bond strength. The most prevalent fracture mode for the groups was the mixed fracture.

Conclusion : The choice of the surface treatment of the hybrid resin for CAD/CAM is dependent on the material employed. Blasting followed by silane application was not beneficial for both composite resin blocks.

EFFECTS OF LIGHT-CURING UNITS AND BRUSHING ON THE SURFACES OF BULK-FILL COMPOSITES

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Aim : This study evaluated the effects of light-activation and brushing on the volume loss (VL), roughness profile (RP), surface roughness (SR), morphology (SM) and microhardness (MI) of bulk-fill composite.

Method : Valo and Demi Ultra curing units were used to polymerize three bulk-fill composites: Filtek Bulk Fill Posterior Restorative (FBF), Tetric EvoCeram Bulk Fill (TET) and Surefil SDR Flow (SDR). Composites disks were prepared (n=10) and submitted to brushing (30.000 cycles). Afterwards, samples were analyzed regarding RP, SR, SM and VL using confocal microscope, and MI measurements and SEM images were obtained. Data were analyzed by Paired-T test, two- and three-way ANOVA and Tukey's test ($\alpha=0,05$).

Results : TET showed higher VL when polymerized with Valo, while for Demi Ultra higher VL was observed with SDR. Higher RP and SM alterations were obtained with SDR after brushing. The SR of FBF light activated with Demi Ultra was not affected by brushing. Higher MI was always found with FBF, followed by TET and SDR. Light activation of TET with Valo resulted in higher MI than when cured with the Demi Ultra, while no difference was noted for other composites.

Conclusion : All composites presented VL of their surface mass after brushing. For SDR, the VL depended on the type of curing unit used. Brushing can alter the SR and SM of some bulk-fill composites. The choice of light-curing unit did not affect the RP, but interfered the MI depending on the composite type.

EFFECTS OF SIMVASTATIN ON BONE MODULATION AND ON TREATMENT OF CHRONIC PERIODONTITIS: LITERATURE REVIEW

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Aim : Periodontitis is an infectious and immuno-inflammatory disease that leads to destruction of the periodontal ligament, alveolar bone loss and even dental loss. Statins, such as simvastatin (SMV), are widely used as treatment of hypercholesterolemia-induced cardiovascular-associated diseases and have pleiotropic effects which may be useful in dentistry. The purpose of

this work was to review the SMV potential as a modulator of bone activity and its effect in the periodontitis treatment.

Method : A survey of the literature was made in PubMed using combinations of keywords: "statins", "simvastatin", "dentistry", "periodontal disease", selecting articles published in English from January 2002 to July 2017.

Results : The results in vitro showed that SMV promotes osteoblastic activity. In periodontal disease, in rats, it was observed reduced bone loss and metalloproteinases expression and increasing of connective tissue. In animal models of bone defect was observed inhibition of bone resorption and apoptosis of osteocytes and promotion of proliferation and differentiation of osteoblast, increasing bone mass and fibrous tissue. Clinical studies showed a positive effect of the local application of SMV in association with non-surgical periodontal treatment, with an improvement in clinical parameters, such as reduction of the periodontal pocket, sulcus bleeding, probing depth, clinical attachment and bone gain.

Conclusion : Therefore, SMV has been shown to be a promising drug in the regeneration and stimulation of bone activity with potential to be used as coadjuvant in the treatment of chronic periodontitis.

EFFICACY OF DIFFERENT DIGITAL RADIOGRAPHIC SYSTEMS ON QUALITY EVALUATION OF DECIDUOUS TEETH FILLINGS

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Aim : The present study aimed to evaluate three digital radiographic systems on the analysis of filling quality of root canals in deciduous teeth, using different materials.

Method : Twenty-five periapical radiographic images were performed of deciduous bovine teeth, filled with 5 different materials (Calen® associated to iodoform, Calen® associated to zinc oxide (ZnO), Zinc oxide and eugenol (OZE), UltraCal®XS, Chlorhexidine digluconate 2% associated to Ca(OH)₂ + ZnO), using the Express, VistaScan and SnapShot systems. The quality of the images was evaluated by objective analysis through the mean and standard deviation gray values and by subjective way through scores assigned to the apical sealing and filling homogeneity. As gold standard, the teeth were scanned in a MicroCT device.

Results : Regarding the radiopacity, the greater difference was observed between the Express and VistaScan systems. The Calen®+Iodoform showed greater radiopacity. The Express system presented the highest contrast. Regarding the homogeneity, the radiographic systems did not show differences between themselves ($p=0.573$). However, when comparing the filling materials, the Calen®+Iodoform showed the best results. For the apical sealing, the Snapshot radiographic system and Calen®+ZnO showed the best results.

Conclusion : Among digital radiographic systems studied, the most recommended to evaluate the quality of the endodontic treatment in deciduous teeth is the SnapShot. Considering radiopacity, homogeneity and

apical sealing, Calen® with iodoform showed better results.

EFFICIENCY OF TOXIN BOTULINUM- A TO TREAT BRUXISM, TMD AND DENTAL TIGHTENING MARISTELA CORRÊA DE LIMA; PAULO H. F. CARIA PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Toxin botulinum- A (TxB-A) has been used in the treatment of muscular pathologies and has proven its effectiveness by different studies, reinforcing its potential as an option in different clinical situations. **OBJECTIVES:** To analyze the dose and time effects of TxB-A in patients of different pathologies like; temporomandibular dysfunction (TMD), bruxism, dental tightening. **Method :** Were evaluated forty-one volunteers of both genders (32 women, age 43.03 ± 13.64 and 9 men, aged 47.10 ± 16.65). All volunteers answered self-report questionnaire about dose and TxB-A effect. As well as the visual analogue, pain scale, in 14, 30, 60, 90 and 180 days after the TxB-A application.

Results : We analyzed each complaint at each time (Tightening, Bruxism, TMD) and the relationship of Pain with the follow-up period, Wilcoxon-Test (Alpha 0.05), showed significant difference only at 6 months in dental tightening and bruxism (pain ± 5.60 and ± 5.65). And in the analysis of the effectiveness over time between the pathologies there was significant difference by the log-rank test ($P < 0.05$), at 6 months the effect of BTX-A, average $\pm 15\%$ varying by pathology. **Conclusion :** The effect was greater on bruxism and dental tightening, significantly reducing pain. And in temporomandibular dysfunction (TMD), although it was considered a more serious complaint, improvement was obtained with the treatment, but with the reduced effect time. However, none of them had an average efficacy of 0% at the end of the six-month follow-up.

ELECTRICAL STIMULATION FAVORS CORTICOTOMY IN ORTHODONTIC TREATMENT

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Aim : The reduction of orthodontic treatment has stimulated the search for new therapies. A established technique to aid in the acceleration of orthodontic movement is corticotomy. Studies of therapies that minimize the adverse effects of this procedure are extremely relevant to its clinical application. The objective of this study was to investigate the effects of low intensity electrical stimulation (MC-microcurrent) on corticotomy in orthodontic treatment.

Method : Fifty four Wistar rats were divided into three groups (n = 6): (C) submitted to tooth movement; (Cort) Cort + tooth movement; (Cort-Mc) Cort/Mc + tooth movement. The following processes were evaluated: Inflammation (quantification of inflammatory infiltrate and expression of TGF- $\beta 1$); Angiogenesis (number of vessels

and VEGF expression); Collagenesis (expression of collagen type I and III, quantification of fibroblasts and birefringent collagen fibers); Osteogenesis (immunostaining for RANK / RANKL / OPG, osteoclasts and protein expression of BMP-7) in the periodontal ligament (PDL) and alveolar bone and tooth displacement in the different groups on the 7th, 14th and 21st experimental days. Data were evaluated by mean $\pm$ standard error, compared by ANOVA/pos- Tukey test ($p < 0.05$).

Results : The results demonstrated the beneficial effects of Mc in corticotomy in reducing inflammation, angiogenesis modulation, collagen reorganization, osteogenesis and tooth displacement.

Conclusion : This study indicated that microcurrent can be used as auxiliary in surgical procedures involving corticotomy and tooth movement.

ENERGY REGULATION WITH ACUPUNCTURE IN THIRD MOLAR EXTRACTIONS. PILOT STUDY

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Aim : The objective was to present results of a pilot study of the patient A.E.L. who received regulation with acupuncture before surgery.

Method : Two surgeries were performed, with an interval of 30 days. In the tooth 38 extraction, real acupuncture was used for regulation, following specific protocols. The second exodontia, performed after 30 days, was of the tooth 48 using acupuncture in acupoints that did not provide regulation of the energetic flow. Edema (mean edema coefficient), trismus and heart rate (F.C.) were evaluated before (preoperative and pre-regulation) and after (07 postoperative and post-regulation days).

Results : There was a greater decrease of the Fc in the actual regulation (decreased by 15 bpm) than in placebo (decreased 9 bpm). There was a reduction of opening in 3.0mm regardless of the regulation used. The edema was 11.18 mm in the real regulation and 14.07 in the placebo.

Conclusion : Preoperative energy regulation with acupuncture, in this pilot study, showed a positive result for the variables studied. However, there is still a need to continue with the study, in order to analyze these and other research variables.

EVALUATING THE BOND STRENGTH OF DUAL-CURE RESIN CEMENT IN COMPARISON WITH COMPOSITE RESIN

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Aim : The aim of this study was to evaluate the bond strength of the dual-cure resin cement in comparison with the composite resin, using a glass-fiber post.

Method : Sixty cylindrical specimens were made, half using the dual-cure resin cement Allcem Core (FGM, Joinville, Brazil) – called group DCRC – and half using the composite resin Opallis (FGM, Joinville, Brazil) – group

CR. They were prepared in an array with a glass-fiber post (FGM, Joinville, Brazil) put in the center, which was filled with the corresponding material and polymerized following the manufacturer's recommendations. The specimens were submitted to bond strength testing using "push-out" test on a universal machine (EMIC DL 1000). The force required for post extrusion were acquired and the interface areas of each specimen were measured to calculate the pressure (MPa), that represents the bond strength. They were also microscopically inspected for the failure types. Data was registered in SPSS 21.0 software and analyzed using Chi-square and U Mann-Whitney tests. **Results** : The mean bond strength of DCRC and CR were similar: 18.00 ($\pm$ 5.49) and 16.16 ($\pm$ 3.67) MPa, respectively ($P= 0.104$). Concerning failure analysis, the mixed type (cohesive of material plus cohesive of glass-fiber post) was the most prevalent (43.3%). The distribution of the failure types was similar in both groups, except for the cohesive of material failure which tended to be more frequent in CR group (30.0% vs 13.3%, $P= 0.107$).

Conclusion : The bond strength of the dual-cure resin cement and composite resin are similar and the obtained values are clinically acceptable.

EVALUATION OF AGGREGATED TRIOXIDE MINERAL BASED PASTE FOR ENDODONTIC TREATMENT IN DECIDUOUS MINIPIG TEETH

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Aim : The endodontic treatment of deciduous teeth requires the use of biocompatible materials that do not damage the permanent tooth germ and are reabsorbed during the process of physiological root resorption. Many of the endodontic pastes used for pulpectomy in deciduous teeth have low efficacy, have not been tested for biocompatibility, and clinical results are controversial. The objective of this work was to evaluate the physiological resorption of deciduous minipig teeth submitted to pulpectomy with MTA based endodontic cement.

Method : Fifteen male minipigs, 3 months age, were submitted to pulpectomy in lower first premolars central and lateral incisors. The animals were anesthetized and radiographed before, immediately after the endodontic procedure and after 30 and 60 days. For the endodontic procedures, the teeth were separated in the control group - left side (Iodoformium based paste) and the test group - right side (MTA Angie - Angelus®). It was evaluated the effect of the MTA paste on the physiological root resorption of the deciduous teeth, presence of periapical radiolucence or abnormality in permanent germ and the resorption of the MTA.

Results : MTA paste did not alter physiological root resorption and germ tooth development. No periapical lesions were observed. The Iodoformium based paste presented areas of internal and external root resorption.

Conclusion : The study suggests that the MTA paste is

biocompatible, does not cause radiographic changes in the permanent germ and is reabsorbed during the process of physiological resorption.

EVALUATION OF CLINICAL AND RADIOGRAPHIC SIGNS IN PERMANENT TRAUMATIZED TEETH OBTURATED WITH AN OBTURATOR PASTE

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Aim : The objective of the study was to evaluate the clinical and radiographic signs in permanent traumatized teeth filled with calcium hydroxide, chlorhexidine gel 2% and zinc oxide.

Method : The patients were treated at the Dental Injury Service of FOP, therefore the data was obtained from clinical records of patients seen from March 2007 to March 2017. Data were collected from the specific clinical records such as gender, age, traumatic dental element, trauma etiology, date of trauma, date of first attendance, date of insertion of the obturator paste, period with this paste, evaluation of radiographic quality of obturator filling, clinical and radiographic evaluation, recorded in standardized forms, and later tabulated in Excel. Conventional preoperative radiographs were scanned through a scanner, and after this process, the images were analyzed by two different evaluators.

Results : Regarding the project statistics, the McNamer test was used, and the results were: 54 clinical cases analyzed in total, in which 91 teeth were filled with the paste. From the total teeth, 76 teeth remained obturated with no change. Overall, the reduction of clinical signs and symptoms was 84.3%. Furthermore, peripapal repair occurred in 70% of the cases.

Conclusion : The research concluded that the use of the paste, - as long as it is properly manipulated and inserted in the root canal -, can persist stable for a long period of time. It was concluded that the prognosis was favorable in the traumatized teeth in which the paste was used for an extended period.

EVALUATION OF COLOR AND ROUGHNESS OF BLEACHED ENAMEL WITH PRIOR APPLICATION OF DESENSITIZING AGENTS

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LIMA

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Aim : This study evaluated the effect of prior application of a different desensitizing agents in tooth bleaching regarding to color change and enamel surface roughness.

Method : Forty eight tooth blocks were pigmented with black tea and divided into four groups ($n=12$) according to the application of desensitizing agent (DA): G1: without bleaching treatment (BT) and DA; G2: only BT; G3: application of DA of potassium nitrate (PN) and BT; G4: application of DA of nano-hydroxyapatite (nHA) and BT. The DA were applied prior the BT following the

manufacturer's instruction. As for BT, three whitening sessions were conducted using 35% hydrogen peroxide. The color measurements were taken before and after treatment protocols and roughness after the treatment application. The roughness analyzes and the color variation of ΔL and ΔE were done by one-way ANOVA and Tukey's test and the Δa and Δb by the Kruskal Wallis and Dunn tests, with a significance level of 5%.

Results : Regard color analyses G2, G3, G4 differ statistically of G1 in ΔL , Δa , ΔE . The Δb values, the G3 and G4 not differ from the G1. The G2 differed from G1, with the highest value in Δb . The G2 presented higher roughness values, differing from the other groups that were bleached, but presented lower values of roughness when compared to the previous application of the desensitizer. The G1 did not differ from any group.

Conclusion : It was concluded that prior application of desensitizing agents reduced color change after bleaching only at the b Δ coordinate. Bleaching did not change the roughness, however the previous application of desensitizing agents contributed to a less roughness after bleaching.

EVALUATION OF DIFFERENT METHODS FOR PARTIAL CARIES REMOVAL IN DENTIN SURFACE-IN VITRO STUDY

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Aim : The aim of this study was to evaluate dentin surface after different partial caries removal methods using scanning electron microscopy.

Method : Sixteen caries-free human third molars were used. Occlusal surface was removed by diamond saw and carious dentin (CAD) were provided by biological method, using *S. mutans* biofilm on that surface. The teeth were divided randomly into two groups according to caries removal method provided by same operator: G1- CAD + rotary instrument (carbide drill); G2: CAD + Hand tool (dentin spoon). Caries removal were accomplished similarly for both groups following clinical criteria: dentin hardness, color and moisture. Caries affected dentin was identified as harder, lighter yellow and dryer than infected one. Sooner the caries affected dentin was identified, the caries removal was stopped. Then, all surfaces were coated with gold/palladium by SEM evaluation. The specimens were observed at 50X e 150X magnification at 15 kV. The electromicrographies were evaluated by 2 calibrated examiners (Kappa=0.9) using the following criteria: dentin surface regularity and selectivity in the removal of caries affected dentin.

Results : It was observed that handle excavation showed an irregular surface, presenting cracks and slopes, whereas removed less caries affected dentin. Rotatory method with drill presented a smoother and uniform surface, but it was more invasive.

Conclusion : It could be concluded that, although more invasive, the rotary instrument (carbide drills) produced a more regular dentin surface and, therefore, more favorable to adhesive procedure.

EVALUATION OF DIFFERENT TREATMENTS FOR OROANTRAL/ORONASAL COMMUNICATIONS: RETROSPECTIVE STUDY

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Aim : The objective of this study was to complement the results of previously published study by the Division of Oral and Maxillofacial Surgery, State at Piracicaba Dental School: Evolution of different treatments for oroantral/oronasal communications: experience of 112 cases. *Int. J. Oral Maxillofac. Surg.* 2006; 35: 155-158.), which evaluated the patients from January 1988 to May 2004. This retrospective study analyzes patients attended between June 2004 and December 2016.

Method : A total of 547 patient charts were analyzed between June 2004 and December 2016, in the files of the Division of Oral and Maxillofacial Surgery, State, Piracicaba Dental School – State University of Campinas. Of these, 56 were selected as having oroantral/oronasal communications. The data recorded included also patient gender, age, etiology, location, type of treatment and short-term complications, and whether treatment was successful.

Results : 54 patients (96,4%) presented OAC and 2 (3,6%) ONC, 1 of the patients presented both types of communications. The most frequent etiology for CABG was exodontia (41.8%). For ONC both cases were due to nasal septum correction surgeon. For the treatment of CAB, there was a similarity of results between fistulectomy (30.9%), placement of biological membrane (29.0%) and closure with Adipose Body of Bichat (25.4%). For ONC, palatal rotational flap was used in one case.

Conclusion : The results confirm that the exodontia is the major etiologic factor for oral communication and that the fistulectomies with immediate closure with buccal mucosa flap are the treatments that were successful.

EVALUATION OF GLYPICANS IN ORAL SQUAMOUS CELL CARCINOMA

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Aim : Evaluation of the gene and protein expression profiles of Glypican 1 (GPC1), 3 (GPC3) and 5 (GPC5) in Oral Squamous Cell Carcinoma (OSCC) and tumor-free lateral margins (TM).

Method : Quantitative PCR for genes GPC1, GPC 3 and GPC5 was carried out in cases of OSCC (n=31), TM (n=12) and the non-neoplastic oral mucosa of healthy patients (NNM) (n=6). Immunohistochemical evaluation of GPC1, GPC3 and GPC5 proteins was performed in 26 OSCC, 9TMs and 4NNMs.

Results : GPC1 (n=26; 83,87%); GPC3 (n=22; 70,97%) and GPC5 (n=15; 48,38%) gene transcripts were detected in OSCC. Similar transcript levels were found among TMs

and NMMs. Parenchymal immunoreactivity for GPC1 was not observed in most OSCCs (n=22; 84,61%). OSCCs with GPC3 protein labeling in the parenchyma were negative for GPC5 in this tumor compartment.

Conclusion : In OSCC, gene and protein expression of GPC1 indicated that this protein participates as a tumor suppressor, while GPC5 and GPC3 function as oncoproteins.

EVALUATION OF HIGH SCHOOL STUDENTS' KNOWLEDGE ABOUT ANEMIA

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Aim : Anemia, among blood diseases, is the most prevalent in the population. It can be classified into chronic or acute, and present several types, among them, iron deficiency anemia. Iron deficiency anemia is caused by a lack of iron in the blood, being characterized by the low amount of red blood cells that are the cells responsible for transporting oxygen to all the tissues of the body. Its symptoms are: weakness, discouragement, easy fatigue, pale skin and sensation of fainting. The objective of this research was to evaluate of high school students' knowledge about anemia.

Method : Pre-structured questionnaires were applied to two rooms of the 1st year of Public High School. The questionnaires had eight multiple choice questions.

Results : The results showed that 56% of the students knew how to define the concept of anemia, but for only 32% the diagnosis should be made through a blood count.

Conclusion : It was possible to conclude that most of the students do not have a sufficient knowledge of the subject, being necessary a greater awareness about its causes and symptoms.

EVALUATION OF INTEGRITY OF SWINE ESOPHAGEAL EPITHELIUM AFTER DIFFERENT PREPARATION AND STORAGE METHODS

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Aim : This research evaluated the integrity of swine esophageal epithelium through the measurement of electrical resistivity after different preparation and storage methods, aiming the use of these tissues for in vitro permeation assays of topical formulations using Franz-type vertical diffusion cells.

Method : Esophageal mucosa was immersed in distilled and deionized water or isotonic saline (65°C, 60s) to separate the epithelium from the connective tissue. Samples (n= 18 each type of preparation) of fresh epithelium were placed at vertical diffusion Franz cells filled with PBS buffer and submitted to resistivity evaluation (by electric current). Then, they were stored at -20 ° C for 4 weeks, afterwards, thawed with artificial

saliva at room temperature and submitted to re-evaluation of resistivity.

Results : The results were submitted to the Mann-Whitney (preparation) and Wilcoxon (storage) tests (α = 5%). Measurements of resistivity were (median ± interquartile deviation, in KΩ / cm²): epithelium prepared with water (fresh: 3.9 ± 1.4, frozen: 2.4 ± 2.5) and epithelium prepared with saline (fresh: 3.7 ± 0.6, frozen: 2.0 ± 2.1). The integrity of esophageal epithelium was altered by freezing (p<0.05), which reduced electrical resistivity. Moreover, the preparation method did not interfere in tissue integrity (p>0.05).

Conclusion : It can be concluded that preparation method using water or saline did not interfere with the integrity of swine esophageal epithelium. However, the storage at -20°C for 4 weeks reduced it. Therefore, it is recommended the use of fresh swine esophageal epithelium prepared with water or saline for in vitro permeation studies.

EVALUATION OF MONITORING OF CAPILLARY GLYCEMIA IN INDIVIDUALS PARTICIPATING IN COMMUNITY HEALTH ACTIVITIES

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Aim : Diabetes mellitus is a public health problem with a high social and economic burden, the diagnosis of which is unknown in half of the individuals who are carriers. This study aims to evaluate the monitoring of capillary glycemia in individuals participating in community health activities.

Method : Participants in the study were those present in the preventive educational activity in oral health at a religious institution in the city of Piracicaba. Monitoring was performed with a digital glucometer (ACCU - CHEK Performa, Roche), ACCU - CHEK Multiclix lancet, in fingerstick. Glycemic monitoring is simple, safe and effective. The test using fasting plasma glucose measurement, considered as fasting glucose or diabetes when values were ≥126mg / dl or ≥110 and <126mg / dl, respectively. Considering the presence of diabetes or impaired glucose tolerance when plasma glucose of 2h after ingesting 75g of glucose is ≥200mg / dl or ≥140 and <200mg / dl, respectively.

Results : A total of 74 individuals were evaluated, of which 31 (41.9%) were male and 43 (58.1%) were female. The age ranged from 3 to 79 years. The age group varied: 21.6% with > 20 years (n = 16), 35.1% between 20 and 40 years (n = 26) and 43.2% with > 40 years (n = 32). The monitoring performed with a digital glycosimeter was: 86.5% (n = 64) considering normal blood glucose to <140 mg / dl, 6.8% (n = 5) considering the presence of diabetes for ≥200mg / dl, 6.8 % (n = 5) considering glucose tolerance decreased when plasma glucose of 2h after ingestion of 75g glucose is ≥140 and <200mg / dl.

Conclusion : It is recommended to perform blood glucose tests in community activities, since the correct and early diagnosis of diabetes mellitus and changes in glucose tolerance is extremely important because it allows the adoption of therapeutic measures that may prevent the onset of diabetes in individuals with impaired tolerance

and to delay the onset of chronic complications in patients diagnosed with diabetes.

EVALUATION OF SEXUAL DIMORPHISM IN THE VISCEROCRANIUM OF BRAZILIANS

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Aim : The present study performed linear measurements of the viscerocranium, looking for sexual dimorphism or analysis of some measurements of the viscerocranium - Frontozygomatic (D) -frontozygomatic (E), Frontozygomatic (D) - Nasoespinha, Zígio (E) - Nasoespinha, Násio - Nasoespinha, Maximum piriform width - and to create a logistic regression model for the Determination of sex.

Method : A total of 167 skulls were Measures. The intra-examiner examination (ICC) was performed and an excellent index was obtained (0.98), with $p < 0.0001$. Data analysis was performed using the Kolmogorov-Smirnov & Levene test and unpaired t-test. To obtain the logistic regression we used the backward stepwise - Wald. We also used the Hosmer & Lemeshow and Nagelkerke test

Results : There was clear sexual dimorphism in the measurements, and the fronto-zygomatic measurements, right-frontozygomatic esq., Right-nasospinal zygium, left nasospinal, nasospinal, and maxillary piriform width were greater in men. that the model composed of the measurements D and F was the best (Chi-square = 53.7, $p < 0.0001$) to predict sex. The other measures were not important for the model. It was possible to construct a mathematical model, namely: Sex = $-24.5 + (0.20 \times \text{Násio} - \text{Nasospinal}) + (0.18 \times \text{Right zigio} - \text{Nasospinal})$. Values larger than 0.5 (cutoff) would be considered as "male" and minor as "female".

Conclusion : It was possible to conclude that all the measures studied are dimorphic and to construct a mathematical model to determine the sex, namely: Sex = $-24.5 + (0.20 \times \text{Násio} - \text{Nasospinal}) + (0.18 \times \text{Right zeros} - \text{Nasospinal})$.

EVALUATION OF THE ANTERIOR AND POSTERIOR SHIFTS OF ARCHWIRE IN CONVENTIONAL AND SELF-LIGATING METALLIC BRACKETS

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Aim : The aim of this study was to evaluate the anterior and posterior shifts of thermoactivated Nitinol wires during a lower canine leveling stage using conventional and self-ligating interactive metallic brackets.

Method : This research was performed with six groups, three groups composed by conventional brackets and three groups composed by self-ligating brackets. One device was adapted to the Instron test machine to

simulate leveling of a lower canine. The groups were differentiated by Nitinol thermoactivated arch wire dimensions (0.014", 0.016" and 0.016" x 0.022"). For each group 15 segments of wire were evaluated according to the shifts during the leveling. The shift of the wire in the anterior and posterior regions was measured using the digital caliper.

Results : The results showed that the anterior shift were statistically significant for the 0.014" wire in the conventional bracket group when compared to the self-ligating bracket. It was also observed that in the conventional bracket group the shift was statistically significant in the wire 0.014" compared to the 0.016" x 0.022" wire, while in the self-ligating bracket there was no anterior shift with any of the tested wires. The posterior shift showed significantly higher in the self-ligating group when compared to the conventional group for 0.016" archwire.

Conclusion : In conclusions there was found more anterior shift of the wire in the conventional brackets in comparison with self-ligating brackets.

EVALUATION OF THE ANTIMICROBIAL ACTIVITY OF DIFFERENT CONCENTRATIONS OF SODIUM HYPOCHLORITE AGAINST ENDODONTIC PATHOGENS

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Aim : The objective of the present study was to evaluate the antimicrobial activity of different NaOCl concentrations (0.5%, 1%, 1.5%, 2%, 2.5%, 3%, 3.5%, 4%, 4.5%, 5%, 5.5% and 6%) against several endodontic pathogens such as *Aggregatibacter actinomycetemcomitans*, *Candida albicans*, *Enterococcus faecalis*, *Porphyromonas gingivalis*, *Staphylococcus aureus* and *Streptococcus mutans*.

Method : The antimicrobial activity of different concentrations of NaOCl was evaluated by agar diffusion test.

Results : 6% NaOCl was the ACS with greater inhibition zone against all tested microorganisms, whereas 0.5% NaOCl was the less effective. The most susceptible microorganism was *C. albicans* and the most resistant was *Aggregatibacter actinomycetemcomitans*.

Conclusion : It was concluded that all tested NaOCl concentrations presented antimicrobial activity against the selected microorganisms and it was associated with its concentration. The microbial susceptibility to the NaOCl was varied (Supported by FAPESP 2015/23479-5, CNPq 308162/2014-5 and CAPES).

EVALUATION OF THE ANTIMICROBIAL EFFECT OF MELALEUCA SPP

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Aim : Medicinal plants have been investigated as alternative for the therapeutic and preventive treatments of various diseases due the large diversity of biocomponents present in extracts and essential oils. In this context, *Melaleuca alternifolia* has been largely studied by antimicrobial activity of the essential oil. Therefore, the aim of the present study was to evaluate the antimicrobial activity of *Melaleuca alternifolia* essential oil in search of the minimum inhibitory concentration (MIC) against *Candida* species, oral streptococci and other bacterial species.

Method : The susceptibility of the microorganisms by essential oil were tested through the broth microdilution method, in which the MIC was obtained, following the recommendations of the CSLI standards

Results : The MIC detected was 1mg/mL.

Conclusion : The *Melaleuca alternifolia* essential oil has antimicrobial activity inhibiting the growth of the species tested in different concentrations, and may be potential source for the production of new antimicrobial pharmacological products.

EVALUATION OF THE ASSOCIATION BETWEEN OBESITY AND PERI-IMPLANT DISEASE: CROSS-SECTIONAL STUDY

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Aim : To evaluate an association between obesity and peri-implant diseases in patients rehabilitated with dental implants.

Method : Seventy-five patients treated with osseointegrated implants in function for at least 06 months were evaluated clinically and radiographically. The length of the waist circumference was used as a criterion to designate obesity. The periimplantitis was defined by probing depth $\geq 5.0\text{mm}$ and bone loss $> 2.0\text{mm}$, probing depth $> 4.0\text{mm}$ associated with absence of bone loss ($< 2.0\text{mm}$) characterized mucositis.

Results : According to bivariate analysis, no association was found between obesity and periimplantitis ($p = 0.66$) or mucositis ($p = 0.75$).

Conclusion : It follows that, in the present population, obesity was not associated with periimplantitis or mucositis. Additional studies and largest populations are required to confirm these results.

EVALUATION OF THE FIBERGLASS POST INDIVIDUALIZATION TECHNIQUE ON A TENSILE BOND STRENGTH (PULL OUT)

THIAGO BESSA MARCONATO ANTUNES; RODRIGO BARROS ESTEVES LINS; LUÍS ROBERTO MARCONDES MARTINS

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to evaluate the tensile bond strength before and after the mechanical cycling of the fiberglass post on different cementation techniques.

Method : One hundred bovine incisor teeth were selected. The root canals were endodontically treated, unlocked

and randomized between the treatment groups ($n=20$): (G1) post + Scotchbond Multi-Purpose (SBMP) + RelyX ARC (ARC) dual resin cement; (G2) relined post with resin composite (Filtek Z250) + SBMP + ARC; (G3) individualized post with convencional resin composite (Filtek Z250) + SBMP; (G4) individualized post with bulk fill composite (Filtek Bulk Fill) + SBMP; (G5) individualized post with bulk fill flow composite (Filtek Bulk Fill Flow) + SBMP.

Results : Data was analyzed by two-way ANOVA followed by Bonferroni test ($\alpha = 0.05$). Were observed same results of tensile bond strength for all groups before the mechanical fatigue ($p > 0.05$). After the mechanical fatigue were observed statistical difference between groups 2 and 4 by groups 1,3 and 4 ($p < 0.001$). However, groups 2 and 4 showed better results of tensile bond strength.

Conclusion : It can be concluded that the use of composite resin bulk fill presents greater pullout strength used in the fiberglass post cementation.

EVALUATION OF YOUNG PEOPLE'S KNOWLEDGE ABOUT SMOKING

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Smoking is the word given to the use of products processed from the nicotine substance, and used as recreational drugs, ie inhaled such as cigarette, cigar, pipe etc; or intoxication caused by its use. The World Health Organization (WHO) estimates that 40% of the world's adult population is a smoker and is the world's leading cause of preventable death. The objective of this research was to analyze the knowledge of the first year of high school students about smoking, specifically about the use of cigarettes and their health damages.

Method : For this, questionnaires were applied to the students from one High School in Piracicaba, and 8 questions were asked about the use of the cigarette.

Results : The results showed that most of the young people are smokers (24%), while 84% of the students have contact with some smokers. The health effects of cigarettes are known to 76% of students.

Conclusion : It was concluded that there is a basic knowledge of the students on the subject, as well as its consequences for health.

EVALUATION OF YOUNG PEOPLE'S KNOWLEDGE OF HUMAN PAPILLOMAVIRUS (HPV)

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The human papillomavirus (HPV), the generic name for a group of viruses that includes more than 100 different

types, can be transmitted through sexual contact, and may present itself clinically through lesions in the body. Genital lesions can be high risk because they are precursors to malignant tumors, especially cervical cancer. The purpose of this work was to educate young people about the forms of HPV virus contamination and to sensitize them to the importance of the vaccine for prevention.

Method : For its accomplishment a pre-structured questionnaire with 8 questions about HPV knowledge was applied to the students of the 9th year of elementary education at the State School.

Results : According to the results, only 41% of the students were vaccinated against HPV, most of whom had knowledge about vaccination (male and female).

Conclusion : With this work, it was concluded that young people have a basic knowledge about sexually transmitted diseases, especially on HPV.

EXPECTATION AND PERCEPTION OF SATISFACTION IN PATIENTS WITH TEMPOROMANDIBULAR DISORDER TREATED WITH ACUPUNCTURE

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim was to verify if the patient's expectation at the beginning of the treatment interferes in the perception of satisfaction in patients with TMD treated with acupuncture.

Method : This is a controlled, randomized, double-blind clinical study approved by the Research Ethics Committee of FOP-UNICAMP, under protocol N° 109/2014. The sample consisted of 40 adult volunteers of both sexes, with TMD from muscular or mixed origin, with or without limitation of mouth opening. Volunteers were randomized into two groups. The researcher and the volunteer were unaware of the allocation. The Treatment Group received acupuncture with actual penetration of the needle and the Placebo Group received non-penetrating sham acupuncture. The acupoints used were: ST6, ST7, SI18, GV20, GB20, BL10 and LI4, in 4 sessions of 20 minutes once a week. The patient's expectation in the first session (before acupuncture) and the perception of satisfaction in the fourth session (after acupuncture) were assessed using a Likert scale of 0 to 4.

Results : The groups were similar regarding the expectation ($p = 0.5145$). The perception of satisfaction with the treatment did not differ between the groups ($p = 0.6369$). The perception of the satisfaction in the 4th session was lower than the expectation in the first session ($p < 0.0001$) in both groups.

Conclusion : Based on these results we can infer that the patient's expectation was greater than the perception of satisfaction in TMD treatment with acupuncture in both groups.

EXTRAORAL BITEWING AND PANORAMIC RADIOGRAPHY: COMPARATIVE STUDY OF THE LOWER THIRD MOLARS ASSESSMENT AND

EXPOSURE

DOSE

EDUARDA HELENA LEANDRO DO NASCIMENTO; BERNARDO BARBOSA FREIRE; KARLA DE FARIA VASCONCELOS; DEBORAH QUEIROZ FREITAS; FRANCISCO

HAITER-NETO
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To compare the performance of extraoral bitewing (EBW) and panoramic radiography (PAN) in the assessment of lower third molars, as well as to evaluate the radiation exposure dose related to both imaging modalities.

Method : PAN and EBW images from one skull and twenty dry mandibles were acquired using a Cranex 3D unit, totalling 34 lower third molars. Teeth were evaluated according to their positioning, mesio-distal relationship with the second molar and vertical relationship with the mandibular canal. Cone beam computed tomography was obtained to serve as reference standard to evaluate the vertical relationship. The exposure dose at skin surface of head and neck organs was measured in PAN and EBW exams using thermoluminescent dosimeters and an anthropomorphic phantom. McNemar Bowker test, weighted Kappa, ANOVA and intraclass correlation coefficient were performed.

Results : Tooth positioning did not differ between the imaging modalities ($p = 1.000$). Although the EBW have showed a decrease in the overlap between proximal faces of the second and third molars, and a trend to approximate the root apex and the mandibular canal, there were no differences between the EBW and PAN in the third molars assessment ($p > 0.05$). The EBW was related to higher exposure dose than the PAN ($p < 0.05$).

Conclusion : EBW should be used with caution in the evaluation of third molars, since it has been showed a tendency to approach the dental roots and the mandibular canal. The higher exposure dose related to EBW highlight the relevance of following the ALADA principle to choose the appropriate imaging modality for the specific diagnostic task.

FACTORS ASSOCIATED WITH THE SUCCESS OF ENDODONTIC TREATMENT PERFORMED IN SINGLE SESSION WITH FORAMINAL ENLARGEMENT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This study evaluated the factors associated with the success of endodontic treatment performed in single session with foraminal enlargement.

Method : From a clinical and radiographic database, 114 patients were randomly selected and some factors were evaluated: age (15-75 years old), gender, tooth location (maxillary or mandibular arch), group of teeth (anterior/premolar/ molar), treatment (primary intervention/retreatment), preoperative pain (symptomatic/asymptomatic) and root canal sealer used (Pulp canal sealer/ Sealapex). After that, a sample of 125 teeth with

periapical lesion were selected and submitted to endodontic therapy in single session with foraminal enlargement. Chemomechanical preparation was performed with chlorhexidine gel 2% associated with the Mtwo rotary system, followed by the hydraulic vertical condensation filling technique. Follow-up was performed between 6 months-1 year, considering the success of the treatment, the absence of signs and symptoms and complete or incomplete radiographic repair of the periapical lesion. Univariate logistic regression analysis was applied for the identification of factors associated with endodontic success.

Results : It was observed that only group of teeth and root canal sealer influenced the endodontic outcomes ($p<0.05$). Pre-molars and Pulp canal sealer showed higher chances of periapical repair ($p<0.05$).

Conclusion : This study showed that the success of endodontic treatment in single session with foraminal enlargement is associated with the group of teeth and root canal sealer used.

FAMILY RISK: A SPATIAL APPROACH AND ITS RELATIONSHIP WITH INDIVIDUAL AND CONTEXTUAL DENTAL FACTORS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : It was proposed to analyze the relationship of individual and contextual factors such as the use of the service, referenced oral morbidity, self-perception of oral health, socioeconomic evaluation and social capital with a family risk classification tool and its spatial distribution, in the perspective of access to Services.

Method : Cross-sectional study with a sample of 128 families. The independent variables were grouped in hierarchical blocks, according to Andersen's theoretical model, individually analyzed for association with the outcome (family risk) and later, estimated hierarchical multiple logistic regression models. For the spatial analysis, the address of the families were geocoded and related to the cartographic base for the construction of maps through the Kernel Intensity Estimator.

Results : The family risk was associated with a lower year of study, more than 4 people in the household, lower family income, dissatisfaction with oral health, shame when smiling and no sleep. After adjustment for the hierarchical levels, the variables that remained in the final model were: number of residents, satisfaction with oral health and shame when smiling. Individuals residing with more than 4 people in the household ($OR=3,4609$; $p=0,0046$), who are dissatisfied with their oral health ($OR=2,3858$; $p=0,0490$) and who are ashamed to smile ($OR=3,0375$; $p=0,0479$), are more likely to be at family risk.

Conclusion : In this way, the family risk classification can be adopted by the oral health teams, as an active search tool for access, with prioritization, greater equity and, in a more directed way, by the spatial location of the assisted populations.

FLUORESCENCE-GUIDED BONE RESECTION IN MAXILLARY OSTEONECROSIS: LITERATURE REVIEW AND CASE REPORTS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The present study aimed to present a series of cases of fluorescence-guided bone resection in patients with maxillary osteonecrosis emphasizing the advantages of using a preoperative bone marking, favoring the identification and removal of necrotic tissue margins in a selective manner and reproducible, meaning an improvement in conservative surgical therapy of this lesion as supported by contemporary literature

Method : Literature review and case reports.

Results : In the surgical treatment of three patients with osteonecrosis of the jaw submitted to fluorescence-guided bone resections with the help of the preoperative use of doxycycline, satisfactory, selective and reproducible results were observed, with resolution of the patients clinical picture

Conclusion : Recently, fluorescence-guided debridement was introduced in the surgical management of maxillary bones osteonecrosis by the use of preoperative administration of a doxycycline. The use of a pre-operative bone marking favors the success of conservative surgical treatment through the identification and removal of selective and reproducible necrotic tissue margins.

GINGIVITIS ASSOCIATED WITH PRIMARY TEETH RETENTION

KELLY GUEDES DE OLIVEIRA SCUDINE; HENRIQUE TONELLI; LÍVIA NAZARETH FERREIRA; FERNANDA MIORI

PASCON

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The purpose of this case report was to describe the management of chronic gingivitis in an 8-year-old female patient with dental retention of the lower primary lateral incisors.

Method : Parents reported that the child was unable to properly brush her teeth due to the discomfort caused by the mobility of the lower primary lateral incisors. At clinical examination, it was observed generalized accumulation of dental plaque and severe gingival inflammation. Presence of dental calculus around lower permanent and deciduous incisors was also remarkable. Regarding the occlusal aspects, the patient presented an anterior open bite and a posterior crossbite due to pacifier use. The medical history did not reveal any abnormality. Thus, the treatment objective was to prevent the further progress of the condition and restore periodontal health. To achieve this purpose, removal of supragingival calculus by scaling and polishing of the teeth was performed and high levels of oral hygiene were given to the child and her parents. Also, teeth extraction of 61 and 71 was accomplished.

Results : After a 3-month follow-up, it was observed good oral hygiene and restoration of periodontal health.

Conclusion : This case report highlights the need for patient education, parent counseling and regular

pedodontic gingival examination for maintaining a healthy and hygienic oral cavity in childhood.

HEALTH PROMOTION IN THE RELIGIOUS SCENE: POSSIBILITIES FOR THE CARE OF ORAL HEALTH MARCOS EDUARDO COSTA BARBOSA; DAGMAR DE PAULA QUELUZ

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to describe the health promotion in the religious scene: possibilities for the care of oral health.

Method : This is a study of experience report.

Results : The results indicate that the promotion and education in oral health are present in the activities developed by volunteers in the religious setting. The Church seeks to change the attitude and adoption of healthy behavior of individuals, through individual and collective actions. All activities and projects develop oral health education actions, although in a specific way, ie educational campaigns, lectures, workshops, thus seeking to reach collectives. The activities along with the developed oral health students were: brushodrome, guidance on oral health, banners of scientific papers, clinical tables of specializations in dentistry: endodontics, periodontics, orthodontics, prosthesis total/partial/fixed; plus microscope with oral mucosa smear slides. Diseases and treatments in different age groups were approached. Greater emphasis was given on prevention policies, using oral health tips, individualized brushing, delivered oral hygiene kit and distributing flyers contextualizing learning practice. The population had service points, as preventive medical services, such as the glucose test for diabetes and measurement of blood pressure for hypertension.

Conclusion : The students were able to gain experience in this religious scene, which enables better learning and promotes oral health in the community. There is a need for the insertion of health professionals to act in this scenario, strengthening it as a social support network, gradually reducing assistance activities and intensifying those aimed at health promotion.

IDENTIFICATION OF ENTEROCOCCUS FAECALIS AND ANTIMICROBIAL SUSCEPTIBILITY ISOLATED FROM ENDODONTICALLY TREATED TEETH

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Microorganisms and their by-products are the main cause of endodontic failure, being *Enterococcus faecalis* one of the most prevalent species in secondary and/or persistent infections. This study aimed: 1) to identify *E. faecalis* strains using selective medium; 2) to evaluate the antimicrobial susceptibility of these strains to 14 antimicrobial agents.

Method : Clinical microbial samples were collected from the root canals (RC) of 20 endodontically treated teeth indicated to retreatment due to technical reasons. The strains that were grown on M-*Enterococcus* medium, were

identified according to their phenotypic characteristics and by molecular methods (PCR and sequencing). The antimicrobial susceptibility was evaluated by the disc diffusion method.

Results : Seven out of 20 samples were positive for *Enterococcus*, comprising 43 strains, being 41 confirmed as *E. faecalis* by PCR and sequencing of 16S rRNA gene. The strains were susceptible to amoxicillin with clavulanic acid (38/41), ampicillin (38/41), doxycycline (33/41), fosfomicin (33/41) and tetracycline (30/41). Resistance was observed against clindamycin (38/41), gentamicin (35/41) and rifampicin (20/41).

Conclusion : It was concluded that the selective medium was effective in growing *E. faecalis* strains, which can be found in RC of endodontically treated teeth indicated to retreatment due to technical reasons. Amoxicillin + clavulanic acid and ampicillin were the most effective antimicrobial agents. (Supported by FAPESP 2015/23479-5, CNPq 308162 / 2014-5 and CAPES)

IMMUNOGENICITY OF ENDODONTIC INFECTIONS AND ITS CORRELATION WITH THE PRODUCTION OF SUBSTANCE P

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The objective of this clinical study was to evaluate the immunogenicity of the endotoxin content of primary endodontic infections in the production of Substance P (SP), correlating its production with vertical percussion pain (TOP) and pain on palpation (POP) of the apical region.

Method : Samples of 24 teeth with endodontic treatment were collected from root canals of teeth with necrotic pulp tissues and radiographic evidence of periapical lesion: C1- before chemomechanical preparation (CMP); C2- after CMP; C3- after intracanal medication (ICM). As a control, six teeth in need of endodontic therapy for prosthetic indication were used. For quantification of lipopolysaccharide (LPS) the LAL test was used. SP levels were quantified with specific kit by enzyme-linked immunosorbent assay (ELISA) and correlated (multiple logistic regression, $p < 0.05$) with TOP and POP. Friedman and Wilcoxon tests compared LPS and SP at each clinical time. Spearman's test correlated LPS and SP ($p < 0.05$).

Results : LPS levels were significantly reduced after CMP ($p < 0.05$). SP levels were significantly reduced after ICM ($p < 0.05$) reaching levels similar to those in the control group ($p > 0.05$). Positive correlation was found between LPS with SP ($r = 0.83$). SP was positively correlated with the TOP and POP (TOP, $r = 0.79$; POP $r = 0.90$).

Conclusion : It was concluded that the endotoxin content of primary endodontic infection induces an immune response characterized by exacerbation in SP production, directly related to TOP and POP. (Supported by: FAPESP 2013/23061-5, 2015/23479-5, CNPq 308162/2014-5 & CAPES)

IMPACT OF BIOACTIVE GLASS-BASED TOOTH PASTE IN THE DEMINERALIZATION AND REMINERALIZATION OF BLEACHED ENAMEL

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Aim : To evaluate the effect of bioactive glass-based toothpaste [BG] used before or after the dental bleaching with 35% hydrogen peroxide [HP].

Method : 96 bovine blocks of enamel/dentin (4 x 4 x 2.5 mm) were randomly allocated into groups (n = 12): 35% HP (control - C); pretreatment with BG: BG (7 days) + 35% HP, BG (14 days) + 35% HP; posttreatment: 35% HP + artificial saliva [AS] for 7 days, 35% HP + AS (14 days), 35% HP + BG (7 days), and 35% HP + BG (14 days). The BG groups were exposed to the toothpaste slurry (1:3 / BG:AS) twice daily for 2 minutes. The specimens were stored in AS during all experiments. The percentage of surface hardness loss (%SHL) was determined by microhardness analysis. Analyses of color (ΔE , ΔL^* , Δa^* , Δb^*) were performed on enamel surface and the opposite dentin. Data were submitted to ANOVA and Tukey's test ($\alpha = 0.05$)

Results : The C group presented the highest values of %SHL, differing statistically from the groups exposed to BG (7 or 14 days) when used prior to HP ($p < 0.05$). The use of BG after HP for 7 days differed statistically from the C group for %SHL ($p < 0.05$). Color changes were not statistically different in the groups on the enamel surface ($p > 0.05$), and on the opposite dentin for ΔE , ΔL and Δa values ($p > 0.05$).

Conclusion : The BG-based toothpaste protected the enamel against the mineral loss promoted by HP and enhanced the remineralization when used after dental bleaching. The BG-based toothpaste did not affect the whitening efficacy on enamel surface or opposite dentin.

IMPORTANCE OF AN INSTRUMENT AND PERMANENT PLANNING INSTITUTION IN PIRACICABA

DAGMAR DE PAULA QUELUZ; DAGMAR DE PAULA QUELUZ
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study is to discuss the Institute of Research and Planning of Piracicaba and its work with the community.

Method : It is a study carried out by means of a bibliographical survey.

Results : The Law No. 5,288, dated July 4, 2003, creates the Institute of Research and Planning of Piracicaba (IRPP) and provides other measures. This Law has 29 Articles. The Decree No. 10,403 of August 21, 2003, provides for the approval of the IRPP statute and makes other provisions. Decree 10.921 of October 20, 2004, establishes the internal regulations of IRPP. The term of office of the appointed members lasts for two years, with a single reappointment being allowed. For the work developed, the members appointed herein will receive no remuneration of any kind and they are considered of relevance to the Municipality. Due to the term of the

mandate, the prefect in decree periodically has the appointment of the members, representatives of civil society, of the Strategic Deliberative Council of the IRPP. At the local level, the creation of IRPP represents a milestone, because it is linked to the purpose of endowing the Public Power with permanent instruments and institutions for planning. One of IRPP's goals is to create a positive relationship between sharing responsibilities between the citizen and the Public Power in the place where one lives, raising civics and valuing the city's history. Encourage ways of acting together with the community, promoting actions that encourage the common citizen to identify the assets of heritage, thereby recovering part of the history of collectivity. My participation in IRPP is due to have been indicated as representative, of civil society, of the Municipal Council of Science and Technology.

Conclusion : IRPP is important and necessary to the municipalities and to the population.

IN VITRO CHARACTERIZATION OF HUMAN DENTAL PULP STEM CELL SHEETS

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Aim : Cell Sheets (CSs) are cell cultures that spontaneously detach from the culture dish and could be used in cell therapy. The aim of the study was to test the hypothesis that after the formation of human dental pulp stem cells (hDPSCs) CS the cells kept their undifferentiating status, viability and differentiation capacity.

Method : CSs were obtained by culturing hDPSCs for 15 days with clonogenic medium (CM) supplemented with 20 µg/ml of vitamin C (VCM- Vitamin C medium). The hDPSCs were characterized immunophenotypically before and after the CSs formation using CD44, STRO1, CD146, CD105, OCT4, Nanog (positive markers) and CD45, CD14, CD34 (negative markers). The morphology of the cells in control (cells grown in CM) and CSs (cells grown in VCM) was analyzed by HE. The cell viability of hDPSCs in the CSs (n=21) was achieved from 0 to 120 h after CS formation using the Live and Dead assay. Osteogenic differentiation of hDPSCs dissociated from the CSs (n=20) was analyzed by using the Alizarin red assay after 21 days cultures in CM (control) or in mineralizing medium (MM).

Results : hDPSCs exhibited only the positive markers before and after CS formation. The cell morphology in control and CSs was similar. Living cells were observed during whole experimental time. Calcified material was formed only in the wells of cells grown in MM ($p < 0.0001$).

Conclusion : After the formation of human dental pulp stem cells (hDPSCs) CS the cells are able to maintain their undifferentiating status. Additionally, viable cells are detected in the CSs at least until 120 h after CS formation and these cells present differentiation capacity.

IN VITRO EVALUATION OF THE ENDOX® ENDODONTIC SYSTEM IN THE REDUCTION OF ENTEROCOCCUS FAECALIS OF THE ROOT CANALS

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BRAGA BRUM; DANIEL RODRIGO HERRERA ;
MARINA ANGÉLICA MARCIANO DA SILVA; JOSÉ
FLÁVIO AFFONSO DE ALMEIDA; ADRIANA DE JESUS
SOARES; ALEXANDRE AUGUSTO ZAIA; BRENDA
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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This study aimed to evaluate in vitro the disinfection of an electroblasting device, the Endox® Endodontic System (EES), in root canals (RC) contaminated with *Enterococcus faecalis*, comparing its effectiveness associated or not with the chemical auxiliary substances (CAS) 5.25% sodium hypochlorite (NaOCl) and 2% chlorhexidine gel (CHX).

Method : Our methodology included 65 human lower premolars divided into 6 experimental groups (n = 10): CHX ; CHX + EES; NaOCl; NaOCl + EES; Saline solution (SS) and SS + EES. As a positive control, 5 specimens were used. RC samples were collected initially (C1), after EES (C2), after chemical-mechanical preparation (CMP) (C3) and after final EES (C4) to determine colony forming units (CFU / mL).

Results : Statistical analysis was performed using the Wilcoxon and Friedman tests; Mann Whitney and Kruskal Wallis tests, supplemented by the Dunn test ($\alpha = 0.05$). The groups with EES in C2 did not reduce CFU / mL when compared to the initial values (C1 ~ C2, $p > 0.05$). After CMP (C3), all groups reduced CFU / mL ($p < 0.05$), being the largest reduction in the CHX or NaOCl groups. Groups that received EES after CMP (C4) did not significantly reduce CFU / mL (C3 ~ C4, $p > 0.05$).

Conclusion : We concluded that the use of the Endox System did not show additive effect reduction of the bacterial load, however NaOCl and CHX were equally effective in this reduction. (Support: FAPESP 2015/23479-5, CNPq 308162/2014-5 & CAPES).

INFECTION CONTROL EVALUATION IN ORAL RADIOLOGY AMONG DENTAL STUDENTS

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CARLOS AUGUSTO DE SOUZA LIMA; FRANCISCO
HAITER NETO; ROSANA DE FÁTIMA POSSOBON;
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MARIA BOVI AMBROSANO
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Aim : Infection control is an essential stage on cross-contamination prevention. In dental school due to the great amount of simultaneous clinical procedures, aseptic chain failures may occur mainly on the most used equipments such as the intraoral radiography equipment . The aim of this study was to evaluate the infection control in oral radiology among dental students

Method : A previously validated questionnaire was used. The questionnaire was composed of 14 multiple choice questions and divided into 9 domains: handwashing, personal protective equipment usage, radiographic receptors protection, protection/disinfection of the

radiographic equipment surface and type of disinfectant used. 1203 undergraduate dental students from the 2nd, 3rd, 4th and 5th years participated in the research. For the infection control analysis students were divided by age, gender, graduation year and public or private dental school. The individual questionnaire scores for each participant were summed and the infection control evaluation scores were dichotomized at low and high. Then, the odds ratio analysis was performed with the respective 95% confidence intervals.

Results : Results showed the 5th year students had a 1.7 higher chance of less adherence to infection control ($p = 0.0149$). There were no significant differences for gender, age and students of public or private schools.

Conclusion : It might be concluded that it is essential to carry out educational programs for oral radiology infection control protocols, especially among undergraduate dental students from the 5th year, in order to prevent cross-contamination in patient care.

INFLUENCE OF BACKGROUND LIGHT ON IMAGE QUALITY OF PHOSPHOR PLATE-BASED RADIOGRAPHIC IMAGING SYSTEMS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to evaluate the influence of ambient light on the image quality of phosphor plate-based radiographic imaging systems.

Method : Radiographic images were obtained with three digital systems: VistaScan, Digora Optime and Express. Radiographic exposures without any object were made under four exposure times: 0.02, 0.05, 0.063 and 0.08 s. After the X-ray exposure, all phosphor plates had half of the active surface exposed to the ambient light under different times: 1s, 2s, 3s, 4s and 5s, and were scanned. Mean gray values were obtained from two regions of interest (exposed and non-exposed to ambient light) using the ImageJ software. The difference between both sides was calculated and the Two-Way (ANOVA) and Tukey's tests were used to verify possible differences between exposure times to light and X-rays for the three digital radiographic imaging systems ($\alpha = 0.05$).

Results : Significant differences were observed between different light exposures ($p < 0.001$) under different X-ray exposures ($p < 0.001$) for the three radiographic systems.

Conclusion : In conclusion, ambient light influenced the image quality of phosphor plate-based radiographic imaging systems.

INFLUENCE OF MANDIBULAR POSITIONING IN CONE-BEAM COMPUTED TOMOGRAPHY FOR IMPLANT PLANNING

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PEYNEAU; MATHEUS LIMA DE OLIVEIRA; GLAUCIA
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Aim : Cone-beam computed tomography (CBCT) is widely used for three-dimensional evaluation of alveolar

bone for dental implant placement. However, the positioning of the patient's head, anatomical asymmetries and skull type can alter the method of measuring and, consequently, the measurements. This study analyzed if mandibular positioning of patients with different facial profiles can change alveolar bone measurements.

Method : The sample consisted of 74 CBCT images, that were divided into meso, brachy and dolichofacial. The sagittal reconstruction was chosen as a reference for the visualization of the orientation plane of the mandible. The mandible was rotated in two positions, in which the occlusal plane (position 1) and the base of the mandible (position 2) were parallel to the horizontal plane. In panoramic reconstruction, measurements were made from the alveolar ridge to the upper cortical of the mandibular canal in edentulous regions of the first lower molars. After an exploratory analysis, the data were submitted to a mixed model methodology for repeated measures (PROC MIXED) and Tukey-Kramer test ($\alpha=0.05$).

Results : The height of the alveolar ridge in the region of tooth #36 of dolichofacial individuals were significantly higher when compared to meso and brachyfacial ones, regardless of the orientation of the mandible. The width of the alveolar ridge of the region of tooth #46 was greater in the mandibular plane than in the occlusal plane for all facial types.

Conclusion : In conclusion, the accuracy of the measurements of the alveolar thickness is affected by mandibular positioning in all facial types.

INFLUENCE OF SOFT TISSUE THICKNESS OUTSIDE FIELD OF VIEW IN CBCT: A QUANTITATIVE EVALUATION

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PIRACICABA DENTAL SCHOOL - UNICAMP
Aim : The objective of this study was to evaluate the influence of the presence of soft tissues outside of the field of view (FOV) in cone beam computed tomography (CBCT) images in a quantitative way.

Method : For this study, five phantoms of dry skulls covered by a soft tissues simulator (rubber) were used. The images were acquired using three FOV sizes, 8x8, 8x16 and 17x23cm, and three different thickness of bovine fat layer, placed around the phantom to simulate patients with different sizes. The mean values and standard deviation of the pixel intensity values were measured in four consecutive axial reconstructions for each acquired volume, in regions of dentine, cortical bone and the rubber around the phantom. To obtain the results, two-way ANOVA and Tukey tests were applied.

Results : The results obtained showed a statistically significant difference between the images without fat and 2cm fat in the three structures (rubber, dentin and bone), and the images without fat and 3cm fat in the FOVs 8x16 and 17x23cm. Regarding FOV variation, for the three evaluated structures, a significant statistical difference

was observed between FOVs 8x8 and 8x16cm, and between 8x8 and 17x23cm for all the fat layers conditions. As for dentin, there was also a statistically significant difference between the FOVs 8x16 and 17x23cm.

Conclusion : It was concluded, therefore, that the presence of a structure located outside the FOV, can influence the pixel intensity values of a CBCT image in the equipment tested.

INFLUENCE OF THE PHOTOINITIATOR SYSTEM ON YELLOWING DEGREE OF EXPERIMENTAL SELF-ADHESIVE FLOWABLE COMPOSITES

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Aim : The aim of this study was to determine the influence of different photoinitiators systems on yellowing degree of experimental self-adhesive flowable composites (SAFC) and traditional flowable composites (standard).

Method : The organic matrixes were formulated by using the monomers bisphenol-glycidyl dimethacrylate (BisGMA) and triethyleneglycol dimethacrylate (TEGDMA). For the experimental SAFCs, bis-2-methacryloyloxy-ethyl phosphate (2MP) was added in the formulation. The photoinitiators systems tested were camphorquinone and ethyl-4-dimethylamino benzoate (CQ+EDMAB), diphenyl(2,4,6-trimethylbenzoyl)-phosphine oxide (TPO), phenylbis (2,4,6-trimethylbenzoyl) phosphine oxide (BAPO), CQ+EDMAB+TPO and CQ+EDMAB+BAPO. The yellowing degree was determined immediately after curing had been evaluated with a spectrophotometer employing the axis b* of CIELab parameter (n=5). Data were analyzed using two-way ANOVA and Tukey's test ($\alpha=0.05$).

Results : With the exception of the application of BAPO in the formulation, the SAFCs promoted higher degree of yellow when compared to standard. BAPO produced the highest yellowing effect regardless of the resin matrix formulation.

Conclusion : It is concluded that for SAFCs were more yellow after photopolymerization, except when BAPO was used.

INTERNAL BLEACHING OF DISCOLORED TOOTH AFTER THE USE OF TRIPLE ANTIBIOTIC PASTE ON PULP REVASCULARIZATION

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Pulp revascularization is an alternative therapy for immature necrotic teeth, with the advantage of inducing root end development. However, this procedure often results in discoloration of dental structures by the use of

an antibiotic paste, composed of metronidazole, ciprofloxacin and minocycline. The objective of this case report is to describe the internal bleaching of a tooth submitted to pulp revascularization.

Method : A 9-year-old male patient had dental trauma, resulting in dental pulp necrosis of element 11. Pulp revascularization was the treatment of choice because the tooth presented incomplete apex and immature root walls. After the access cavity, the root canal systems was irrigated with 6% sodium hypochlorite and medicated with the triple antibiotic paste. After 21 days, bleeding was induced into the root canal space, and then a 3 mm white MTA barrier was placed. At the next appointment the tooth showed a dark discoloration. Internal bleaching was performed using sodium perborate, associated with distilled water. Two applications of the bleaching agent were performed, with a interval of 7 days between each session. The color was evaluated through the CIELAB system, the values of L* a* and b* were recorded, and the color change calculated (delta E).

Results : A significant increase in the values of L* (lightness) was observed after internal bleaching using sodium perborate and distilled water, as well as delta E values showed a significant color change.

Conclusion : It was verified that internal dental bleaching was effective in the treatment of discoloration after pulpal revascularization, with satisfactory aesthetic results.

INTERNAL BLEACHING OF DISCOLORED TEETH AFTER DENTAL TRAUMA AND PULP REVASCULARIZATION

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The objective of the study was to evaluate internal tooth bleaching in discolored teeth after dental trauma and pulp revascularization procedure. The patient's satisfaction was also analyzed.

Method : Fourteen discolored teeth were selected and divided into three groups: Group TAP (n=4): discolored teeth after pulp revascularization procedure, using triple antibiotic paste (ciprofloxacin, metronidazole and minocycline) and cervical sealing with white MTA. Group CH + CHX (n=4): discolored teeth after pulp revascularization procedure, using calcium hydroxide and 2% chlorhexidine gel and cervical sealing with white MTA. Group DT (n=6) = discolored teeth after dental trauma. Sodium perborate powder was mixed with distilled water, for the internal bleaching. Color was assessed with the digital spectrophotometer VITA Easyshade. A visual analog scale (VAS) and a questionnaire was used to assess patient satisfaction.

Results : Regardless of the group, the final L* values were higher than the initial L* values ($p = 0.000$). There was no significant difference between the means of Delta E ($p=0.48$) and Delta L ($p=0.42$), all groups resulted in a similar dental bleaching. It was verified in TD group that

teeth that have been discolored for several years needed a bigger number of bleaching application ($p = 0.0005$). In the analysis of patient satisfaction, there was a significant difference between the initial and final values ($p= 0.003$).

Conclusion : Thus, it was concluded that internal bleaching was effective in the treatment of discolored teeth after dental trauma and after pulp revascularization procedure, with satisfactory aesthetic results.

INTERNAL-EXTERNAL CONTROL, DEPRESSION, ANXIETY, PSYCHOLOGICAL STRESS AND SENSE OF COHERENCE

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The goals were to investigate anxiety, stress and depression among students from School of Dentistry of Piracicaba (Unicamp) and verify its association with the locus of control and sense of coherence.

Method : The dental students had filled 6 instruments that investigated the study variables and sociodemographic data.

Results : Almost half (49.7%) of the students had stress symptoms, 24.4% were classified with moderate or severe anxiety level and 12.8% had depression symptoms. There was association between anxiety, depression and stress with sense of coherence. The students are vulnerable to stress, anxiety and depression what shows the need for greater attention to prevent emotional and physical illness between college students.

Conclusion : Graduation students in dentistry presented some level of stress, anxiety or depression, which may indicate the need for greater attention to the prevention of injuries resulting from these emotional states, such as lack of stimulation to study or school dropout.

INVESTIGATION OF ANXIETY AND ITS ASSOCIATIONS WITH SELF ESTEEM AMONG DENTAL SCHOOL STUDENTS

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Aim : To investigate the level of anxiety among students of the undergraduate course in Dentistry of FOP-Unicamp and to verify its association with self-esteem.

Method : The participants answered two research instruments: the Beck Anxiety Inventory (BAI) and the Rosenberg SelfEsteem Scale, already validated in Brazil, as well as a socioeconomic and demographic questionnaire. In addition to the descriptive statistics, a bivariate analysis (chi-square test) at the significance level of 5% was used to test the association between anxiety and independent variables (socioeconomic, demographic and self-esteem).

Results : Most of the students were over 21 years of age and 76.7% were female. When the level of anxiety was analyzed, 40.4% of the sample had high levels and students with low self-esteem presented 3.93 times higher

chances of having high anxiety levels, with women being more likely to have anxiety ($p = 0,0033$) than men. The third year of undergraduates was the period where low levels of self-esteem were obtained, which reflected the increase in anxiety ($p < 0.0001$).

Conclusion : Anxiety was associated with the female gender and levels of self-esteem were related to high anxiety on the part of undergraduates.

ISOLATION AND CHARACTERIZATION OF A HUMAN CEMENTOCYTE-LIKE CELL LINE, HCY-23

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Aim : Here, the question was whether cementocytes, the residing cells in cellular cementum, have potential to be protagonist in dental cementum homeostasis, responding to endocrine signals and directing local cementum metabolism.

Method : From healthy erupted human teeth, isolated cells using sequential collagenase / EDTA digestions, and maintained them standard cell culture conditions.

Results : A cementocyte-like cell line was cloned (HCY-23, for human cementocyte clone 23), which presented a cementocyte compatible gene expression signature, including the expression of dentin matrix protein 1 (DMP1+), sclerostin (SOST+), E11/gp38/podoplanin (E11+), and osteoprotegerin (OPG+). In contrast, these cells did not express the marker dentin sialophosphoprotein (DSPP-). HCY-23 cells produced mineral-like nodules in vitro under differentiation conditions, and were highly responsive to inorganic phosphate (Pi).

Conclusion : In conclusion, this newly established human-derived cementocyte-like cell line should prove essential for determining the role of cementocytes on periodontal homeostasis and regeneration.

KNOWLEDGE IN ORAL HEALTH OF TEACHERS AND STUDENTS OF SECONDARY SCHOOLS

BEATRIZ BACHEGA GROppo; MARCOS EDUARDO COSTA BARBOSA; JULIA SARTORI LONGO; JAQUELINE FRANCO ALCARDE; DAGMAR DE PAULA QUELUZ

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to evaluate the knowledge in oral health of teachers and students of secondary schools.

Method : Teachers and students from two public high schools in Piracicaba answered a questionnaire about: promotion and prevention in oral health, self perception in oral health, satisfaction with the general and oral health condition, habits of oral hygiene and health knowledge oral; in addition to demographic partner aspects.

Results : The results of 33 teachers and 486 students were that most of them: usually look at their mouth and teeth daily, have no mouth sores, do not have bad breath, do not show bleeding gums, do not have teeth or mouth

pain, consider to have satisfactory general and oral health, does not usually change dentist, have regular oral hygiene habits and knowledge.

Conclusion : This study allowed us to conclude the importance and necessity of reinforcing concepts of good health habits in schools and show that prevention is the best way to reduce diseases.

LASERS SURGICAL TREATMENT FOR ANKYLOGLOSSIA IN NEWBORN: CLINICAL CASE REPORT

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Aim : Ankyloglossia is a congenital disorder characterized by a short lingual frenulum insertion which interferes with the tongue movement and when it occurs in newborns, it may hamper breastfeeding causing weight loss and, consequently, favoring early weaning. Among the treatment alternatives, lasers can be highlighted in modern Dentistry both in trans and postoperative periods. The high power diode laser ($\lambda = 980$ nm) operates in soft tissue surgery allowing precise incision and adequate hemostasis with reduced bleeding, postoperative edema and pain, besides promoting good surgical wound healing. The low power laser ($\lambda = 660$ nm) has analgesic, anti-inflammatory and reparative characteristics in the postoperative period, providing a shorter healing time and patient comfort.

Method : Thus, the objective of the present study was to present a case report of a 1-month-old male infant.

Results : The mother reported an incorrect breastfeed and the infant's rapid tiredness during breastfeeding. The medical-dental examination showed a short lingual insertion of the frenulum and lack of adequate weight gain in the first month of life. Lingual frenectomy with diode laser was performed as choice for surgical technique followed by low power laser irradiation in the postoperative follow-up appointments to control pain, edema and repair acceleration.

Conclusion : It was concluded that laser is a simple and safe option for newborns, as it reduced the need for local anesthetic, besides bleeding, edema, discomforts and time of the postoperative wound.

MANAGEMENT OF NON-CARIOUS CERVICAL LESIONS (NCCLS): CLINICAL CASE REPORT

GABRIEL CANDOLATO DE ALEMEIDA; LAURA NOBRE FERRAZ; CAROLINE MATHIAS CARVALHO DE SOUZA; GISELLE MARIA MARCHI; DÉBORA ALVES NUNES LEITE LIMA

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Aim of this case report is to describe the diagnosis and treatment of generalized abfraction lesions associated to abrasion lesions.

Method : A 43-year-old female patient sought the clinic of the Piracicaba Dental School reporting dentin hypersensitivity. Clinical examination revealed abfraction lesions associated with abrasion in several teeth.

Successful prevention and management of abfraction or any NCCLs requires an understanding of the risk factors and how these risk factors change over time in individual patients. In addition, treatment involves a preventive and restorative approach. As a preventive intervention the patient was instructed to perform brushing with vertical movements, using little force and avoiding brushing for very long periods. For the treatment of sensitivity was indicated brushing 3 times daily using potassium nitrate dentifrice. To improve occlusal harmony and distribution of contact points, occlusal adjustment was performed by reducing heavy contacts and removing premature contacts. As restorative treatment, lesion restoration was performed using self-etching adhesive and composite nanohybrid resin. All restorations were duly polished using flexible disks with decreasing granulation and abrasive rubbers until obtaining a highly smooth surface. After the end of all the restorations occlusal splint was done and the patient was instructed to use the device every day overnight.

Results : NCCLs still represent a challenge for clinical practice and the accurate diagnosis and the choice of proper treatment is the key of success for these lesions.

Conclusion : Overall, the treatment of NCCLs should be based on its etiology.

MECHANICAL PROPERTIES OF BULK FILL RESTORATIONS WITH OT WITHOUT ADDITIONAL LAYER IN CONVENTIONAL RESIN COMPOSITE LUCAS MOREIRA LARA; MATEUS GARCIA ROCHA; MARCOS BLANCO CANGIANI; AMÉRICO BORTOLAZZO CORRER; MÁRIO ALEXANDRE COELHO SINHORETI; SELMA APARECIDA BARBOSA SEGALLA; DAYANE CARVALHO RAMOS SALLES DE OLIVEIRA

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To evaluate the differences in mechanical properties of bulk fill composites restorations with or without the final layer in conventional resin composites.

Method : Samples (n=5) were prepared in a 25x2x2 mm (ISO 4049) matrix with bulk fill composites (Tetric Bulk Fill; Filtek Bulk Fill; Filtek Bulk Fill Flow) with or without addition of a conventional resin composite (Empress Direct; Filtek Z350). In each case, the samples were photoactivated in two equidistant regions using the Valo Cordless (Ultradent) curing-light with 20 J/cm². To evaluate the mechanical properties, a pre-calibrated Instron equipment was used with 0.75±0.25 mm/min of speed and 50±16 N/min of loading in order to determine elastic modulus and flexural strength.

Results : The addition of a nanoparticulate conventional resin composite improved the mechanical properties of bulk fill composite restorations. However, the addition of a microhybrid conventional resin composite reduced the properties evaluated.

Conclusion : Addition of a conventional resin composite was capable of affecting the properties of bulk fill composites restorations. However, these properties are directly correlated with the type of conventional resin composite used in the final layer.

METAPROTEOMICS ANALYSES OF ROOT CANAL CONTENT OF TEETH WITH ENDODONTIC FAILURE

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Proteome screening of microbial communities is important to provide an insight into the pathogenicity mechanisms and interactions between root canal bacteria and host in the persistence or resurgence of apical periodontitis. The aim of this study was to characterize the proteome of 20 root canals of teeth with endodontic failure by

Mass Spectrometry.
Method : Twenty patients with apical periodontitis and need for endodontic retreatment were selected. Samples from the root canal content were collected and processed by Capillary Nano-Flow 2-Dimensional Liquid Chromatography and Electrospray Ionization Tandem Mass Spectrometry. The acquired spectra were separately searched against specific protein database (Swiss PROT and TREMBL).

Results : Through the metaproteomics analysis, 1153 human and 720 bacterial UniProt accession numbers corresponding to proteins, were recovered. The higher prevalence of proteins, in general, was related to biological functions such as cellular and metabolic processes. A considerable number of bacterial proteins with clinical relevance functions as pathogenesis/virulence, proteolysis, cell adhesion and drug resistance, were present. Common endodontic pathogens related to endodontic failure: *Enterococcus* spp; *Propionibacterium* spp; and *Streptococcus* spp, were associated with 23; 40; and 94 distinct proteins, respectively. Regarding human proteins, were detected many factors related to the immune system process.

Conclusion : These findings may indicate a complex interaction between the host immune system and the endodontic infection. (Supported by FAPESP 15/23479-5, 15/19215-2, 16/19743-1; CNPq 308162/2014-5, 140944/2017-6; CAPES).

MICROBIAL ANALYSIS OF TEETH SUBMITTED TO ENDODONTIC RETREATMENT FOR TECHNICAL REASONS

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Aim : This study aimed: to quantify the microbial load in endodontic retreatment (ERT) phases by microbial culture; b) to identify *Enterococcus* spp by microbial culture and molecular techniques; and c) to identify microorganisms (MO) in initial samples by Checkerboard DNA-DNA hybridization.

Method : Our methodology included 20 teeth submitted to ERT without periapical lesion (PL). Samples were collected from each third of the root canal (RC) before and after chemo-mechanical preparation (CMP) and after

intracanal medication (ICM). Microbiological samples were part plated on FAA and M-Enterococcus culture media for counting the colony forming units (CFU). Another part was processed by Checkerboard DNA-DNA hybridization using 40 DNA probes.

Results : The results showed that all initial samples presented microbial growth, with a reduction in CFU after CMP (99.77%) and ICM (98.74%)($p < 0.05$), with no additional effect between the phases in the reduction of the microbial load ($p > 0.05$). In addition, Enterococcus spp was present in 36% of the cases, totaling 43 strains, being 41 confirmed as *E. faecalis* by PCR and sequencing of 16S rRNA gene. The cervical third was more contaminated than the apical third ($p < 0.05$). There was a prevalence of *E. hirae* (70%) and *E. faecalis* (65%) by Checkerboard DNA-DNA hybridization.

Conclusion : We concluded that MO's are present in RC of teeth submitted to ERT for prosthetic reasons without PL, and that Enterococcus spp. is frequently found in RC. (Supported by: FAPESP 2015/23479-5, CNPq 308162/2014-5 & CAPES).

MICROBIOLOGICAL AND ENDOTOXIC CHARACTERIZATION OF COMBINED ENDO-PERIODONTAL LESIONS

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Aim : To investigate in root canals (RC's) and periodontal pockets (PP's) of teeth affected by CEPL's: a) the presence of periodontopathogenic microorganisms (MO's) before (s1) and after chemical-mechanical preparation (CMP) (s2); And after the use of intracanal dressing (ID) (s3); b) the susceptibility of these MO's to CMP and ID; c) the effect of CMP and ID on endotoxins' reduction (LPS).

Method : Samples were collected from 14 teeth. The microbiological reduction was evaluated by counting the colony forming units (CFU's). Nested-PCR was used to detect *T.denticola* (Td), *T.socranskii* (Ts), *G.morbilorum* (Gm), *T.forsythia* (Tf), *A.actinomycetemcomitans* (Aa), *P.endodontalis* (Pe), *P.gingivalis* (Pg), *P.intermedia* (Pi), *P.tanneriae* (Pt), *P.nigrescens* (Pn), *F.nucleatum* (Fn), *F.alocis* (Fa), *P.micra* (Pm). LAL-test was used to quantify LPS.

Results : In PP's the values of CFU's were higher than in RC's. Statistically significant reductions of CFU's were found at moments 2 and 3 in both sites ($p < 0.05$). Pt was the most commonly found specie in RC1; Tf, Pt, Pn and Fn in RC2 and Td, Aa, Pe, Pn and Fn in RC3. Td and Pm in PP1; Fn in PP2; And Tf and Pg in PP3. In PP1 the LPS' concentration was 648.11 EU/mL, 109.65 EU/mL in PP2 and 36.5 EU/mL in PP3 ($p < 0.05$). In RC1, the LPS' concentration was 15.6 EU/mL; 0.19 EU/mL in RC2; And 0.06 EU/mL in RC3 ($p < 0.05$).

Conclusion : It was concluded that CMP and ID were effective in the reduction of MO's and LPS in PP's and RC's. The use of ID was effective in the reduction LPS in PP's.

MICROHARDNESS ANALYSIS OF DIFFERENT COMPOSITES AFTER CHEMICAL DEGRADATION

TALITA MALINI CARLETTI; ISAAC JORDÃO DE SOUZA ARAÚJO; MAURÍCIO MATTÉ ZANINI; MAURÍCIO BOTTENE GUARDA; ISABELA PINHEIRO CAVALCANTI LIMA; SIMONIDES CONSANI; REGINA MARIA PUPPIN RONTANI; AMÉRICO BORTOLAZZO CORRER

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to evaluate the microhardness of two different resin composites submitted to chemical degradation.

Method : Forty cylinders (4 diameter x 2 mm thick) of each resin composite (Filtek Z350 and Zirconfill) were prepared. Knoop microhardness (KHN) was assessed after 24 h storage in deionized water (baseline). Three indentations were made in each specimen using a microhardness tester with 50 g load and 5 seconds indentation time. Specimens of each resin composite (n=10) were immersed into distilled water, soda, coffee or artificial orange juice for 7, 14, 21 and 28 days and KHN evaluated at each immersion time. Data were analyzed by 3-way repeated measures ANOVA and Tukey posthoc test ($\alpha = 0.05$).

Results : Z350 presented KHN significantly higher than Zirconfill up to 21 days. KHN significantly reduced from baseline to 28 days storage for all chemical solutions. KHN in distilled water was significantly lower than the other chemical solutions.

Conclusion : It can be concluded that chemical solutions affected microhardness over time. KHN differences between resin composites are time-dependent.

MICROORGANISMS FOUND IN ENDODONTIC FAILURE BY NESTED-PCR

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Aim : The main etiological factor of endodontic treatment failure is the presence of microorganisms in previously treated root canals. Objectives: a) To characterize endodontic failure microbiota by Nested-PCR; b) To correlate the microorganisms identified with the patients' clinical signs and symptoms.

Method : Initial microbiological samples were collected from 15 teeth with presence of periapical lesion and need for endodontic retreatment. After the bacterial DNA extraction, Nested-PCR was carried out with species-specific primers for 13 species, including bacteria of difficult cultivation.

Results : The results indicated the a mixed microbiota with the presence of Gram-positives (51.7%) and Gram-negatives (48.3%), strict-(67.8%) and facultative- (32.2%) anaerobes, cocci (41.5%) and bacilli (58.5%) bacteria. The most prevalent species were Enterococcus faecalis (93.3%), Fusobacterium nucleatum (93.3%), Streptococcus sobrinus (86.6%) and Actinomyces israelii

(80%). Only two correlations were found, being both negatives, between pain and the number of facultative anaerobic bacteria and; between periapical lesion size smaller than or equal to 2 mm and facultative anaerobic bacteria ($p < 0.05$).

Conclusion : It was concluded that the microbiota of the secondary or persistent infection is heterogeneous and that Nested-PCR has proved to be efficient in the detection of bacteria, including those of difficult cultivation. (Supported by FAPESP 2015/23479-5 and 2015/19215-2, CNPq 308162/2014-5 and 140944/2017-6 & CAPES

MINIMALLY INVASIVE APPROACH FOR RESOLUTION OF DENTAL FLUOROSIS: CASE REPORT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This clinical case report aims to present the resolution of a fluorosis case through microabrasion associated with tooth whitening.

Method : A 27-year-old male patient sought the dental service of FOP / UNICAMP, showing striated white spots and a generalized chromogenic biofilm. After anamnesis and clinical examination, it was diagnosed that the patient had spots of fluorosis. Thus, it was initially performed the adaptation of the buccal environment, with supragingival prophylaxis and scraping, followed by microabrasion of enamel with 6.6% hydrochloric acid (Whiteness RM - FGM) and supervised home bleaching with 16% carbamide peroxide (Whiteness Simple 16% - FGM).

Results : Harmonization the patient's smile color with the microabrasion associated with bleaching.

Conclusion : It can be concluded that the treatment resulted in aesthetic restoration through minimally invasive procedures, which harmonized the color of the smile without causing dental sensitivity.

MORPHOLOGICAL CHANGES OF THE SPHENOID SINUS AND SELLA TURCICA ASSOCIATED TO HUMAN DENTITION

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The knowledge of craniofacial growth and development is important to the diagnosis, planning and dental treatment. Understanding the normal skull base development helps to understand the alterations of growth that occur through the complex balance of several elements including spheno-occipitalis region. The sella turcica is related inferiorly with the sphenoid sinus that during the development of the human skull shows changes of size and format depending of age and dental status. Such changes are related, especially among other factors, to the distribution of mechanical forces by the base of the skull during chewing as well as facial skull growth.

Method : This study evaluated radiographically the

morphological alterations of sphenoid sinus and to sella turcica in patients with different teething conditions, regardless of their facial type. It was measured by the sphenoid sinus and the semaphore local of 60 lateral telerradiographs of 6-60-years-old patients of both genders with different situation dentitions (mixed, permanent and edentulous) independent of the facial form (class I, class II And Class III of Angle).

Results : The results were submitted to statistical analysis (ANOVA and Tukey) where it was shown that both the sphenoidal sinus and the sella turcica had a significant difference between the different types of dentition.

Conclusion : The dimensions of the base of the skull, the number of teeth in contact are important factors to determine the anteroposterior relationship of the jaws, the dental arches and consequently the size of the sella turcica and the sphenoidal sinus.

MORPHOMETRIC STUDY OF CRANIOFACIAL BONE STRUCTURES AIMING THE REHABILITATION WITH EXTRAORAL IMPLANTS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To establish the bone thickness in different regions of the cranium complex to define the best locations for craniofacial implants.

Method : In 40 human skulls (31 men and 9 female), between 20 to 60 years old from the Laboratory of Anatomy of FOPUNICAMP were performed tomography computed volumetric cone beam with the ICAT VISION in the area of Dental Radiology of FOP-UNICAMP.

Results : In the supraorbital area, the minimum values were $7.92 \text{ mm} \pm 1.82 \text{ mm}$ and the lateral area were $7.54 \text{ mm} \pm 0.98 \text{ mm}$ allowing the installation of 5mm or 6mm length implants, the area of the zygomatic bone minimum values were $10,4 \text{ mm} \pm 2.35 \text{ mm}$ allowing the insertion of implants of 8 mm. In the periauricular areas the values in the upper region were $2.93 \text{ mm} \pm 0.55 \text{ mm}$ and lower were $3.1 \text{ mm} \pm 0.7 \text{ mm}$; the region of the mastoid process allowed the installation of 5mm implants. In the perinasal region 4mm or 5mm length implants could be installed.

Conclusion : We concluded that in the craniummaxillofacial area, there were regions for acceptable thickness for extrabucal implant installation being the superior temporal bone area the one with the major limitations.

MOTHERS KNOWLEDGE ABOUT THE ORAL HEALTH OF CHILDREN AGED 0 TO 3 YEARS IN THE FAMILY HEALTH STRATEGY

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Aim : The main purpose of this work was to describe the oral hygiene care practiced with the children and to verify whether there was an association between the oral health

of the mothers and their children.

Method : A qualitative, cross-sectional study was conducted with questionnaire application and use of DMFT and dmft indices. This study was performed in a Family Health Unit, in Brazil with 186 people.

Results : The toothbrush and toothpaste set were the most cited for oral hygiene (59.14%), followed by toothbrush without toothpaste. Most mothers do the hygiene after meals, 39,13% do it before bedtime or after breastfeeding. All mothers presented themselves as responsible for the nocturnal hygiene practiced in the children, and they stated that this procedure was not straightforward. In children, caries were observed in alarming prevalences, with moderate to high dmft. In mothers, the DMFT index ranged from moderate (44%) to high (28%), with a significant correlation among indexes. In the evaluation of mothers's oral health, 46.24% have already performed exodontia, 10.75% using some type of prosthesis.

Conclusion : The habits of oral hygiene practiced in children bring incoherence and were described as being difficult to perform. The oral health of both children and mothers evaluated in this work appeared to be unsatisfactory.

NEW APPROACH IN THE FIBERGLASS POSTS CEMENTATION

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to develop new techniques for cementing fiberglass posts, which promote an easy and fast technique, improving the results.

Method : It was develop 2 diferent techniques: a fiberglass post cemented using a flow resin composite; and a fiberglass post cemented using a bulk-fill resin composite. For each technique, a clinical case of a patient was submitted to a technique that was developed during the college graduation clinic. As the bonding agent, the three-step adhesive was used. For the bulk-fill technique, the resin composite was increased by 3 increments of 4 mm and then polymerized by 20 seconds.

Results : It was shown great resistant and adaption, with both techniques.

Conclusion : These two cases report demonstrated that both techniques developed good results, but needs to be studied more to provide longevity and a successful treatment for the patient.

NEW DENTURE ADHESIVE CONTAINING MICONAZOLE NITRATE POLYMERIC MICROPARTICLES: ANTIFUNGAL AND ADHESIVE FORCE

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STATE UNIVERSITY OF LONDRINA

Aim : The purpose was to evaluate the effect of addition of polymeric microparticles of miconazole nitrate (MN) at

different concentration into a denture adhesive on antimicrobial activity and adhesive force.

Method : Spray drying MN-microparticles: Eudragit L-100 (E), Gantrez MS-955 (G) and the combination of both (EG) was incorporated to DA. The concentration of MN into DA was 1% (1) and 2% (2). Therefore, the groups formed with combinations of polymers and concentration were: DAE1, DAG1, DAEG1, DAE2, DAG2, DAEG2, and DA with 2% pure MN (DAM) and DA without microparticles or drug (DACT) as control. Minimum inhibitory concentration (MIC) against *Candida albicans* was performed by broth micro-dilution and agar dilution methods in extract of DAs and conventional gel form (Daktarin®). Adhesive load testing was made between acrylic resin samples on a universal testing machine after immersion in water by 6 h. Data of adhesive force were evaluated with two-way ANOVA and Bonferroni tests ($\alpha=0.05$).

Results : All DA groups with polymers G alone or combined with E performed antifungal activity and good adhesive force. However, DAEG2, DAEG1, DAG2 showed the most actives against *C. albicans* and DAG2 compared to the control group. The best adhesive properties were exhibited by DAEG2, consisting of high initial adhesive force which maintained by time test.

Conclusion : MN-microparticles addition may provide antimicrobial properties DA without adversely affecting the adhesive strength of the formulation. This dental and pharmaceutical formulation would be an innovative product against denture stomatitis that generally affects removable denture wearers.

NEW PULP REVASCULARIZATION PROTOCOL FOR DISINFECTION AND CERVICAL SEALING: A CASE REPORT

FERNANDA YUKARI TAKARA; ANA CAROLINA CORREIA LAURINDO DE CERQUEIRA NETO; JOSÉ FLÁVIO AFFONSO DE ALMEIDA; MARINA ANGÉLICA MARCIANO; ALEXANDRE AUGUSTO ZAIA; CAIO CÉSAR RANDI FERRAZ; BRENDA PAULA FIGUEIREDO DE ALMEIDA GOMES; ADRIANA DE JESUS SOARES

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The purpose of this study is to describe a case report of a traumatized incisor with incomplete apex and pulp necrosis, in which the treatment of choice was pulp revascularization. A 7-years-old-male patient searched the Dental Trauma Care Service of FOP-UNICAMP after suffering fall from his own height in the previous month.

Method : Anamnesis, clinical and radiographic exams were performed, demonstrating tenderness to percussion, pulp necrosis and incomplete apex associated with tooth 21. The diagnosis of enamel-dentin fracture associated with subluxation was established and the treatment planning of pulp revascularization was performed. At the first appointment, a passive descontamination was undertaken using 6% sodium hypochlorite and 2% chlorhexidine, followed by the use of calcium hydroxide association with 2% chlorhexidine gel as intracanal medication. After 21 days, a blood clot was stimulated by exceeding a manual file through the apical foramen. Then, a collagen matrix was applied above bleeding and a

cervical sealing with calcium hydroxide, 2% chlorhexidine gel and zinc oxid was inserted. Above this sealing, coltosol was inserted and tooth restoration with composite resin was performed. Following this, clinical and radiographic exams were performed, in each three months.

Results : It was possible to observe remission of signs and symptoms, apical closure, thickening of root walls and longitudinal root growth after 2 years of follow-up.

Conclusion : It was concluded that the therapeutic protocol used in the present report is a favorable alternative for traumatized teeth with incomplete apex and pulp necrosis.

ODONTOGENIC KERATOCYST: IMAGING ASPECTS AND CONCORDANCE WITH THE WHO CLASSIFICATION OF 2017

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Odontogenic keratocyst (OK) is considered, according to the new classification of the World Health Organization (WHO) of 2017, an odontogenic cyst. This condition usually develops during the 2nd and 3rd decades of life and has mild male predilection. The site of major involvement is the posterior region of the mandible, involving body and ramus. It is often an asymptomatic condition, but in some cases a slight increase in volume may be evidenced by clinical examination.

Method : A 47-year-old female patient was referred to the buccomaxillofacial surgery service after complaint of "throbbing" in the right third molar region. On the panoramic radiograph, a well-defined and partially corticalized multilocular radiolucent image was observed, associated with right third molar, in the region of body, ramus and head of the mandible of the right side, causing discrete expansion and thinning of the anterior and superior cortices of the ramus of the mandible.

Results : After the incisional biopsy, which confirmed the diagnosis of OK, a concomitant computed tomography scan was performed for surgical planning, where a bulging and thinning of the involved cortical bone was observed. The technique of marsupialization was chosen due to the extension of the lesion. After eight months, the reduction of the affected area was observed.

Conclusion : Thus, it is important to recognize the contribution that the panoramic radiography has for the initial diagnosis and, in particular, to emphasize that the new WHO classification is relevant since the lesion was successfully treated using the indicated surgical technique.

ORAL BURN SYNDROME TREATED WITH ACUPUNCTURE - A CLINICAL CASE

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Report the clinical case of a patient, 59 years old, referred to the acupuncture clinic of the School of

Dentistry of Piracicaba (UNICAMP), by Orocentro (UNICAMP), with Oral Burn Syndrome treated with acupuncture and its results.

Method : After the conventional dental anamnesis and the one recommended by Traditional Chinese Medicine, the patient's energy imbalance was verified with the selection of the following acupuncture points: HT7 (Shen Men), CV6 (Qi Hai), ST36 (Zu San Li), LI4 (He Gu), LI11 (Qu Chi), CV23 (Lian Quan), SP6 (San Yin Jiao), LR3 (Tai Chong), Yintang e Ex Jin-Jin Yuye. Five traditional acupuncture sessions were held, one per week lasting 20 minutes. The Visual Analog Scale (VAS) was used at the beginning and end of each session, called VASi and VASf, respectively.

Results : In the initial session, the VAS= 8, and in the final session there was total remission of the oral burning symptoms, VAS= 0.

Conclusion : The restoration of energy balance through acupuncture provided the normality of the patient's oral health.

ORAL HEALTH EDUCATION AS SUPPORT FOR THE QUALITY OF LIFE

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To report a social experience about oral health education as support for the quality of life.

Method : This was a study of experience reporting.

Results : Health education is a set of knowledges and practices aimed at disease prevention and health promotion. It is a resource through which scientifically produced knowledge in the field of health, mediated by health professionals, affects people's daily lives, since the understanding of the determinants of the health-disease process offers subsidies for the adoption of new habits and behaviors of health. The oral health education activities were developed with the children from Socio Educational Service Center. First, all the children watched an explanatory and demonstrative video about the caries process and periodontal disease in a simple way. They learned about the importance of brushing and the correct technique. In small groups of children, they underwent supervised brushing. After brushing, an oral clinical examination was performed and referred for dental treatment if necessary. After the clinical examination, this same group went to a clinical table with models, games, flipchart, etc. These activities were performed at least twice with the children. Teachers attended lectures to improve knowledge about oral health.

Conclusion : In view of the results, it could be highlighted the relevance of oral health education for children in this segment, with the improvement of oral health and the quality of life of the population most in need.

ORAL HEALTH EDUCATION: ANALYSIS OF THE KNOWLEDGE OF HIGH SCHOOL TEACHERS IN THE CITY OF PIRACICABA (SP)

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The school has been considered a suitable place

for the development of health programs. To evaluate the knowledge of high school teachers in the city of Piracicaba (SP) on hygiene and oral health conditions.

Method : The research consisted of a descriptive, cross-sectional study, through data collection through a questionnaire. The target population was teachers from 1st to 3rd year of high school. To determine the level of knowledge a specific categorization was created, classifying the answers into right or wrong. In order to determine the level of knowledge a specific categorization was created, classifying the seven answers as right or wrong (right answers: 6 and 7 good level, 4 and 5 reasonable level, 3 or less critical level).

Results : 38 teachers answered the questionnaire, and they have difficulty accessing information, contents and materials related to oral health, as these topics are generally not discussed. Most do not have enough specific knowledge to perform oral health education work with their students, since only 12% classified themselves as having a good level of knowledge.

Conclusion : It is necessary to provide theoretical and practical support to these educators so that they can deal with such content in an appropriate way. To this end, it is necessary to stimulate the adoption of new strategies and continuous training, through a multi-professional work that involves the active participation of dentists and high school teachers.

PHARMACOLOGICAL INHIBITION OF KS, ER AND TE FASN-DOMAINS ON THE ADHESION/MIGRATION OF SCC9 CELLS: PRELIMINARY RESULTS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The goal of this study was to compare the effects promoted by cerulenin (CER), triclosan (TCS) and orlistat (ORL) which inhibit the KS, ER and TE domains of the metabolic enzyme Fatty Acid Synthase (FASN) in the adhesion and migration of SCC9 cells.

Method : SCC9 cells were treated for 24 or 48h with the compounds and then, plated in previously coated wells with collagen and fibronectin. No adherent cells were removed by washing with PBS and the adherent cells were stained by toluidine blue. To evaluate the migration of SCC9 cells treated with CER, TCS and ORL, we performed the well established "wound healing assay" for 24 or 48 hours.

Results : The SCC-9 adhesion to the matrix components were significantly reduced by the treatment with different concentrations of TCS. However, different concentrations of CER resulted in a significant increase of the SCC9 adhesion and ORL did not change the adhesion phenotype of these cells. Also, our preliminary results showed that the treatment with C75 (CER analogue), TCS and ORL were able to significantly reduce the migration of SCC9 cells.

Conclusion : The FASN enzyme has emerged as a promising therapeutic target for cancer treatment. The comparison of the effects of different FASN domains with CER, TCS, and ORL may contribute to a better

understanding of the mechanism of action and the side effects of these drugs, as well as help to improve the therapeutic index. In summary, this results will be the key for future preclinical and clinical studies of FASN inhibition of oral squamous cell carcinoma.

POLYMORPHISM IN ANRIL GENE, AND NOT IN IL-10 AND GLT6D1, WAS ASSOCIATED WITH THE PROGRESSION OF CHRONIC PERIODONTITIS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The present study aimed to investigate the associations between SNPs (rs1333048, rs1537415 and rs6667202) and chronic periodontitis (CP) in a Brazilian population

Method : The frequency of SNPs rs1333048, rs1537415 and rs6667202 were analyzed by real-time PCR with specific Taqman probes in 190 patients with CP and 202 subjects with periodontal health (SP). The chi-square test was used to evaluate the differences between the groups when allele frequencies and genotypes.

Results : The rs1333048 SNP in the ANRIL gene was associated with CP in the population studied. The rare allele A was detected less frequently in the CP group when compared to the SP group (41.4% and 49.3 respectively, $p = 0.007$), suggesting that the A allele is protective for the occurrence of CP. SNPs rs1537415 and rs6667202 were not associated with CP.

Conclusion : It can be concluded that the SNP rs1333048 in the ANRIL gene was associated with CP in the Brazilian population studied. The A allele was less frequently detected in CP patients, suggesting that this allele is protective for the occurrence of CP.

POPULAR PIRABIXO COURSE

TÚLIO MAURICIO FERREIRA PARO; DAGMAR DE PAULA QUELUZ

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to report on the preparatory course Popular PiraBixo from Piracicaba Dental Scholl (PDS) - UNICAMP.

Method : It was a study carried out through information from founders and organizers of this course.

Results : The preparatory course Popular PiraBixo is a course initially organized by teachers and students of the PDS to promote to the community of the city a pre-university course of quality and without cost of tuition, so that it could attend the population that would not be able to attend a particular pre-university course. In 2014 the project was reactivated by the PDS undergraduate students, where it works to this day. The preparatory course Popular PiraBixo currently has about 21 teachers who teach in the areas of mathematics, Portuguese, history, geography, physics, chemistry, biology and English, and contains 60 students in the age range of 16 to 60 years. The selection is through a theoretical test of general knowledge, and later by a socio-economic

evaluation. The teaching material used in the classroom is provided through partnerships with private schools. The teachers of the course are the PDS undergraduate students.

Conclusion : PDS's popular PiraBixo course has already approved several students from the beginning of the project in public and private universities. It is of the utmost importance for those who are unable to afford a pre-university course, and are looking for content to be able to enter a university to gain a better professional qualification by helping in their personal lives.

PRACTICAL APPLICATION OF ACUPRESSURE IN PEDIATRIC DENTISTRY CLINIC - CASE REPORT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to report the case of a patient in the dental clinic, odontopediatrics area of the Piracicaba Dental School (FOP/UNICAMP), male, 7 years old, with extraction indications for the 1st and 2nd molars left primary (74 and 75) and rights (84 and 85), resistant to dental treatment and the conventional technique of dental anesthesia, with indication of the exodontia to be done with analgesia in hospital environment, treated with acupressure and its results.

Method : Colza seeds were fixed with beige-colored tape (used in auriculotherapy) at the following acupuncture points: HT7 (Shen Men), PC7 (Da Ling), PC6 (Nei Guan), LU9 (Tai Yuan) e Yintang, placed before dental treatment, and massaged for 5 minutes. Seven acupressure sessions were performed, one per week. Between the sessions a seed was fixed at the point Anxiety in the ear and the parents were instructed to stimulate this point three times a day and remove on the 5th day.

Results : In the first session the sealant was made in the right upper molar and in the other sessions the student simulated the anesthesia technique to familiarize the patient with the procedure. In the 7th session it was anesthetized and 74 and 75 were extracted. After healing, another session of acupressure and extraction of the 84 and 85 was performed.

Conclusion : The therapeutic effects obtained with acupressure were important as an aid in dental treatment.

PREVALENCE OF RED COMPLEX BACTERIA IN COMBINED PERIODONTAL AND ENDODONTIC SITES

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The red complex is part of the climax of the community of microorganisms organized in biofilms and comprises species that are considered periodontal pathogens, related to the increase in pocket depth and the presence of bleeding on probing, named *Porphyromonas gingivalis* (Pg), *Treponema denticola* (Td) and *Tannerella*

forsythia (Tf). The aim of this study was to verify the presence of Pg, Td and Tf in diseased periodontal tissues (DPT) associated with both necrotic pulp (NP) (i.e. combined endoperiodontal lesions) and with vital pulp (VP) (i.e. primary periodontal lesions with secondary endodontic involvement); and in healthy periodontal tissues (HPT) associated with VP.

Method : Microbial samples were collected from 10 teeth with NP and associated DPT, 10 teeth with VP and associated DPT, and 10 teeth with VP and HPT (control group) from the periodontal tissues (PT) and root canals (RC). Samples had their DNA extracted and submitted to the checkerboard analysis.

Results : The Fisher exact test was performed to test the frequency and mean of individual bacterial species and the red complex ($\alpha = 5\%$). Pg, Td and Tf were detected in all the periodontal sites investigated. However, the proportions of the red complex were significantly higher in NP associated DPT, than in VP ($p < 0.05$), when compared to the control group.

Conclusion : It was concluded that the red complex was more frequently in DPT of teeth with combined endoperiodontal lesions than in teeth with primary periodontal lesions with secondary endodontic involvement. (Supported by FAPESP 2015/23479-5, CNPq 308162 / 2014-5 & CAPES).

PREVALENCE OF TEMPOROMANDIBULAR DISORDERS IN COLLABORATORS OF A REFERENCE HOSPITAL IN PIRACICABA

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The objective of this study was to determine the prevalence of temporomandibular disorders (TMD) in collaborators of a reference hospital in Piracicaba.

Method : This was a cross-sectional, descriptive study based on a digitized archive of the occupational health sector of a public reference hospital in Piracicaba - SP. The files used were related to the records of occupational dental records of the collaborators of the second half of the year 2015, filled out by the collaborators of the hospital, and part by dentists through clinical examination and interview. Sociodemographic data were collected, as well as signs and symptoms associated with temporomandibular disorders. Data were analyzed through descriptive and estimative statistics, with significance level for $p \leq 0.05$, Chi-square test, to verify the association between each dependent variable (presence of TMD) and the other variables (sociodemographic, signs, symptoms).

Results : The highest occurrence of TMD symptoms in this study occurred in females aged 21-40 years. When the symptoms were related to the presence or absence of prostheses, it was verified that the majority did not have a prosthesis nor did they present the symptoms. In the relation of the symptoms with stress, it was possible to be noticed that the majority was not stressed, nor did it present such symptoms; but in the case of dental tightening, there was a change in proportion, where most of the stressed ones clenched their teeth.

Conclusion : The TMD is very prevalent nowadays and it is strictly necessary to create public policies aimed at Workers' Health to provide a correct diagnosis and an integrated and multidisciplinary treatment, generating greater labor productivity as well as the quality of life of the worker.

PREVALENCE OF VIRULENCE GENES OF ENTEROCOCCUS FAECALIS STRAINS ISOLATED FROM TEETH INDICATED TO ENDODONTIC RETREATMENT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This study evaluated the presence of virulence genes of *E. faecalis* strains isolated from root canals of teeth with failure of the endodontic treatment and presence of periapical lesion (PL) and teeth indicated to endodontic retreatment for prosthetic reasons and no PL.

Method : The sample consisted of 40 teeth (20 with PL and 20 without PL). *E. faecalis* strains were isolated from each root canal (40/40) and identified by genetic sequencing. The detection of virulence genes such as collagen-binding protein (ace), hemolysin activator (cylA), endocarditis antigen (efaA), surface protein (esp) and gelatinase (gelE) was performed by polymerase chain reaction (PCR).

Results : The virulence gene ace was detected in 100% of the cases with the presence of PL and 84.09% without PL. EfaA was detected in 95% (PL) and 81.81% (no PL), esp 70% (PL) and 54.54% (no PL), gelE 75% (PL) and 97.72% (no PL) and cylA was not detected in cases of endodontic failure with the presence of PL, but it was detected in 2.27% of the cases without PL.

Conclusion : It was concluded that *E. faecalis* strains isolated from teeth with and without periapical lesions show distinct virulence genes patterns (Supported by grants: FAPESP 2015/23479-5, CNPq 308162/2014-5 and CAPES).

PREVENTIVE EFFECT OF TOOTHPASTES WITH NANO-SIZED TRIMETAPHOSPHATE ON ENAMEL EROSION IN VITRO

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ARAÇATUBA DENTAL SCHOOL - UNESP

Aim : The aim of this study in vitro was to evaluate the effect of the fluoride toothpastes supplemented or not with nano-sized sodium trimetaphosphate (TMPnano) with dental erosion using bovine enamel.

Method : Blocks of bovine enamel (4 mm x 4 mm, n= 60) were selected through the hardness of the initial surface (SHi), the next step they were divided in 5 experimental toothpastes (n = 12): without F or TMP (Placebo); 1100 ppm F (1100 ppm F); 1100 ppm F plus 3% TMP micrometer (1100 TMP); 1100 ppm F plus 3% TMP nano-

sized (1100 TMPnano), and 5000 ppm F (5000 ppm F). The erosive challenge was produced by citric acid, for 5 min (4x/day), during 5 days. After these challenges, the hardness of the surface post-erosion (SHf) and enamel wear (µm) were determined. The data were submitted for analysis of variance ANOVA, followed by the test of Student-Newman-Keuls ($p < 0.001$).

Results : The results of the SHf were significantly higher in the groups treated by the supplemented toothpastes with 1100 TMPnano and 5000 ppm F when compared to the Placebo and 1100 ppm F ($p < 0.001$); no significant difference was observed between 1100 TMPnano and 5000 ppm F ($p = 0.202$). The 1100 TMPnano and 5000 ppm F toothpastes had a greater protective effect when compared to the positive control (1100 ppm F) for all variables studied ($p < 0.001$).

Conclusion : Furthermore, from the results it was concluded that the addition of 3% TMPnano to conventional toothpastes (1100 ppm F) promoted a synergistic protective effect against erosive wear of the enamel when compared to its homologues reaching levels of protection similar to those observed for the toothpaste 5000 ppm F.

PROGRESSION OF EXPERIMENTAL PERIODONTITIS DURING THE TREATMENT WITH ONCOLOGICAL DOSE OF ZOLEDRONATE

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ARAÇATUBA DENTAL SCHOOL - UNESP

Aim : Zoledronic acid is an antiresorptive agent which belongs to the bisphosphonates kind, and used to the treatment of diseases that can lead to osteolysis. A serious adverse effect initiated by this medicine is the bisphosphonate-related osteonecrosis of the jaw (BRONJ). Epidemiological and clinical studies show that periodontal disease is frequent in patients that developed BRONJ. According to that, the comprehension of how the periodontal disease takes part of BRONJ'S pathophysiology is important, since it can help to prevent and also to treat the disease itself.

Method : Rats were divided in experimental groups: VEH-PE and ZOL-PE. The rats got intraperitoneal shots of sodium chloride solution, or, 45ml shots plus 100µ g/Kg of zoledronic acid. The shots had a 3-day hiatus between each other. After two weeks of drug treatment, a cotton ligature was installed to the first lower left molar and kept until the end of the experimental period. Euthanasia was done 14, 21 and 42 days after the cotton ligature was installed. It was executed the hemi-mandibles' histological sections were stained with hematoxylin-eosin. Furcation of region of the first molar were made: histopathological analysis, Histometric analysis of the percentage of bone tissue (PTO), and Histometric analysis of the percentage of non-vital bone tissue (PTOnv).

Results : Throughout the treatment using zoledronic acid there were increased magnitude of the local inflammatory response and severe tissue disruption.

Conclusion : It could be concluded that zoledronic acid reduced alveolar bone loss incuded by PE, which makes

periodontal disease as an important local risk factor to the BRONJ.

QUANTIFICATION OF LPS LEVELS IN SALIVA, PULP CHAMBER AND ROOT CANAL OF TEETH WITH POST-TREATMENT APICAL PERIODONTITIS
 PEDRO IVO DA GRAÇA FAGUNDES; PRISCILA AMANDA FRANCISCO; MARAÍSA GREGGIO DELBONI; MAICON RICARDO ZIEBERG PASSINI; MARINA ANGÉLICA MARIANO DA SILVA; ADRIANA DE JESUS SOARES; ALEXANDRE AUGUSTO ZAIA; BRENDA PAULA FIGUEIREDO DE ALMEIDA GOMES
 PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Persistent infection or microbial recontamination by the coronal microleakage is the main cause of post-treatment apical periodontitis. Endotoxins (LPS) are part of the outer membrane of the cell wall of Gram-negative, and even at low concentrations, are powerful stimulators of the periapical immune response. **Objectives:** a) to quantify LPS levels present in the saliva, pulp chamber and root canals investigated; b) to correlate the LPS with the clinical and radiographic aspects of the patients. **Method :** Samples were collected from the saliva, pulp chamber and root canal of 20 teeth with periapical lesion and need for endodontic retreatment. LPS samples were quantified by the Limulus Amoebocyte Lysate (LAL) method.

Results : LPS was found in 100% of the samples collected, with a mean in the saliva of 0.90 EU/mL ($\pm$ 2.43), in the pulp chamber of 0.45 EU/mL ($\pm$ 0.72) and in the root canal of 3.26 EU/mL ($\pm$ 5.41). LPS of saliva presented a positive correlation with the presence of fistula ($p = 0.02$).

Conclusion : It was concluded that, although LPS are commonly related to primary infections, they are also found in secondary/persistent infection. In addition, the association of salivary LPS with fistula suggests possible communication between oral sites. (Supported by FAPESP 2015/23479-5 & 2015/19215-2; CNPq 308162/2014-5 & 140944/2017-6 and CAPES).

RECONSTRUCTION OF A SEVERELY RESORBED MAXILLA USING RHBMP-2 AND BIOMATERIALS
 CHRISTOPHER CADETE DE FIGUEIREDO; ANTONIO GABRIEL LANATA FLORES; LUIDE MICHAEL RODRIGUES FRANÇA MARINHO; RENATA SILVEIRA SAGNORI; CLÁUDIO FERREIRA NOIA
 PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : For the installation of dental implants its necessary width and height of alveolar ridge. The recombinant human bone morphogenetic protein-2 (rhBMP-2) have been introduced in an effort to support the native regenerative potential of patients in need of bone augmentation. The association of biomaterials to rhBMP-2 is given to provide osteoinduction and osteoconduction. The aim of this study is present a case report showing a reconstruction of a severely resorbed maxilla using rhBMP-2.

Method : A caucasian male patient, 62-years-old, with no systemic disease, attended our service for evaluation. After clinical and radiographic evaluation a significant

atrophy of the maxillary alveolar ridge was diagnosed, requiring extensive reconstruction. The first surgery was performed to remove an implant from the right maxillary sinus. The second surgical procedure was performed in a hospital under general anesthesia, after three months with the sinusitis already controlled. A bilateral maxillary sinus lift was performed. The buccal region of the maxilla and the maxillary sinus were filled with rhBMP-2, absorbable collagen sponge carrier (ACS), and lyophilized bovine graft (LBG). Two titanium-mesh were used each side of the maxilla to provide space and wound stability. Eight months after the second surgery was performed the installation of 7 implants in the maxilla.

Results : Currently the patient waiting for the period of osseointegration to go to prosthetic phase.

Conclusion : We conclude that the reconstruction of the maxilla using rhBMP-2/ACS/LBG is an excellent alternative, providing adequate height and bone thickness for the installation of dental implants.

RECONSTRUCTION OF THE ALVEOLAR RIDGE USING PIEZO SURGERY - CASE SERIES AND LITERATURE REVIEW

CAROLINA SANTOS VENTURA DE SOUZA; HEITOR FONTES DA SILVA; ANTONIO GABRIEL LANATA FLORES; MARCIO DE MORAES; ALEXANDER TADEU SVERZUT
 PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of the study was to evaluate the efficacy of the technique for obtaining the graft and the reconstruction performed, also analyzing the risks of associated complications.

Method : Based on a literature review, a series of 3 cases were performed for the reconstruction of atrophic maxillary ridges with the use of block and particulate grafts obtained from the mandibular branch with the use of saws used in a piezoelectric motor.

Results : The use of saws and drills to obtain the grafts can increase the wear of the block obtained, in addition to increasing the risk of injury of vascular and nervous. In order to avoid these complications, the use of ultrasound (piezo surgery) is advantageous for this type of procedure. Satisfactory amounts of graft were obtained, and patients were being followed up, awaiting the implantation phase of implants presenting no sign of complications associated with the technique.

Conclusion : Satisfactory amounts of graft were obtained using this technique with less risk of complications

REHABILITATION WITH OBTURATOR REMOVABLE PARTIAL DENTURE AFTER PARTIAL MAXILLECTOMY: A CASE REPORT

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 PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to describe the rehabilitation treatment of a 62-year-old patient, female, which was submitted to a partial maxillectomy for treating an adenocarcinoma.

Method : The patient has as sequelae the loss of some dental elements, oral-nasal communication and collapse of muscles around the defect. As a treatment, it was proposed the preparation of a palatal obturator prosthesis, which would have the primary function to promote a sealing between oral and nasal cavities, with consequent improvement in compromised oral and aesthetic functions.

Results : In this study, the prosthesis achieved its purpose to offer proper aesthetic and functional conditions to the patient, providing improvement of oral functions such as phonetics, chewing, swallowing and aesthetics, promoting greater comfort.

Conclusion : It is important to emphasize the role of rehabilitation in quality of life, since the reintegration of these individuals into society is essential.

RELEVANCE OF EARLY DIAGNOSIS OF DIABETES FOR HEALTH PROMOTION

BIANCA LIMA DE ARAÚJO; DAGMAR DE PAULA QUELUZ

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To raise awareness of the importance of early diagnosis of diabetes, in addition to habits that may aid on its prevention, and to defend the importance of the health professional in having mastery over the disease within its training area.

Method : This study was based on a literature review.

Results : Hyperglycemia, also called Diabetes, is the rise in blood sugar rates. It is known that this disease must be controlled, because hyperglycemia over the years is associated with microcirculatory lesions, injuring and impairing the functioning of various organs such as kidneys, eyes, nerves and heart. Patients who are able to maintain good glycemic control have a significant reduction in the risk of developing such complications. The number of people diagnosed with diabetes increased by 61.8%. It went from 5.5% in 2006 to 8.9% in 2016, with diabetes prevalent in women. Periodontal disease is the most common dental manifestation, being present in 75% of these patients. In addition, emergencies such as hypoglycemia and metabolic ketoacidosis may occur during care, and the dentist should be alert to suspect previously undiagnosed diabetes mellitus.

Conclusion : This study allowed us to conclude that well-controlled diabetic patients can be treated as normal patients, so care in the treatment and preparation of health professionals is essential for the effectiveness of the procedure, as well as regular physical exercise and good nutrition.

RESTORATIVE COMPOSITE WITH DIATOMITE FILLERS: EVALUATION OF MECHANICAL PROPERTIES

MAURICIO BOTTENE GUARDA; AMÉRICO BORTOLAZZO CORRER; GABRIEL NIMA; ISAAC JORDÃO DE SOUZA ARAÚJO; ISABELA PINHEIRO CAVALCANTI LIMA; MAURICIO MATTE ZANINI; REGINA MARIA PUPPIN RONTANI; SIMONIDES CONSANI

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to evaluate the influence of brushing and storage time on surface roughness and flexural strength before and after thermal cycling of two restorative composites.

Method : For the roughness test, samples (n = 10) (4x2 mm) were made with each restorative composite (Filtek Z350, 3M ESPE - Z350 and Zirconfill, Technew - ZIR) which were evaluated in rugosimeter after 24 h from cure. After initial evaluation, the samples were submitted to 30,000 cycles of brushing and again evaluated. To evaluate the influence of storage time, samples (n = 10) were made in the same dimensions as those submitted to the roughness test associated to brushing, and evaluated after 24 h, 7, 14 and 28 days, and 6 months of storage. For the flexural test were made samples (n = 10) (25x2x2 mm) which were tested before and after 10,000 thermal cycling. Flexural data were submitted to 2-way ANOVA, and roughness data to 1-way repeated measure ANOVA, followed by Tukey's test (5%).

Results : The results of roughness (Ra) after the brushing showed that ZIR presented higher values after 24 h and after brushing. The roughness after storage showed higher value in all periods for ZIR when compared to Z350. In flexural strength, Z350 samples without cycling showed higher strength values than ZIR. After cycling, there was no difference between the two groups.

Conclusion : It was concluded that the Filtek Z350 composite had better mechanical properties than Zirconfill, regardless of the storage time.

SEVERE BRUXISM MANAGEMENT FOR FULL MOUTH REHABILITATION: BOTULINUM TOXIN AND OCCLUSAL SPLINT THERAPY. CLINICAL CASE

VICTOR RICARDO MANUEL MUNOZ LORA; GIANCARLO DE LA TORRE CANALES; ALTAIR ANTONINHA DEL BEL CURY

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of the present study was to control severe bruxism of a patient in a need for a full mouth rehabilitation.

Method : A 43 year-old patient attended to the clinic to perform a full mouth rehabilitation. After clinical evaluation, the patient is diagnosed with severe bruxism, generalized severe dental wear and bilateral hypertrophy of the masseter and temporal muscles. Bilateral applications of botulinum toxin A were performed in the masseter and temporal muscles (anterior bundle), with the installation of an occlusal splint to control the bruxism. Once bruxism was controlled, the patient was rehabilitated.

Results : The patient reported a relieve of muscle pain and a decrease in masticatory muscles force, as well as an improve of sleep quality. The bilateral masseter and temporal hypertrophy was corrected, presenting a thinning of the face with consequent aesthetic improvement. Severe wear was corrected by total rehabilitation using ceramic crowns. Patient was satisfied with the proposed treatments and with the final result.

Conclusion : Applications of Botulinum toxin A together with occlusal splint therapy can be a excellent treatment option in patients diagnosed with severe bruxism.

Botulinum toxin A seems to relieve muscle pain related to bruxism, becoming a great ally in the control of the disorder.

SEXUAL DIMORPHISM BY MEANS OF LINEAR MEASUREMENTS OF THE SCAPULA AND IT'S IMPORTANCE FOR BRAZILIAN ANTHROPOMETRY

MARIA JÚLIA ASSIS VICENTIN; FLÁVIA LAZARINI MARQUES; CRISTHIANE MARTINS SCHMIDT; VIVIANE ULBRICHT; BRUNA PINCINATO; FRANCISCO CARLOS GROppo; EDUARDO DARUGE JUNIOR; LUIZ FRANCESQUINI JÚNIOR

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this research was to study seven linear measurements in the right scapula (A-maximum length of the glenoid cavity, B-maximum width of the glenoid cavity, C-upper scapula angle - lower angle, D-upper angle - lateral angle of scapula, E-lateral angle - lower angle of scapula, F-more equidistant border of the acromion - upper angle of the scapula and G-length of acromion) to verify if they are dimorphic.

Method : The study was approved by CEP / FOP / UNICAMP 138/2014). With the release of the ethics committee, the inter- and intra-examiner calibration was performed, obtaining ICC granting excellent. Measurements were made (in mm) on the scapulae (A-maximum length of the glenoid cavity, B-maximum width of the glenoid cavity, C-upper scapula angle - lower angle, D-upper angle - lateral angle of scapula, E-lateral angle - lower angle of scapula, F-more equidistant border of the acromion - upper angle of the scapula and G-length of acromion), next to the osteotomes of the Osteological and tomographic Biobank Prof. Eduardo Daruge of FOP-UNICAMP, in the age range of 18 to 100 years. As linear measurements were made by means of a digital caliper, duly calibrated.

Results : The results indicated that all measures studied are dimorphic, and it is possible to establish a logistic regression model with four measures to facilitate the determination of sex. This obtained 87.0% of sensitivity, 89.6% of specificity and 88.1% of accuracy, and was therefore effective in predicting sex.

Conclusion : It is concluded that it is possible to determine the sex by the scapula, being able to be used individually or in conjunction with the other bones found.

SEXUAL DIMORPHISM IN CALCANEUS BONES OF THE OSTEOLOGICAL AND TOMOGRAPHIC BIOBANK DR. EDUARDO DARUGE-FOP / UNICAMP

BRENDA GALVÃO BRUDER; CRISTHIANE MARTINS SCHMIDT; VIVIANE ULBRICHT; FRANCISCO CARLOS GROppo; JOÃO SARMENTO NETO; EDUARDO DARUGE JÚNIOR; LAISE CORREIA NASCIMENTO LIMA; LUIZ FRANCESQUINI JUNIOR

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The study was conducted with the objective of evaluating whether calcaneal bone measurements can be used to determine sexual dimorphism and, from these, to develop Logistic Regression functions.

Method : This is an observational study based on the archive of human bones from the Osteological and

Tomographic Biobank Prof. Dr. Eduardo Daruge of FOP / UNICAMP. According to the Inclusion / Exclusion criteria established, the sample was defined as 100 Right-Hand Calcains, belonging to 50 female and 50 male subjects, with ages ranging from 22 to 85 years old, which was obtained by lottery in two equal groups. The present investigation involved the metric analysis of Calcaneum based on ten standard measurements (C, CC, LMT, AMT, LMSAP / A, AMSAP / A, AMSAAM / A, LMSAAM / A, LMSA / C, AMSA / C).

Results : In the analysis of the results, a Strong Sexual Dimorphism Percentage was obtained for the measures Length (14.13%), Circumference (15.03%) and Maximum Width of Articular, Anterior and Middle Surfaces with Astragalus (22.61%). When a likelihood analysis was applied to the three variables selected within the Logistic Regression itself, the following logistic function was obtained: $\text{Logite} = -3.578 + 0.023x_C + 0.010x_{CC} - 0.091x_{LMSAAM / A}$, with a sensitivity of 72% Cases.

Conclusion : In view of the results, it can be stated that the measurements of the calcaneus Length (C), Circumference (CC) and Maximum Width of Articular, Anterior and Middle surfaces with Astragalus (LMSAAM / A) can be used to identify the sex in individuals with reliability Of 72% of the cases, and may be useful for Forensic Anthropology.

SEXUAL DIMORPHISM IN CLAVICLES IN THE BRAZILIAN OSTEOLOGICAL COLLECTION OF FOP / UNICAMP

FLÁVIA LAZARINI MARQUES; BRUNA PINCINATO; MARIA JULIA ASSIS VICENTIN; CRISTHIANE MARTINS SCHMIDT; VIVIANE ULBRICHT; FRANCISCO CARLOS GROppo; EDUARDO DARUGE JR.; LUIZ FRANCESQUINI JÚNIOR

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The present study performed linear measurements of 193 clavicles obtained from bones and tomographies of the Prof. Dr. Eduardo Daruge biobank from FOP / UNICAMP, as well as, discussed the importance of this study for Brazilian Anthropometry.

Method : We measured 193 left clavicles (110 male and 83 female) on the osteological and tomographic Biobank Prof. Dr. Eduardo Daruge of FOP / UNICAMP.

Results : The Kolmogorov-Smirnov and Levene tests showed that the data presented, respectively, normality and homoscedasticity, and the unpaired t test was used to compare the sexes considering each measure separately. Logistic regression (Forward Stepwise - Wald) was calculated, considering males as "1" and females as "0" for calculation purposes, revealing that the model composed of the measurements of the maximum clavicle length, medial clavicle circumference and medial epiphysis width was better (Chi-square = 120.6, $p < 0.0001$) to predict sex than chance. The length measurements of the medial epiphysis ($p = 0.42$), distal epiphysis width ($p = 0.63$) and distal epiphysis length ($p = 0.74$) were not important for the model, besides that, the Hosmer and Lemeshow test showed that the model was adequate ($p = 0.34$). So the logit would be: $\text{Sex} = -27.8 + (1.39 \times \text{Maximum clavicle length}) + (1.58 \times \text{Mean clavicle$

perimeter) + (0.10 × Medial epiphysis width) The method results in 87.3% of sensitivity, 84.3% of specificity and 86.0% of accuracy, being therefore, but effective in predicting sex.

Conclusion : It was possible to conclude that all measurements are dimorphic. It was possible to create a mathematical model to determine sex.

SILVER NANOTECHNOLOGY AS A DIFFERENTIAL TO REDUCE THE CONTAMINATION OF TITANIUM SURFACES

GRADE 2

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UNIVERSITY OF FRANCA - UNIFRAN

Aim : Through nanotechnology, it is possible to elaborate materials with optimized properties, such as silver nanotechnology films, that can be applied to coat surfaces and minimize microbial adhesion. This work evaluated the formation of biofilm in titanium alloy grade 2, coated with silver nanotechnology film.

Method : Thirty specimens (10.0x3.5x1.0mm) were prepared with this alloy (fifteen coated with the antimicrobial film) for the development of monotypic biofilms of *S. mutans* ATCC 25175, *A. actinomycetemcomitans* ATCC 43717 and *A. naeslundii* ATCC 19039, according to protocol defined by Stepanovic et al. (2000), with modifications. Once the biofilms were formed, each specimen was individually placed into tubes containing 5.0 mL of PBS; These were subjected to the ultrasonic bath (120s) for the removal of the bacteria, for subsequent serial dilutions up to 10⁻⁷ and counting.

Results : The data obtained in UFC/mL were analyzed (Anova, Tukey, p≤0.05). The biofilm formation of the three bacteria evaluated was significantly lower (p≤0.05) in the specimens coated with the silver film than in the controls (*S. mutans*: 101.5 UFC / mL - controls and 56, 3 -UFC/mL - specimens with films, *A. actinomycetemcomitans*: 96.4 UFC/mL - controls and 51.6 UFC/mL - specimens with films, *A. naeslundii*: 79 UFC/mL - Controls and 52 UFC/mL - specimens with films).

Conclusion : The preliminary results allowed to infer that the silver nanotechnology film promoted a significant reduction of biofilm adhesion. There was a statistically significant difference (p≤0.05) between specimens with and without silver coating, for each of the evaluated microorganisms.

SOLUBILITY OF A FILLING PASTE COMPOSED OF CA(OH)₂, CLHLORHEXIDINE 2% AND OXZN 2:2:1: STUDY IN MICRO-CT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of the study was to evaluate the solubility,

radiopacity e horizontal flow of 5 different materials.

Method : The materials were divided in groups: G1(Calen®); G2(Calen® combined with zinc oxide 2: 2); G3(root canal filling paste composed of Ca(OH)₂, chlorhexidine gel 2% and OxZn 2: 1: 2); G4(Calplus®) and G5(UltraCal®XS). 28 bovine incisor teeth were selected to evaluate the solubility. The filling materials were inserted into the specimens and scanned by micro-CT. After 7 days in PBS solution and at 37 ° C, they were scanned again. The difference between the volume represented the variation of solubility. To the flow test was recommended by the ISO 6786 standard and ANSI / ADA (specification 57). 0.1 ± 0.005 ml of each material was individually placed on the center of a glass plate, and a second identical glass plate was placed in the set along with a weight of 87.37g. After 7 min, the additional weight was removed and the diameters of the disks formed were measured using a digital caliper. All materials were tested 5 times. To radiopacity test, 5 acrylic plates were made containing 5 wells each, where the materials were deposited. 5 radiographic shots were performed and the acrylic plates containing the materials were positioned along with an aluminum scale. The images were analyzed at Image J and radiopacity was converted into mmAl.

Results : G3 had the highest average solubility. The material with the highest flow was G2. G4 and G3 were the materials that presented the highest radiopacities.

Conclusion : G3 obtained the best values on the solubility and radiopacity tests. In relation to the flow, the Calen® paste presented the highest values.

STABILIZATION SPLIT THERAPY FOR THE TREATMENT OF PAIN TEMPOROMANDIBULAR MIOFOASCIAL

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this review is to discuss the stabilization splint therapy in reducing symptoms in patients with myofascial pain.

Method : Searching of databases, handsearching of relevant key journals, and screening of reference lists of included studies were undertaken.

Results : Muscle pain has been known for some time to be the leading cause of discomfort in the head and neck area], and masticatory muscle pain (myofascial pain) is the most common diagnosis among the various conditions encompassed by the term temporomandibular disorders (TMDs). There are many synonyms for this condition including facial arthromyalgia, TMJ dysfunction syndrome, myofascial pain dysfunction syndrome, craniomandibular dysfunction, pain dysfunction syndrome, and myofascial pain dysfunction. The etiology of myofascial pain is multifactorial. Consequently, many different therapies, some conservative and reversible, others irreversible, have been advocated for patients with myofascial pain. A number of successful treatment outcomes have been reported, including occlusal splints, physiotherapy, muscle-relaxing appliances, and pharmacological interventions.

Conclusion : There was insufficient evidence either for or

against the use of stabilization splint therapy over other active interventions for the treatment of temporomandibular myofascial pain. However, it appears that stabilization splint therapy may be beneficial for reducing pain severity at rest and on palpation and depression when compared to no treatment.

STRESS AMONG DENTAL STUDENTS: ASSOCIATION WITH COURSE PERIOD

GABRIELA SANTANA DE PAULA; LUCIANE MIRANDA GUERRA; JUCILENE LODI; GLAUCIA MARIA BOVI AMBROSANO; KARINE LAURA CORTELAZZI MENDES; ROSANA DE FÁTIMA POSSOBON PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Stress is getting more frequently among college students, affecting their academic development. The goal of this study was investigate the level of stress among students in the School of Dentistry of Piracicaba (Unicamp) and verify the association with the course period comparing students from the 1st to the 5th year.

Method : The participants (262 students) had filled a research instrument that measured the stress level and a questionnaire about socioeconomic and demographic data.

Results : The results showed more female students and median age of 21 years old, majority living far from their parents. The first and the third period's students were classified in higher stress levels.

Conclusion : There was no association between socioeconomic and demographic data and the stress level. There are specific periods during the dental undergraduate course in which the health of students demand more attention and, although it could be different to each student, it seems to healthy teach students how to cope with daily stressors before beginning these specific periods.

STRUCTURAL AND NUMERICAL ORGANIZATION OF BONES OF THE OSTEOLOGICAL AND TOMOGRAPHIC BIOBANK OF FOP / UNICAMP

VALMIR DIAS RAMOS; PAOLA INÊS BOLDRIN; LETICIA GRABRIELE PERON; CRISTIANE MARTINS SCHMIDT; VIVIANE ULBRICHT; EDUARDO DARUGE JÚNIOR; LUIZ FRANCESQUINI JÚNIOR

PIRACICABA DENTAL SCHOOL - UNICAMP
Aim : In the present study, the students collected the bones directly from the cleaning site to the polls, verifying if they were dry, disinfected and promoted the structural and numerical organization of the bones with the Biobank.

Method : All rules for sanitization of bones have followed national standards (ie, washing in hot water, followed by the use of detergent, hypochlorite and some peroxide). The collection respected the numbering indicated on the respective numbered labels. These numbers identify regional origin, sex, age, ancestry and cause of death and are available in a specific handout.

Results : In the present study the students initially organized the bones, the collection (urns with bones, in increasing numerical Arabic numerical order). After this stage the cataloging began (organization of the bones in the anatomical norm, with insertion of numbering by

means of marker pens for overhead projectors in all bones). They were also able to help Graduates and graduate students to measure bones for the achievement of future mathematical formulas. During this period, they had classes of human identification, course of photography, and practice of anthropometry and computed tomography.

Conclusion : All the work developed by the students will facilitate the use and development of new mathematical models.

STUDY OF BOND STRENGTH IN TOOTH ENAMEL PREVIOUSLY BLEACHED WITH 10% CARBAMIDE PEROXIDE CONTAINING DIFFERENT THICKENERS

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Aim : To evaluate the shear bond strength of enamel bleached with 10% carbamide peroxide (CP) associated with different thickeners carbopol or natrosol.

Method : Ninety tooth blocks were divided into six groups (n=15), G1: without bleaching, G2: CP with carbopol (FGM), G3: CP with natrosol (Drogal handling pharmacy (DP)), G4: CP with cabopol (DP), G5: Natrosol gel (DP), G6: Carbopol gel. The gels were applied for four hours daily during 14 days, and kept in artificial saliva in the oven at 37 ° C. At the end of the treatments composite resin restorations were made on enamel surface and the bond strength was obtained by means of a microshear test. After the bond strength test, failure type images were obtained by scanning electron microscopy in order to observe the interface between enamel and composite resin. The data were submitted to statistical analysis, microshear using one-way ANOVA and failure type using Fisher's Fisher ($\alpha = 5$).

Results : The G2, G4 and G6 presented higher frequency of adhesive fracture, but did not differ from each other. The G3 presented higher frequency of mixed and adhesive fracture pattern. The G5 presented higher frequency of mixed fracture, followed by adhesive, cohesive in enamel and dentin.

Conclusion : Any group statistically differed in the bond strength analysis. According to the results presented, it can be concluded that the groups containing the natrosol thickener presented better adhesion results.

STUDY OF LIDOCAINE INCLUSION IN HYDROXYPROPYL-B-CYCLODEXTRIN ON VIABILITY AND PROLIFERATION OF SQUAMOUS CARCINOMA CELLS

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Aim : This study evaluated the effects of lidocaine complexed in 2-hydroxypropyl- β -cyclodextrin (Lido-HP- β -CD) on the viability and proliferation of human squamous carcinoma cells (SCC9 and SCC25).

Method : The cells were exposed to lidocaine and Lido-

HP- β -CD (11.5 to 1.115 μ g / ml). Sulforhodamine B was used to test cell proliferation and the MTT assay to verify cell viability.

Results : Lido-HP- β -CD reduced viability and proliferation of SCC9 and SCC25 cells compared to the control (untreated cells), and presented lower IC 50% (inhibitory concentration for 50% of cells) than Lido ($p < 0.0001$). HP- β -CD without lidocaine did not alter proliferation, but reduced viability of SCC9 and SCC25 cells to 91.61% and 93.64%, respectively ($p < 0.05$ compared to control).

Conclusion : Doxorubicin (positive control) was more effective than Lido and Lido-HP- β -CD in reducing cell viability and proliferation. Lido-HP- β -CD at 1115 μ g / mL potentiated the in vitro cytotoxic effects of lidocaine on SCC9 and SCC25 cells and could be an important therapeutic adjunct if their effects are confirmed in vivo studies.

SURFACE CHANGES OF MATERIALS USED AS CERVICAL BARRIER IN REVASCULARIZED TEETH AFTER THE APPLICATION OF HYDROGEN PEROXIDE

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Crown discoloration induced by materials used in pulp revascularization can be reversed through internal bleaching, however, the effect of bleaching agents on these materials still uncertain. This study investigated changes in the surface structure and chemical composition of materials used as cervical barrier, after the contact with Hydrogen Peroxide (HP).

Method : Twelve bovine teeth were sectioned and divided into four groups: Coltosol, MTA, HP Repair MTA and MTA Flow. The specimens were exposed to 2, 4 and no application of HP and analyzed in SEM and semi-quantitative analysis in EDS mode. The analysis of the micrographs showed a change in the surface of all materials, more evident after 4 applications of HP.

Results : For all the cements, an aggregation of the particles was observed, forming a porous structure, with loss of the particles. In the semi-quantitative analysis of the chemical elements, Coltosol had a higher percentage of zinc in the control group, compared to the groups that received 2 or 4 applications of HP. For the MTA, MTA HP and MTA Flow, in the group submitted to 2 applications of HP, the peaks observed for the calcium ion remained high, but after 4 applications, they presented an increase in the percentage of calcium. In the MTA, the silicon ion was observed in low percentage. As for the HP Repair MTA, this element was not detected in any of the evaluated groups.

Conclusion : Hydrogen Peroxide contact changes the surface structure, physical and chemical properties of the Coltosol, MTA, MTA HP and MTA Flow materials when used as a cervical barrier during internal bleaching resulting to the detriment of sealing.

SURFACE CHARACTERIZATION AND BACTERIAL ADHESION ON TiNbZr EXPERIMENTAL ALLOYS FOR DENTAL IMPLANTS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The purpose of this in vitro study was to characterize the surface and evaluate the adhesion of *Streptococcus sanguinis* and *Actinomyces naeslundii* onto TiNbZr alloys.

Method : The experimental alloys were developed at the following compositions (in wt%): Ti35Nb5Zr and Ti35Nb10Zr. Commercially pure titanium (cpTi) and the Ti6Al4V alloy were used as controls. Roughness, wettability, chemical composition and morphology were analyzed. All surfaces were submitted to adhesion (2h) of *S. sanguinis* and *A. naeslundii*. The colony forming units were determined by specific mediums (log CFU/cm²) and the biofilm structure was evaluated by scanning electron microscopy (SEM). Quantitative data was statistically analyzed at a significant level of 5%.

Results : CpTi surface presented the highest roughness results in all parameters evaluated (Ra, Rq, Rt, Rz) ($P < 0.05$). Wettability was similar among groups ($P > 0.05$) being between hydrophilicity and hydrophobicity limits. The alloying elements presented concentrations close to stoichiometric values. The bacterial adhesion was statistically significant lower to Ti35Nb10Zr and Ti6Al4V groups.

Conclusion : The experimental alloys showed similar surfaces characteristics to control groups. Furthermore, they did not promote higher bacterial adhesion compared to the control groups, being Ti35Nb10Zr less prone to bacterial adhesion compared to Ti35Nb5Zr. However, these surfaces need further investigations before clinical appliances.

SURGICAL TREATMENT OF CEMENTOBLASTOMA ASSOCIATED WITH DENTOFACIAL DEFORMITY: REVIEW OF LITERATURE AND CASE REPORT

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : We present a case of benign cementoblastoma associated with the root apex of the third right upper third molar, involving the maxillary sinus in a patient with class II dentofacial deformity. The treatment chosen for an exact tumor in association with orthognathic surgery.

Method : A 22-year-old, female, normosystemic patient was undergoing follow-up at our department to perform orthognathic surgery and correction of dentofacial deformity. In its initial orthodontic documentation, a radiopaque, circumscribed image with well defined limits was observed, associated to the dental unit (UD) 18 included in the maxillary arch involving the maxillary right sinus. The procedure was the Lefort I maxillary osteotomy

for correction of the maxillary midline deviation and bilateral sagittal osteotomy of the mandibular branches for mandibular advancement.

Results : Cementoblastomas are rare benign odontogenic tumors originating from neoplastic cementoblasts. Our case becomes interesting and rare, since its location affects the maxillary sinus of a patient of 16 years, being this location of anatomical difficulty to perform the excision and consequent treatment.

Conclusion : Le Fort I osteotomy is a surgical technique that allows the treatment of lesions in the maxillary sinus region and, at the same time, the correction of the facial deformities, providing an adequate visibility allowing that with only one surgical procedure we can treat the pathology and return function and aesthetics to our patients.

SURVIVAL RATE OF DENTAL IMPLANTS PLACED AT THE SAME AND DELAYED MOMENT IN MAXILLARY SINUS LIFT SURGERIES

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Assess the dental implant (DI) survival rate and identify risk factors associated with early dental implant failure in implants placed at the moment and delayed in maxillary sinuses grafted in the Division of Oral and Maxillofacial surgery of Piracicaba Dental School - UNICAMP - Sao Paulo (Brazil) between January 2002 and January 2012.

Method : Data collected included: gender; age; smokers or nonsmokers; region involved; type of bone substitute material; use of collagen membrane; surgery protocol; prosthetic connection; implant diameter; implant length; intraoperative, early or late surgical complications and survival rate. Simple logistic regression analyses linear and non-linear were performed to evaluate the relationship between characteristic and the occurrence of dental implants early failure. Chi square, relative risks and odds ratio were also calculate

Results : In 65.58% of the cases, the delayed surgery protocol were performed, 4.55% of DI failed. On the other hand 34.42% of the implants has placed at the same moment of the sinus lift surgery and 2.6% of DI were failed. According to regression analysis the variables diameter ($P = 0.00125$), and surgical complication ($P < 0.00001$) were statistically associated with early dental implant failure. The survival rate was 92.85%

Conclusion : Surgical complications are involved in early dental implant failure placed in sinus lift reconstructed areas independent of surgical protocol applied

SUSCEPTIBILITY OF IRRADIATED PRIMARY TEETH TO THE CARIOGENIC CHALLENGE IN THE PRESENCE OF FLUORIDE

GABRIELA ROVAI PAVAN; LENITA MARANGONI LOPES; MARINÊS NOBRE DOS SANTOS UCHÔA
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To evaluate, in vitro, the association of fluoridated dentifrice (FD) and application of fluoride phosphate

acidulated (FPA) on the susceptibility of irradiated enamel to the cariogenic challenge.

Method : Demineralized deciduous enamel specimens were randomized in 08 groups ($n = 15$): (G1) Non-irradiated (NI) + Non-fluoridated Dentifrice (NFD); (G2) NI + FD; (G3) NI + NFD + FPA; (G4) NI + DF + FPA; (G5) Irradiated (I) + NFD; (G6) I + FD; (G7) I + NFD + FPA; (G8) I + DF + FPA. The specimens were submitted to de/remineralization cycling, and transversal microhardness analysis to calculate mineral loss (Delta S).

Results : The results were non-normal distribution according to the Shapiro-Wilk test, and were submitted to the Kruskal-Wallis test, followed by the Student-Neuman-Keuls test. Results: The G1 group obtained greater mineral loss than non-irradiated groups with application of FFA independent of dentifrice (G3 and G4). The G2 group also presented greater mineral loss than the group with combined therapy (G4). The G5 and G7 had greater mineral loss than groups G3 and G4. In addition, the G8 group had greater mineral loss than the G4 group. A dark area of the caries lesion in all treatment groups, a higher negative birefringence in the irradiated groups, and a presence of the remineralization line in groups G2, G3 and G4 were seen in the polarized light microscopy images.

Conclusion : The irradiation turned the primary teeth more susceptible to mineral loss. The use of fluoride was not sufficient to contain the mineral loss of primary teeth.

SWITCHING PLATFORM IN PATIENTS WITH CHRONIC PERIODONTITIS: A 2 YEARS RANDOMIZED TRIAL

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Chronic periodontitis may represent a greater risk of complications around implants, such as peri-implant marginal bone loss. The present randomized controlled trial of split-mouth, evaluate restored implant tissue with inferior diameter on platform switching in patients treated for chronic periodontitis.

Method : There were 19 patients who received implants with standard diameter prosthesis (control group) and platform switching implants (test group). Peri-implant clinical parameters were measured with 1, 3, 6, 12 and 24 months. The distance between a platform and a bone height were measured by radiographs with 6 and 24 months.

Results : There are no statistically significant in clinical parameters at study times between groups ($p > 0.05$). However, GC showed an increase in depth of probing at 24 months ($p < 0.05$). The analyses showed no difference between the groups for the radiographic parameter. However, in the test group we could observe increase in the distance of implant platform and the bone crest at 24 months ($p < 0.05$).

Conclusion : In conclusion, there was no difference in implants with diameters inferior to their prosthetic platform

compared to restored implants of the same diameter in patients with a history of chronic periodontal disease.

THE EFFECT OF TRICLOSAN ON SALIVARY MICROBIOTA IN CHILDREN FROM GENERALIZED AGGRESSIVE PERIODONTITIS PARENTS HENRIQUE TONELLI; RENATO CORRÊA VIANA CASARIN

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : A study was designed to evaluate the role of Triclosan in toothpaste in the control of periodontopathogens present in saliva in children belonging to families with a history of generalized aggressive periodontitis (GAP), comparing them with children whose parents are not included in History of periodontal disease.

Method : Were selected 18 children with parents with GAP, and 18 children with parents with periodontal health. A cross-over study, with a 21-day washout period, was conducted between therapies. Each child was included in a plaque control therapy with dentifrice containing triclosan and placebo, randomly allocated. The indices of plaque (IP), gingival (GI) and bleeding were probed (SS) in baseline and 3 months. A statistical analysis considered a $p < 0.05$.

Results : Children in the PAG group did not obtain the decreased amount of plaque, gingival bleeding and probing ($p > 0.05$) with the use of triclosan and placebo. In relation to the control group, there was reduction of IP with the use of triclosan and placebo, and SS with the use of triclosan.

Conclusion : It is concluded that the use of dentifrices with Triclosan is not able to improve clinical control groups in children who have parents with aggressive periodontitis, although children with healthy parents show additional benefits.

THE IMPACT OF THE INTERNET AND SOCIAL NETWORKS ON ORAL HEALTH EDUCATION IN TEENAGERS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Since the 1990s, with the popularization of the Internet in Brazil, it has become the main mean of communication and information among people, especially among the teenagers public due to the advent of social networks. The aim of this study was to discuss the impact of the Internet and social networks on oral health education in teenagers.

Method : It was a study carried out by means of a bibliographical survey.

Results : The internet today is used as a source of information for the most diverse types of research, but many question remain whether the information extracted is reliable. The impact of social network can be positive and / or negative, as it is necessary to confirm whether it is an opinion or information based on reliable sources. Knowing about the potentialities and risks of internet use (orthodontic appliance, tooth bleaching from Youtube, Instagram, Facebook). Considering the School, as a

source of knowledge, correct information and well-being of teenagers, it is the function of schools in association with dental professionals to promote correct information about oral health, in order to prevent future damages to oral health of teenagers due to missing or distorted information.

Conclusion : This new form of research that intensifies every day, is like having a library available at any time to extract information on any subject, but it is important to be attentive, because one must research enough to obtain good sources of information about oral health.

THE INFLUENCE OF THE CONTROL LOCUS AND SOCIOECONOMIC FACTORS ON THE CEO-D INDEX IN 5 YEARS OLD CHILDREN FROM AVARÉ-SP

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Aim : To investigate the role of socioeconomic factors and the Parous Control Loci in the caries's prevalence in 5 years students from Avaré, São Paulo State

Method : Cross-sectional design research (Protocol CEP 3711-2010). The KAPPA (> 0.87) test was used to assess the ceo-d index of 426 5 years students; the parents reported on sociodemographic characteristics using the methodology proposed by Meneghim and responded to the adapted Parental Control Loci (MHLC) questionnaires. For the data analysis, a binary logistic regression model was applied, having as outcome variable ceo-d > 5 and as explanatory variables the socioeconomic level and Control Loci.

Results : The results showed that 43.66% of the 5 years students presented caries, and the E-F classes contained 61.82% of this total. Higher socioeconomic factors and low externality were shown as protective factors.

Conclusion : It was concluded that low parental internality appeared as a caries risk factor in the children deciduous teeth, possibly because the parents delegate.

THE STUDY OF SEXUAL DIMORPHISM AND ANCESTRY OF OSTEOSCOPIC OSTEOLOGICAL AND TOMOGRAPHIC BIOBANK EDUARDO DARUGE

CRISTHIANE MARTINS SCHMIDT; VIVIANE ULBRICHT; EDUARDO DARUGE JUNIOR; MARIA JULIA ASSIS VICENTIN; FRANCISCO CARLOS GROppo; YULLI ANDREA LOPEZ QUINTERO; JOÃO SARMENTO NETO; LUIZ FRANCESQUINI JUNIOR PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The aim of this study was to develop the cranial, mandibular and first cervical vertebrae, parameters to determine sexual dimorphism in 200 bones, belonging to the Professor Dr.Eduardo Daruge Osteological and Tomographic Biobank.

Method : Craniometric measurements were performed using precision caliper and the data were recorded in a spreadsheet. The measurements Performed were: Zigomaxillary - Zigomaxillary, Length and width of foramen magnum, Nasion - basal, Bregma - Posterior nasal spine, Mastoid incision - Mastoid incision, Basion - Suture Zigomatotemporal (right and left), Mastoid incision

- Zigomaxillary (right and left); Mandibular measures: Gion - gion, Gnatio - Gonio (right and left) and Measures of the 1st cervical vertebra: Transversal diameter of the Raquidian canal, Anteroposterior diameter of the Raquidian canal.

Results : Statistical analysis was performed by the Kolmogorov-Smirnov and Levene tests, verifying homoscedasticity, and the unpaired T test was used to compare sex and ethnicity. The logistic regression (Foward Stepwise-Wald) was calculated to observe the degree of dependence of sex on the measurements, considering the male as "1" and the female as "0" for the purpose of the calculation to sex and skin color.

Conclusion : It was possible to determine a mathematical model for determining sex. On the other hand, the mathematical models for determining ancestry have produced little or no contribution to this study.

THE VALUE OF THE IMAGING EXAMS FOR THE TREATMENT OF ODONTOGENIC INFECTIONS

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The present study aims to present a series of clinical cases of patients with severe odontogenic infections, emphasizing relevant aspects of the imaging diagnosis and its importance in the definition of treatment and monitoring of the condition.

Method : Odontogenic infections are important for the clinical practice of dentistry, because of their high incidence and the risk of fatal complications. Infections can range from localized and require conservative treatment, assisted in a clinic, to highly complex infections requiring multidisciplinary treatm

Results : These complications include orbital involvement, damage the airways and development of necrotizing fasciitis in the patients. Due to the anatomical characteristics of the region, these infections can still spread rapidly and involve vital structures, which can lead to death of the patient.

Conclusion : For a better evaluation of the case, a detailed anamnesis, a rigorous physical examination and the request for complementary examinations are indispensable. Imaging exams, for example, not only aid in diagnosis, but also guide and define the surgery approach in cases of complex infections.

TRANSCRIPTOMIC PROFILE OF HUMAN PERIODONTAL LIGAMENT CELL CLONES IN OSTEOBLASTIC/CEMENTOBLASTIC DIFFERENTIATION

CATHARINA MARQUES SACRAMENTO; MIKI TAKETOMI SAITO; LUCIANA MOFATTO; MARCIO ZAFALLON CASATI; ENILSON ANTONIO SALLUM; FRANCISCO HUMBERTO NOCITI JR; KARINA GONZALES SILVÉRIO RUIZ

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Currently the investigation of periodontal tissue formation has gained prominence to develop new therapies to repair the damage caused by Periodontitis

and to return not only health but also lost structures. It is already known that remnant cells of the periodontal ligament may present phenotype similar to those of undifferentiated mesenchymal cells. However, the understanding of commitment of periodontal ligament cells to form different tissues still not been fully elucidated.

Method : To better define the gene expression in differentiating periodontal cells, here we compared the transcriptomic profile of primary pluripotent cell clones committed to osteoblastic/cementoblastic differentiation (C-O clones) and clones committed to fibroblastic phenotype (C-F clones) using next-generation sequencing technology (RNA-seq) when cultivated under osteogenic differentiation induction condition (OM) in vitro.

Results : The genes BMP4, WNT2, WNT5A and WIF1 showed to be differentially expressed between periodontal ligament clones with distinct differentiation commitment potential. The up-regulation of genes related to mesenchymal cell differentiation, regulation of osteoblast differentiation, regulation of ossification, mesenchyme development and vasculature development were significantly overrepresented in C-O clones compared to C-F clones.

Conclusion : Therefore, biological processes related to mineralization and mesenchymal differentiation are significantly more expressed in clones with greater potential for osteo/cementoblastic differentiation.

TWO DIFFERENT TREATMENTS FOR NECROTIC TRAUMATIZED INCISORS WITH IMMATURE APEX: A CASE REPORT

PABLA SECCHI; ANA CAROLINA L LAURINDO ITIKAWA; MARIA EUNICE S DAVIDIAN; GUILHERME N ITIKAWA; MARINA CARVALHO PRADO; BRENDA PAULA FIGUEIREDO DE ALMEIDA GOMES; JOSÉ FLÁVIO AFFONSO DE ALMEIDA; ADRIANA DE JESUS SOARES

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The purpose of this study was to describe a dental trauma case report involving the maxillary central incisors of one patient, in which different treatments were performed.

Method : A 21-years-old-female patient was referred to the Dental Trauma Care Service of FOP-UNICAMP due to a fall that had occurred 12 years previously. After anamnesis and clinical, radiographic and cone beam computed tomography (CBCT) exams, it was possible to observe in the maxillary central incisors: incomplete apex, tooth discoloration, enamel fracture, tenderness to percussion, absence of response to vitality test and palpation, and presence of sinus tract associated with tooth 21. The diagnosis of lateral luxation and pulp necrosis was established. Both incisors were subjected to passive disinfection with 2% chlorhexidine gel and 30/10 ProDesign S file. Then, apexification in single session was performed in tooth 11 using a paste of calcium hydroxide, 2% chlorhexidine gel and zinc oxide. In tooth 21, it was applied calcium hydroxide with 2% chlorhexidine gel as intracanal medication. After 21 days, a blood clot was stimulated in tooth 21 by exceeding a manual file through the apical foramen. Above bleeding, it was applied:

collagen matrix, MTA, coltosol and tooth restoration with composite resin. Following this, clinical and radiographic exams were performed in each 4 months. CBCT analysis was also performed after 12 and 18 months.

Results : It was possible to observe remission of signs and symptoms, apical closure and thickening of root walls.

Conclusion : It was concluded that both treatments for necrotic traumatized teeth with immature apex permits favorable outcomes.

USE OF DESENSITIZING DENTIFRICE ON THE REDUCTION OF PAIN SENSITIVITY CAUSED BY HOME DENTAL WHITENING

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : The objective of this study was to evaluate clinically the use of desensitizing dentifrice, applied through a plastic tray, in the reduction of pain and color variation caused by the technique of home dental whitening - double controlled clinical study.

Method : For the study, 24 volunteers who were submitted to home dental whitening were selected for 4 weeks (28 days), using whitening gel (carbamide peroxide - 16%) in a plastic tray for 4 hours daily. After each application of the whitening gel in the tray, the volunteers used the same plastic tray for 4 hours containing one of the dentifrices relative to the experimental groups: (1) Sucralose (S); (2) Sodium Phosphate (FS) and Calcium Silicate (SC) (NR-5 Technology). The pain was evaluated before to use of the plastic tray with dentifrice (S1, S3, S5, S7) and after (S2, S4, S6, S8) for 4 weeks using the analogue numerical scale with scores from 0 to 10. For Color variation (ΔE) was used spectrophotometer (Easysshade).

Results : The FS and SC groups presented pain reduction in relation to the other groups ($p < 0.05$). There was a reduction of pain after the use of the dentifrice tray (S2, S4, S6, S8) for 4h and there was no difference for ΔE between the experimental groups after whitening treatment ($p = 0.91$).

Conclusion : In conclusion, the use of desensitizing dentifrice with FS and SC (NR-5 Technology) in plastic tray was efficient in the reduction of pain without to change the color of the teeth during home dental whitening.

USE OF DESENSITIZING DENTIFRICE ON THE REDUCTION OF PAIN SENSITIVITY CAUSED BY IN-OFFICE DENTAL WHITENING

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PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : In this controlled double blind clinical study was evaluated the use of desensitizing dentifrice, applied through a plastic tray, in the reduction of pain and color

variation caused in-office dental whitening.

Method : Twenty four volunteers underwent in-office dental whitening in three clinical sessions. On the night of each whitening session, the volunteers used a plastic tray for 4 hours containing one of the dentifrices: Sucralose (S); Sodium Phosphate (FS) and Calcium Silicate (SC) (Regenerate - Technology NR-5). The pain was evaluated before and after each of the three whitening sessions (S1; S2; S3; S4; S5; S6) using an analog numerical scale with scores from 0 to 10 to evaluate the action of each dentifrice used in the tray. To evaluate the color variation (ΔE) the spectrophotometer (Easysshade) was used

Results : The FS and SC groups showed a reduction in sensitivity in relation to the other groups ($p < 0.05$). There was a reduction of pain after the use of the dentifrice tray (S2, S4, S6) and there was no statistical difference for ΔE between the experimental groups after whitening treatment ($p = 0.71$).

Conclusion : In summary, the use of desensitizing dentifrice with FS and SC (NR-5 Technology) in plastic tray was efficient in the reduction of pain without to decrease the efficiency of in-office dental whitening.

USE OF FREE FIBULA GRAFT IN MANDIBULAR RECONSTRUCTIONS: LITERATURE REVIEW AND CASE REPORTS

LUIDE MICHAEL RODRIGUES FRANÇA MARINHO; ANDRÉS CÁCERES-BARRENO; GUSTAVO ALMEIDA SOUZA; MARCIO DE MORAES
PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : Mandibular reconstruction aims at the structural, functional and aesthetic rehabilitation of patients with pathologies, submitted to surgical resections, or victims of ablative traumas. Any patient who has a segmental mandible defect and who has good systemic health can be submitted to mandibular reconstruction

Method : The study will consist a literature review of the use of free fibula graft in mandibular reconstructions, abording the clinical aspects about this modality of graft, indications, surgical technique and success factors for this type of rehabilitation. After this, a clinical cases performed by oral and maxillofacial surgeons of Piracicaba Dental School will be shown, demonstrating the applicability of fibula graft.

Results : Patients submitted to mandibular resection and who were rehabilitated with a fibular free graft were successful in their rehabilitation, with bone available and sufficient for rehabilitation. It was observed that the bone loss was lower, compared to some types of bone graft, like a cancellous bone.

Conclusion : We can observe that the free fibular graft, when well indicated, obtains high success rates, providing a good amount of bone for posterior rehabilitation with dental implants and returning facial contour after segmental resection of the mandible.

USE OF GUIDED SURGERY IN REHABILITATION WITH IMPLANTS IN A PATIENT WITH GENERALIZED AGGRESSIVE PERIODONTITIS

THAYANE CERQUIARE BUSINARI; MABELLE DE FREITAS MONTEIRO; FLÁVIO HENRIQUE BAGGIO

AGUIAR; LAURA NOBRE FERRAZ ; THIAGO OZI BUENO; RENATO CÔRREA VIANA CASARIN; KARINA GONZALES SILVEIRO RUIZ; MARCIO ZAFFALON CASATI

PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : This case report describes the clinical protocol of a guided implant surgery in a patient with severe bone loss and diagnosis of generalized aggressive periodontitis.

Method : Due to the severe bone loss, it was decided to use guided implant surgery and the placement of 6 implants in the maxilla. The patient was molded with addition silicone and referred for tomography of the maxilla and the mold. The tomographic exam allowed the planning of the ideal number and position of the implants and the preparation of the prototype surgical guide. We opted for the maintenance of teeth 17 and 27 to assist in the fixation of the surgical guide. The guide was fixed in the maxilla and it guided the drilling for implant placement. The implants were installed and the abutments placed in position. Then, the patient was molded in the same day of surgery and the mold was sent to the prosthetist to make the prosthesis. After two days, the patient received rehabilitation with the protocol prosthesis.

Results : The patient is under follow-up and presented, after oral rehabilitation, an esthetic and functional satisfaction.

Conclusion : It was concluded that guided surgery is a viable and predictable alternative to assist in rehabilitation with dental implants.

USE OF INTRA-ALVEOLAR SPACE MAINTAINER IN PEDIATRIC DENTISTRY

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Aim : Space maintainers are auxiliary orthodontic appliances used when there is a need to preserve the perimeter of the dental arch. It is important to preserve the perimeter of the dental arch after premature extraction of deciduous teeth, to avoid changes in occlusion in the development of the permanent dentition. Usually, the main etiological factors of early losses are associated with tooth decay, dentoalveolar trauma and anomalies. In this case report, the use of intra-alveolar orthodontic appliance "Distal Shoe" type was done in a child patient who had some losses in the deciduous dentition.

Method : The patient "A. S.", four years old, male, attended the CESMAC Children's Dentistry Clinic, for dental treatment because he had painful symptomatology. At clinical examination, early losses in various dental elements were diagnosed including the left deciduous second molar. As the moment for eruption of the first permanent molar (36) would only occur around 6 years, it was chosen to use a "distal shoe" space maintainer.

Results : This is an orthodontic device attached to the first deciduous molar that extends distally and intragengivally to the mesial surface of the first non-erupted permanent molar. During its installation, surgical exposure of the mesial surface of the tooth 36 was performed with the

purpose of better adaptation of the device.

Conclusion : Currently, the patient is in clinical follow-up, with the arch perimeter space preserved for the eruption of the second lower left premolar.

USING OF ACUPUNCTURE IN BRUXISM TREATMENT

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Aim : Bruxism is considered a common pathology in modern man. Its etiology is multifactorial and complex. From the Tradicional Chinese Medicine (TCM) perspective, teeth grinding can be treated quite effectively using acupuncture, which improves bruxism by helping to correct the functioning of imbalanced meridians. Acupuncture points are selected along the energetic trajectory of the meridians. The aim is to present the clinical case of bruxism treated with acupuncture.

Method : The study was approved by the Research Ethics Committee of Piracicaba Dental School (FOP_UNICAMP), under protocol 099/2008. A 19-year-old, 60 Kg, 1,76m tall, male patient that had as main complaint waking up during the night grinding teeth, which caused bilateral TMJ pain and sensitive teeth, mainly during the hot weather and chronic biting of oral mucosa, symptoms that had started approximately two years ago. Patient's tongue was trembling and presented a thin layer of white coating. The tongue could not come out of the mouth completely. There were 4 acupuncture sessions, lasting 20 minutes each, at the acupoints HT7, PC6, SI3, GB20+TE23, besides auriculotherapy at the shenmen, neurasthenia, anxiety, heart, lower jaw and upper jaw points.

Results : After only one session patient related being more relaxed and not waking up during the night. At the third session patient's tongue could come out of the mouth completely and he did not feel pain in the TMJ during sleep.

Conclusion : It can be inferred that acupuncture was effective in improving the bruxism and reducing pain in the TMJ.

USING OF ACUPUNCTURE IN PATIENT WITH TEMPOROMANDIBULAR DISORDERS - CLINICAL CASE REPORT

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Aim : There are several studies that demonstrate the effectiveness of acupuncture in the treatment of musculoskeletal pain, including Temporomandibular Disorders (TMD). In addition, acupuncture is believed to promote an improvement in the immune system and reduce levels of stress and anxiety. The objective of this report is to present a clinical case of a 42-years-old caucasian male patient with TMD associated with anxiety and stress, treated with acupuncture. The study was approved by the Research Ethics Committee of Piracicaba

Dental Scholl (FOP-UNICAMP), under protocol 099/2008. The patient complained of severe pain in the facial muscles, "feeling that the face will split in half", due to muscle contractions and spasms. He reported having Toxoplasmosis, with intense vision impairment, anxiety and nervousness.

Method : He received 8 sessions of Traditional Chinese Acupuncture with lasting 20 minutes each. The acupoints used were: HT7/ PC6/ SI3/ TE23/ GB20/ SI19/ ST5/ ST6/ Yin Tang (Ex-HN-3)/ BL60/ KI3/ LR2/ TE17

Results : The facial pain was evaluated by a Visual Analog Scale (VAS) ranging from 0 to 10. The initial pain (VAS=9) decreased after the first session (VAS=7) and throughout the 8 sessions the pain was completely reduced (VAS=0). The other symptoms reported, anxiety, stress, and nervousness, were also declining in intensity.

Conclusion : According to the results, the acupuncture treatment contributed to the improvement of the emotional factor and to reduce pain in patient with TMD

VALIDATION OF REPORTED GLT6D1 (RS1537415), IL10 (RS6667202), AND ANRIL (RS1333048) FOR AGGRESSIVE PERIODONTITIS

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Aim : Aggressive periodontitis (AgP) is influenced by genetic factors. Recently, the single nucleotide polymorphisms (SNPs) rs1537415 (GLT6D1), rs6667202 (IL10), and rs1333048 (ANRIL) were associated with AgP in different European populations. However, these specific SNPs have not yet been determined in Brazilians. Therefore, this study investigated whether these previously reported associations could be replicated among Brazilians.

Method : The frequency of the SNPs rs1537415, rs6667202, and rs1333048 were analyzed by TaqMan assays in 200 AgP and 202 healthy subjects (H). Differences in allele and genotype frequencies were analyzed using chi-square tests and stepwise logistic regression.

Results : SNP rs6667202 (IL10) was associated with AgP. The rare C allele was less frequently detected in subjects with AgP when compared to H subjects (23,5%, 34,5%, respectively, $p = 0,0063$), making the SNP protective against disease occurrence. Moreover, the final logistic model for AgP diagnosis included gender ($p=0.003$), and IL10 polymorphism ($p<0.001$) as significant variables. The SNPs rs1537415 in GLT6D1 and rs1333048 in ANRIL did not show associations with AgP.

Conclusion : SNP rs6667202 (IL10) was associated with AgP in a Brazilian population. The rare C allele was less frequently detected in AgP subjects than in H subjects; therefore, this SNP is protective against AgP.

VARIABILITY AND COMPLEXITY ABOUT TREATMENT OF FRONTAL BONE FRACTURES:

LITERATURE REVIEW AND CASE REPORT VITOR JOSÉ DA FONSECA; CAROLINA SANTOS VENTURA DE SOUZA ERICK ANDRES ALPACA ZEVALLOS; ALEXSANDER TADEU SVERZUT PIRACICABA DENTAL SCHOOL - UNICAMP

Aim : To present and discuss, according to current literature, incidence of frontal bone fractures, as well as etiology and trauma variability. To present an illustrative case report, discussing the complexity of treatment.

Method : A review of the current literature on the Pubmed database was fulfilled to evaluate causes and innovations about treatment of the type of lesion presenting in the case report.

Results : The etiology of frontal bone trauma more frequently found in the epidemiological studies selected was the automobile accident. Regarding trauma variability, several reports of fractures comminuted or not, associated or not, with fractures of other facial bones were found. The authors describe several treatment modalities, such as the use of miniplates and screws, the use of titanium meshes, autogenous bone grafts, the use of surgical guides made of methyl methacrylate for comminuted fractures or sequels. In this case, miniplates and screws were used, in addition to titanium meshes, which provide good aesthetic and functional restoration of the patient. The patient is satisfied and has no complaints.

Conclusion : Surgical treatment of frontal bone fractures is often a challenge for bucco-maxillofacial surgeons and the knowledge of effective techniques and the use of a correct sequence of surgical procedures is related to the success of the treatment.

VARIABLES ASSOCIATED WITH SELF-PERCEPTION OF ORAL HEALTH BY ADOLESCENTS

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Aim : The aim of this study was to evaluate, through an observational cross - sectional study, the associations between self-perception of oral of adolescents and their psychosocial characteristics.

Method : 200 adolescents aged 14-18 years old of both sexes from 5 high school public schools in the city of Piracicaba, SP, participated in the study. Questionnaires about sociodemographic characteristics (gender, age, housing, etc.) and self-perception of income were applied in classroom. Data analysis was performed using descriptive statistics, chi-square test and univariate logistic regressions.

Results : The delay in seeking dental treatment, the treatment performed by dentist, the contentment of adolescents with their teeth, as well their sociodemographic characteristics were associated with the self-perception of oral health by adolescents

Conclusion : Intersectoral policies should be developed to improve student self-perception of their oral health.

VIOLET LED BLEACHING WITH OR WITHOUT HYDROGEN PEROXIDE

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Aim : This clinic case report aims to evaluate the bleaching efficacy and dental sensitivity when the bleaching was performed through a LED system called (Bright Max Whitening, MMO) (BMW-MMO), with and without Hydrogen Peroxide (HP).

Method : For this, two clinical cases were done: in the first case the bleaching was performed using HP 35% (Whitess Max HP , FGM) and the BMW-MMO equipment, in two clinical sessions; in the second case the bleaching was performed using only the BMW-MMO equipment in three clinical sessions; Both with three 10-minute cycles. Between each cycle the mucosa and the teeth passed through moistened gauze hydration and the time between each clinical session was 7 days. The color of the teeth was evaluated with the Vitapan Classic scale.

Results : In the first case, the color change was from A1 to B1 in the upper and lower central incisors, from A2 to B1 in the upper canines and from A2 to A1 in the lower canines, and the patient reported dental sensitivity in both sessions. In the second case, the color change was of half tone in the upper and lower incisors, and the upper and lower canines remained in the same tone, being A3.5 for the upper and A4 for the lower ones, and the patient did not report sensitivity.

Conclusion : Therefore, it can be concluded that bleaching with hydrogen peroxide activated for violet LED was effective to color change, even though caused sensitivity. The gel-free bleaching with BMW-MMO equipment alone was not effective in relation to color change and a HP-based bleaching gel was required to obtain an effective bleaching.