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001 3D ANALYSIS OF TEMPOROMANDIBULAR JOINT BONE STRUCTURES: EVALUATION IN INDIVIDUALS WITH DIFFERENT DENTAL CONDITIONS

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Aim: To evaluate the volume of bone structures of the temporomandibular joint in individuals with posterior dental loss. **Methods:** We used 150 TC cone-beam of adult individuals of both sexes. The distribution of CT scans by groups was determined by the individual dental situation regarding the presence / absence of posterior teeth. We used the Mimics v.17 software to segmented the bone structures of interest. In this software, we obtained the volume (in mm3) by voxel counting the bone components of the temporomandibular joint previously reconstructed three-dimensionally. The data were submitted to the Kruskal-Wallis test, considering a 5% significance level. **Results:** The articular eminence showed higher volume (P<0.05) in dentate and mandibular bilateral edentulous than in the other groups. The volume of the mandibular condyle of the mandibular unilateral edentulous was higher than all other groups (P<0.05). The mandibular fossa showed heterogeneous according to the groups. **Conclusion(s):** The absence of further unilateral mandibular teeth causes bone remodeling in the articular eminence and mandibular condyle. The volume of the articular eminence reduces when mandibular condyle increases in individuals with no mandibular posterior teeth unilaterally.

002 3D TRABECULAR BONE ANALYSIS OF MANDIBULAR CONDYLE IN RATS WITH DENTAL OCCLUSAL CHANGE.

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Aim: To assess the 3D trabecular bone parameters in mandibular condyle of adult rats with dental posterior occlusal change. **Methods:** we evaluated 4 groups of animals (n = 5) according to 7, 14, 21, and 28 days after application of the resin (unilateral application, in right side, with 1 mm of thickness in oclusal surface of upper molars). The control group presented the teeth without occlusal change. After euthanasia, we performed the micro-CT scan of the mandibular condyles of the rats. We performed the analysis of 3D trabecular bone parameters in CT-Analyzer software. For statistical analysis, the Kruskal-Wallis and Dunn (post hoc) tests were performed, considering α=0.05. **Results:** we verified that trabecular thickness had decreased on the 7th day, decreasing until day 21, and on the 28th day, the results did not show statistically significant differences (Kruskal-Wallis test, p <0.05) with the control. The number of trabeculae increased in 7 and 14 days, decreasing to levels similar to the control on day 21 and increasing in 28 days. The trabecular separation decreased on the 7th day compared to the control and tended to remain less than the control in the following periods. **Conclusion(s):** The 3D trabecular bone parameters showed numerous trabeculae and less space, but thinner, indicating loss of bone mass.

003 ANATOMICAL MODELS FOR LEARNING DENTAL ANATOMY

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Aim: The primary objective of dental anatomy course in the Dental School is to develop in students cognitive and psychomotor skills related to tooth morphology and spatial and functional relationships of the human dentition. **Methods:** Traditionally educational content is found in textbooks and course manuals or offered in a few lectures. Psychomotor skills associated with the recognition and reproduction of tooth morphology are not developed at this stage, there is only the examination of preserved tooth specimes, combined with the manufacturing drawings and the progressive teeth in wax sculpture. These activities are not enough to fix concepts about the function of certain anatomical structures for the dental practice. In most cases, students are passive in the learning process and assessment of student performance is insufficient. The purpose of this study was build macro models of teeth in plaster to facilitate observation and understanding of the anatomical concepts of permanent teeth. **Conclusion(s):** The handling macro models with frames highlighted and emphasizing their masticatory functions become learning more efficient and its clinical application more evident. After use macro models to teach dental anatomy was made pre-post comparison of learning outcomes for three class cohorts (N = 236).

004 DURATION OF CHEWING ACT AND CYCLE BEFORE AND AFTER ORTHOGNATHIC SURGERY: ANALYSIS CHEW OF A CRACKER AND A LATEX RUBBER

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Aim: To analyze the duration of the chewing act and cycle in individuals with dentofacial deformity submitted to orthognathic surgery. **Methods:** The research was approved by the Research Ethics Committee of Piracicaba Dental School (process 074/2012). This is an observational longitudinal study with 24 individuals evaluated before, three and six months after it by surface electromyography of the masseter and temporalis muscles bilaterally. It was analyzed the act and cycle duration (AD, CD) of chewing during habitual and unilateral chewing of a latex rubber piece and a cracker (2 cm). Friedman and Dunn tests was used with significance level of 5%. **Results:** After surgery the CD during the habitual chewing was significantly lower than for all muscles (p<0.05) and AD was significantly lower for right masseter (p=0.01) and temporal (p=0.01). After surgery, the left masseter showed shorter cycle (p=0.02) during left unilateral chewing and AD was longer for all muscles (p<0.05). For right unilateral chewing AD was significantly longer after surgery for right masseter (p=0.01), temporal (p=0.02) and left temporal (p=0.03). There was no difference in CD with cracker, but AD after surgery was significantly lower for left masseter and temporal (p<0.01). **Conclusion(s):** The decrease in the duration of chewing infers that individuals chewed more quickly, due to the adequacy of occlusal contact in the postoperative period, which improved the masticatory function. The divergence between AD and unilateral chewing be attributed to the no habitual pattern with the movements are slower. Keywords: Mastication, Malocclusion, Electromyography.

005 EVALUATION OF STRESS ON DIFFERENT DENSITIES OF BONE STRUCTURE IN SIMULATION OF REVERSE TORQUE ON IMPLANT MORSE TAPER

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Aim: This work evaluated the mechanical stress in bone structure characterized by different densities after simulation of reverse torque force on implant morse taper, using finite element analysis. **Methods:** Bone structure and the implant geometries were constructed using Rhinoceros 3D 5.0 software. We constructed 3 different densities of bone structure: D1, D2 and D4. The finite element analysis was performed using ANSYS program v14, in which was simulated a reverse torque load with 50N. Equivalent von Mises stress was evaluated. **Results:** The stress intensity increases gradually by the decrease of cortical bone thickness and the cancellous bone porosity. In the apical regions of implant, the internal structure presented more intensity of stress, in special in D4 bone density. **Conclusion(s):** The bone structure D4 showed higher stress near to the surface, compared to D1 and D2 density of bone, suggesting that bone D4 have lower resistance to reverse torque.

006 EVALUATION OF THE INFLUENCE OF THE POSITION OF PARAFILM ON CO-CONTRACTION OF THE MASTICATORY MUSCLE

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The co-contraction is defined as simultaneous contraction of two or more antagonistic muscles around a joint and can be evaluated through of the electromyography (EMG). The periodontal mechanoreceptors may influence the degree of contraction of the masticatory muscles and suprahyoid. **Aim:** The aim of this study was to evaluate the influence of parafilm position in the co-contraction of the elevator and depressor of the jaw muscles. **Methods:** Participated in this study one woman with 45 year without dental flaws and without TMD. The electrodes were placed in the masseter and temporalis muscles on both sides, and suprahyoid. The EMG signal was recorded during the isometric contraction of the elevator muscles of the jaw in the rest position, parafilm between the molars (M), parafilm between the premolars (PM), parafilm between the anterior teeth (A), parafilm between M, PM and canines (C) and intercuspation maximum (ICM). The EMG values were expressed in root mean square (RMS). **Results:** The results showed a higher degree of the co-contraction in according with of the parafilm will moving on and higher co-contraction in ICM when compared with isometrics with parafilm in M, PM and C. **Conclusion(s):** It can be concluded that the EMG activity of the muscles responds according to the position of the occlusal load when measured in isometrics, due the protective function of previous periodontal receptors and of the ATM receptors on increasing the resistence of the lever arm.

007 HISTOLOGICAL AND IMMUNOHISTOCHEMICAL EVALUATION OF ALVEOLAR BONE AFTER REMOVAL DENTAL IMPLANTS

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The removal and reinstallation of dental implants has been a viable alternative to resolve complication on oral rehabilitation. **Aim:** This study ivestigated histological and immunohistochemically the alveolar bones after dental implants remotion. **Methods:** Eighteen alveolar bones of 6-month –old mini pigs were divided in two groups: immediate post-dental implants remotion (IR) and 6-months post-dental implants remotion (SR). All dental implants remotion were made by a retriever tool, following an atraumatic protocol. Immediately after controlled time of each group, animals were euthanized and the experimental alveolar bone of the jaw were collected and used to analyze alveolar bone morphology, apposition and resorption based on immunohistochemistry (osteocalcin) and hematoxylin and eosin stained histological sections of 30 µm. **Results:** Preliminary results presented to the IR group, inflammatory process with mast cells, fibroblasts and macrophages in the connective tissue, dispersed collagen fibers and elastic fibers. Bone structure was not damaged. The SR group alveolar bone presented natural structure, without inflammatory process and secondary bone (mature) well defined. **Conclusion(s):** The immediate implants remotion do not cause significant damage on the peri-implant bone, allowing a new implant installation on the same session.

008 IMPORTANCE OF DENTAL OCCLUSAL ANATOMY IN FORENSIC DENTISTRY: A CASE REPORT

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Aim: To show the importance of occlusal dental anatomy in the human identification process in Forensic Dentistry. **Methods:** Case Report - the forensic dentistry experts asked for the alleged victim´s family, any medical and dental materials to be present in the same residence. The family sent a box containing an occlusal splint white color and the indication of a dental surgeon who treated the alleged victim, and had the dental records in question. The occlusal splint was evaluated and the forensic dentistry experts found a dental anatomy similarity with the maxillary arch. **Conclusion(s):** According to the details recorded in the dental record, observations guided the teeth, the coincidence between them and the bite plate of the display; these characteristics allow us to state that there was coincidence between the maxillary arch of alleged victim and the occlusal splint.

009 INFLUENCE OF ORTHOTROPIC CORTICAL BONE IN FINITE ELEMENT ANALYSIS: SIMULATION OF THE MANDIBULAR ANGLE TRAUMA

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Aim: To assess the influence of the orthotropic cortical bone on stress generated by mechanical trauma in mandibular angle of the human mandible by finite element analysis. **Methods:** A tomographic image of a dry human dentate mandible had the bone structure and teeth selected and defined in Mimics v.17 software. In Rhinoceros 3D 5.0 software was obtained the geometry of the teeth, compact (with specific settings of their thickness in each region of the mandible), and cancellous bone. The finite element model was constructed in Ansys v14 software. The cancellous bone and teeth were considered isotropic. The compact bone was considered orthotropic. A load magnitude of 980N was simulated to the mandibular angle. The results were analyzed according to von Mises stresses. **Results:** The orthotropicity in mandibular compact bone structure associated to traumatic force caused a large stress concentration occupying mandibular body, from the level of the first premolar to the mandibular ramus. On the lateral view, the magnitude of the von Mises stress varied from 22.318MPa to 41.168MPa. In the mandibular ramus, laterally, occurred most stress concentration in a range from the mandibular angle to the condylar process with magnitude ranging from 41.168MPa to 90.28MPa. On the medial view, concentration occurred with the same magnitude, but with a larger area. **Conclusion(s):** The mandibular compact bone with orthotropic material assignment presented more defined stress areas. In this situation, the traumatic force in the mandibular angle resulted in major stress values at the lateral and medial view of mandibular body and mandibular ramus.

010 MORPHOLOGICAL CHANGES IN THE MANDIBULAR FOSSA CAUSED BY DENTAL CONDITIONS

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Aim: TMJ structures as condyle, disc, ligaments and mandibular fossa are submitted to constant remodeling due to mechanical load between the TMJ's osseous structures (Moffett et al., 1964; Yamada et al., 2004). Bruxism, dental clenching and total or partial edentulism seems to be correlated with changes in the morphology of the mandibular fossa. **Methods:** Correlation between mandibular fossa depth, dental condition and age was evaluated in 80 human adult dry skulls. The measurements of depth and anteroposterior and lateral distances were taken with a digital caliper. All samples were classified according to age and dental state (dentate, partially dentate and totally edentulous) and a multivariate analysis was employed. Data were submitted to variance analysis (ANOVA and Tukey) and presented differences on the depth of mandibular fossa between sexes. The mandibular fossa also was deeper in partially dentate individuals who edentulous or dentate individuals. The width and depth of mandibular fossa did not present difference, regardless of the dental condition. **Conclusion(s):** Although masticatory stress is not transferred for all articular surface of mandibular fossa, the imbalance caused by the presence or absence of teeth causes remodeling of the mandibular fossa by decreasing of tension in the mandible condyle surface as well as in the mandibular fossa.

011 STRESS DISTRIBUTION ON FIXED IMPLANT-SUPPORTED PROSTHESIS PILAR BY THE FINITE ELEMENT METHOD.

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Aim: The development of implant dentistry has enabled the advancement and success in oral rehabilitation with fixed implant-supported prosthesis, however there are still limitations in clinical analyses, due to the difficulty of analyzing positioned implants as the forces exerted on them.Therefore, it is necessary analyses with experimental models to know and quantify the actions of forces on these structures, the tension transmitted to the bone near the implant and the minimum safe implants so there is a favorable prognosis and especially to decrease rehabilitation costs, thus, we are going to use the Finite Element Method for the analysis. **Methods:** Through a CT scan of a 35-year-old toothless male cadaver jaw, two geometric models will be created and then will be done the analysis program loading with information related to the material properties applied to construct these structures. Then will be divided into a finite number of elements that we call modeling SolidWorks. Subsequently, the structures will be subjected to static analyses, linear and non-linear using ANSYS program, the analyses will be qualitative and quantitative.All the analyses will be performedconsidering the von Mises tension for metallic materials. The data will be numerically produced, color-coded and compared to models with 4 and 3 implants. **Conclusion(s):** It is expected that the model with four implants have a better dissipation of tension forces, but that the results obtained in the model with 3 implants are also suitable for rehabilitation with a fixed prosthesis, and increasing the rigidity of the bar also increase the tension values.

012 STUDY OF MECHANICAL RESPONSE OF MANDIBULAR NECK IN SIMULATION OF TRAUMA ON HUMAN MANDIBLE – A FINITE ELEMENT ANALYSIS

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Aim: To analyze and compare the stress distributed to mandibular neck by traumatic force on mentual region of the human dentate and edentate mandibles by finite element analysis. **Methods:** A tomographic image of two dry human mandible, one dentate and another edentate, had the bone structure and teeth (for dentate) selected and defined in Mimics v.17 software. In Rhinoceros 3D 5.0 software was obtained two geometry, one for each mandible. The finite element models were constructed in Ansys v14 software. The compact and cancellous bone and teeth were considered isotropic. We performed two simulations, one for each geometry. A load magnitude of 980N was applied perpendicular to the mentual region. The results were analyzed according to von Mises stresses. **Results:** We verified a bone response in mandibular body toward the posterior and inferior directions, both dentate and edentate mandibles. Thus, the energy dissipation from the impact region, which was calculated through von Mises stress distribution, presented similar behavior in the two cases. The mandibular neck was highly stressed in comparison to others region in mandible. In both mandibles, the high values of stress located at anterior, lateral and posterior faces of mandibular neck. The dentate mandible presented high stress values with minor area. On the other hand, the edentate mandible presented major stress areas with less stress values than dentate mandible. **Conclusion(s):** We verified that major weakness of elderly edentate mandible in comparison to dentate mandible after the action of traumatic force in mentual region.

013 USE OF VIRTUAL MODELS IN DENTAL ANATOMY CLASSES

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Aim: This work used virtual models for dental anatomy classes. **Methods:** The upper central incisor virtual geometry was constructed using the Rhinoceros 3D 5.0 software. The models were applied in during theorical dental anatomy teaching for undergraduate students in Dentistry course. **Results:** The introduction of digital tools allowed the three-dimensional understanding of the anatomical structures of teeth for Dentistry students. **Conclusion(s):** This study showed a new approach for teaching in dental anatomy.

014 USING DIFFERENT GEOMETRICAL BONE DENSITIES IN FINITE ELEMENT METHOD: SIMULATION OF REVERSE TORQUE ON EXTERNAL HEXA IMPL.

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Aim: This work evaluated the mechanical stress in bone structure, which was characterized by different densities after simulation of application of reverse torque force on external hexagon implant through finite element analysis. **Methods:** We constructed three different densities of bone structure, based on its geometry using the Rhinoceros 3D 5.0 software. The finite element analysis was performed using ANSYS v14 software. We simulated a reverse torque load with 50N of magnitude. The von Mises stress was calculated for analysis of results. **Results:** The bone type D1 showed less stress near to the surface, in which compared to D2 and D4 density of bone. **Conclusion(s):** The external hexagon implant transferred more load to bone structure from reverse-torque, according the changes in bone density.

015 APPLICABILITY OF AN IN SITU MODEL TO EVALUATE ANTI-CARIES EFFECT OF FLUORIDE MOUTHRINSES

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Aim: Among caries in situ models, the "Piracicaba in situ model" has been used to evaluate the cariogenic potential of carbohydrates, dental biofilm composition and different methods of fluoride (F) use. However, the applicability of this model to evaluate the effect of F mouthrinses on enamel de- and remineralization has not yet been evaluated. **Methods:** A, double-blind, crossover, in situ study, was conducted. Ten volunteers wore a palatal appliance containing 8 bovine enamel slabs (4 sound and 4 carious), with known surface hardness. They were exposed to 20% sucrose solution (8 or 3 times a day), to assess enamel de- and remineralization, respectively. The mouthrinses (0, 250 and 1000 ppm F as NaF) were used 2x/day. After 14 days, the slabs were collected for analysis of surface hardness loss (demineralization) or recovery (remineralization). Model dose response was assessed by linear regression. **Results:** The percentage of surface hardness loss and the percentage of surface hardness recovery were 80.1% ± 23.1; 59.5 ± 24.1; 42.0 ± 3.7 and 3,.7 ± 14.9; 23.7 ± 19.8; 29.4 ± 9.3 for the groups 0, 250 and 1000 ppm F, respectively. **Conclusion(s):** A significant linear correlation was found between %SHL and %SHR versus the F concentration in the rinses ($p < 0.01$). Conclusions The results showed that the "Piracicaba in situ model" presents dose-response to evaluate the anticaries effect of F mouthrinses.

016 CA PRE-RINSE IMPROVES THE ANTICARIES EFFECT OF FLUORIDE MOUTHRINSES: IN SITU STUDY

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Aim: It has been suggested that a Ca pre-rinse is able to increase fluoride (F) concentrations in saliva and biofilm fluid, as well the formation of F reservoirs on biofilm solids. However, its effect on enamel de- and remineralization is not clear, and was tested in this study. **Methods:** A double-blind, crossover, in situ study, was conducted. Ten volunteers wore a palatal appliance containing 8 bovine enamel slabs, 4 sound and 4 carious, exposed to 20% sucrose solution in the frequencies of 8 or 3 times a day, to assess enamel de- and remineralization, respectively. The treatments were performed 2x/day: placebo rinse (for Ca and F); Ca placebo pre-rinse followed by 250, or 1000 ppm F rinse (NaF); or Ca pre-rinse (150 mM calcium lactate) followed by 250 ppm F rinse. After 14 days enamel slabs were collected for analysis of mineral loss or gain, by surface hardness. **Results:** The inhibition of demineralization was higher in the group using Ca pre-rinse, when compared to placebo and 250 ppm F ($p<0.001$), and equivalent to 1000 ppm F group ($p>0.05$). However, for remineralization the groups using F rinse differed only from the placebo group ($p<0.001$), with no difference among them ($p>0.05$). Conclusions **Conclusion(s):** The results suggest that a Ca pre-rinse may enhance the effect of a fluoride rinse to reduce enamel demineralization.

017 CALCIUM AS AN INDICATOR OF ENAMEL DEMINERALIZATION CAUSED BY *S. MUTANS* BIOFILM EXPOSED TO SUGARS

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Streptococcus mutans biofilms exposed to sugars are used to simulate cariogenic biofilms, and the quantification of calcium released in culture medium would favor the understanding of the demineralization process. **Aim:** Therefore, this study evaluated the kinetics of calcium release during enamel demineralization using *S. mutans* biofilm formed in the presence of sucrose or its constituent monosaccharides, glucose and fructose. **Methods:** Bovine enamel slabs (4x7x1 mm) were used. After salivary pellicle formation, the slabs were immersed in LMW medium with 1% glucose containing bacterial inoculum and incubated for 8 h (37°C, 10% CO2). *S. mutans* biofilms were formed during 5 days in LMW and exposed 8 x/day to two different conditions (n = 12): 10% sucrose or 5.25% glucose + 5.25% fructose. At the beginning and at the end of each day, the slabs were placed in fresh LMW. The medium was used to quantify calcium concentration and pH. Calcium quantification was performed using Arsenazo III reagent and a spectrophotometer (650 nm). The surface hardness was measured before and after the experiment and the percentage of hardness loss (% SHL) was calculated. The Student t-test ($\alpha = 5\%$) was used. The calcium concentration in the medium was increased progressively after the cariogenic challenges, reaching a maximum value of 1.46 mM in biofilm exposed to sucrose. A significant positive correlation between the % SHL and the total calcium amount was also observed. **Conclusion(s):** It can be concluded that the method was appropriate to evaluate the kinetics of the calcium released from enamel, and that sucrose was the carbohydrate that caused greater demineralization.

018 FLUORIDE INCORPORATION IN ENAMEL DURING THE CARIOGENIC CHALLENGE IN THE PRESENCE OF CALCIUM AND/OR FLUORIDE

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Aim: The anticaries potential of fluoride (F) is related to its ability to improve the precipitation of minerals containing F, as fluorapatite (FAp), during de- and remineralization process. F anticaries effect can be improved by strategies which prolongs its retention in dental biofilm, as using a mouthrinse containing calcium (Ca) prior to a F mouthrinse. This study evaluate the incorporation of F in the enamel, before and after a cariogenic challenge in biofilms previously exposed to different concentrations of Ca and F. **Methods:** Dental slabs under biofilms pretreated with different Ca concentrations (0, 1 and 10 mM) and F (0, 1 and 225 ppm F) were exposed to sucrose solution, extraorally, and the firmly bound F concentration ("FAp") was evaluated before (30 minutes) and after the cariogenic challenge (75 minutes). For FAp extraction, enamel slabs were individually immersed in 0.4 mL of 0.5 M HCl for 30 s, under constant agitation. Then, the samples were buffered with the same volume of TISAB II containing 20 g of NaOH/L and the F concentration in the solution was determined by ion-specific electrode. **Results:** FAp concentration increased when 225 ppm F was used in the treatment (0,28 ± 0,13, 0,27 ± 0,14 and 0,53 ± 0,26 µg F/cm2, for groups 0, 1 and 225 ppm F with no calcium, respectively). The presence of Ca in the treatment did not influence the results, and no difference was observed before and after the cariogenic challenge. **Conclusion(s):** The biofilm treated with 225 ppm F increased FAp concentration in enamel and the presence of Ca in the treatment or a cariogenic challenge did not influence F uptake.

019 *S. MUTANS* POPULATION IN INITIAL ADHESION AND IN MATURE BIOFILM EXPOSED TO SUGARS

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Streptococcus mutans is the main microorganism related to caries development. In the presence of sucrose, *S. mutans produces* acids and synthesizes extracellular polysaccharides (EPS), which could favor bacterial adhesion and higher counts of microorganisms in biofilm. **Aim:** Therefore, this study evaluated *S. mutans* population in initial adhesion and in mature biofilm using *S. mutans* biofilm model formed in the presence of sucrose (S) or its constituent monosaccharides, glucose (G) and fructose (F). **Methods:** Bovine enamel slabs (4x7x1mm) were saliva-coated. For adhesion (n=12), the slabs were immersed bacterial inoculum in LMW medium containing 1% S or 0.525% G and 0.525% F. The blocks were incubated for 8 h (37°C, 10% CO2). For biofilm formation during 5 days in LMW (n=12), after adhesion, biofilms were exposed 8x/day to two different conditions: 10% S or 5.25% G + 5.25% F. After adhesion and biofilm formation, the slabs were placed in microcentrifuge tubes containing saline solution. After sonication (7watts, 30s), the suspensions were serially diluted and plated on THB agar. Biofilm dry weight was also evaluated. Two-way ANOVA test followed by Tukey and Student t-test (α = 5%) were used. Higher cell count was observed in initial adhesion in the presence of sucrose (1.5 log). However, this difference in microorganism counts was not significant for the biofilm formed in the presence of (S) or (G+F) (p>0.05). The biofilm exposed to S showed higher wet weight, probably due to EPS presence. **Conclusion(s):** It can be concluded that sucrose favored initial bacterial adhesion to enamel, however it did not influence microbial population in mature biofilm.

020 A CASE REPORT: MANAGEMENT OF GUNSHOT FACIAL WOUNDS

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Aim: The severity of injury resulting from facial gunshot wounds varies according to the type of weapon, caliber of the bullet, range of the shot and it can result in functional and aesthetic consequences. **Methods:** We present a case of a 40 years old female patient who received several gunshot wounds resulting in right zygomatic orbit fracture and right condyle mandibular fracture associated to thorax and right arm wounds. At initial clinical exam, the patient presented facial asymmetry, loss of right midfacial projection, excessive right midfacial width and malocclusion. A computed tomographic scan revealed a comminuted fracture of the right zygomatic orbit complex and right condyle fracture. The patient was released from the hospital and started the treatment of the facial wounds with a conservative treatment of the fractures, but 4 month later the patient continued presenting facial asymmetry, restricted mouth opening and difficulty chewing, so underwent a surgical reduction and internal fixation of the zygomatic orbit fractures and bilateral mandibular sagittal split osteotomy. The patient presented adequate occlusion, improve of the facial asymmetry but lost of right zygomatic projection as consequence of the loss of substance due to the gunshot facial trauma. A second surgical procedure was planned in order to improve esthetic. Eleven months after the first surgery, the patient underwent for another surgery for placement of a high-density porous polyethylene implant on the affected area. **Conclusion(s):** Case evolution was satisfactory. This case illustrates the complex treatment of facial gunshot wounds.

021 CLOSURE OF OROANTRAL FISTULA: 2 CASES REPORT

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Aim: Oroantral communication is the space created between the oral cavity and the maxillary sinus, which if not treated properly can suffer epithelialization and result in fistula. The most common etiology of this complication is the extraction of upper molars because of the close relationship of the root apex with the sinus cavity. Fundamental part of the diagnostic and planning is the detection of the presence or absence of infection, as this must be addressed before any attempt to close the oroantral fistula for successful treatment. Different procedures have been suggested for treatment of this condition, including buccal sliding flap, palatal-based rotational flap, pedicled buccal fat pad (BFP) or a combination of these. **Methods:** The BFP has been used with high rates of success, and was used to oroantral fistula closure in 2 cases treated in our discipline. 1-Patient M.L.T., 35, male, whose main complaint was the liquid passage from the mouth to the nose, reported extraction of 27 for 3 months with onset of symptoms. 2-Patient A.F., 40, female, whose main complaint was also the liquid passing through the mouth to the nose, reported extraction of 18 for 3 months, followed by two failed attempts of closure. The procedures were performed under local anesthesia, by excising the fistula tract, buccal flap, dissection and traction of BFP, suture over the bone defect and suturing the buccal flap over the fat pad. **Conclusion(s):** Clavulin 500 mg, Nimesulide 100 mg, dipyrone 500 mg, Afrin nasal topical and Periogard were prescribed. Patients were instructed not to perform positive and negative pressure for 3 weeks.

022 DECOMPRESSION: A NONAGGRESSIVE SURGICAL TECHNIQUE FOR TREATING EXTENSIVE LESIONS IN THE JAWS

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Aim: Cystic lesions and some odontogenic tumors can be treated by aggressive or conservative surgical techniques. Choosing one of them depends on some factors like the size of the lesion, relation with adjacent vital structure, age and type of pathology. **Methods:** The patient's preference can also be considered. Growth of cysts is believed to occur by a combination of osmotic pression and pressure resorption associated with release of prostaglandins and growth factors. Decompression is an effective treatment for large cystic lesions of the jaw with low morbidity; it seems to change the environment, reducing the cystic osmotic pressure and decreases the amount of interleukin. This treatment consists in creating a small window in the cyst epithelium and anchors a drain on it in order to keep it open for a long time and allow constant irrigations with sodium chloride using a syringe. The patients must be oriented and trained to do in an accurate way. According to the clinical evolution, an enucleating surgery with low morbidity can be performed after under sizing of the lesion, especially in cases with an extensive compromise. This kind of treatment decreases the possibility of having some trans-operatory complication and allows a better recovery. **Conclusion(s):** In the literature still there are controversial opinions between conservative and aggressive treatment, so the aim of this poster is to show a series of clinical cases treated using a decompression technique.

023 EVALUATION OF DYNAMICS OF BONE REPAIR AFTER EXTRACTION AND INSTALATION OF MEMBRANES IN MOLARS SOCKETS OF RATS.

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Aim: To evaluate the bone tissue formed during the alveolar bone repair, after the instalation of membranes in the upper molar sockets of rats, through 3D, histological and immunohistochemical parameters. **Methods:** 12 male rats (Rattus novergicus, albinus, Wistar) were anesthetized and submited to the extraction of the first upper molars in both sides. The resorbable membrane was implanted only in the right side and the left side was the control group. After 14 and 28 days, the dental sockets in repairing process were removed to be analysed. **Results:** The histological evaluation showed that only the 14 days group with the membrane presented an inflamatory infiltrate, with a little more evidence than expected. The immunohistochemical analysis showed intense production of alkaline phosphatase in 14 days group with membrane and in the others, presented a moderate production. Osteocalcin showed a greater labelling in the group without the membrane in 14 days and in the group with membrane 28 days. The parameters of 3D reconstruction showed that there are no significantly diferences (p<0,05) between the bone volume in none of the periods analysed. While the bone trabeculaes of the 28 days animals that used the membrane were significantly diferent (p<0,05), presenting thinner than in the control group. **Conclusion(s):** These results allow us to conclude that the membrane seems to cause a small delay in the initial process of alveolar repairing process, otherwise, even presenting thinner trabeculaes in the end of the process, it was observed a greater bone maturity through the minerals precipitation observed in the immunolabeling results.

024 EVALUATION OF HEALTH STATUS INFLUENCE IN FACIAL TRAUMA TREATMENT

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Inflammatory or infectious complications are common in facial trauma, especially in mandibular fractures, getting to 30% in some studies. **Aim:** This work was based in an observational study, prospective and longitudinal, with the objective to identify the risk factors to inflammatory and infectious complications in cases of facial trauma served by Area of Surgery Maxillo-Facial in Odontology University of Piracicaba – Unicamp, in the city of Piracicaba and region, from January 2001 to January 2014. **Methods:**The analysis was aimed at data on population variables as age, genre, color and profession/occupation, systemic changes, addictions, trauma etiology, body injury in facial or not, including facial fractures or not and fractures associated, treatment given, time between trauma and treatment, in addition to inflammatory and infectious complications that occurred. Those patients were subject to completion of a clinical form specifically designed for the annotation data for the study of facial trauma. For that, each patient was properly informed and clear about the objectives and implementation of epidemiological studies of facial trauma. Patients with Incomplete information were excluded. The results obtained and literature review can identify whether there is a set of one or more risk factors associated with inflammatory or infectious complications facial trauma that can be modified to improve the results. **Conclusion(s):** In addition to enabling the development of specific prevention and treatment programs, and service delivery with best care and treatment when these traumas happen.

025 EVALUATION OF THE PERI-IMPLANT BONE LOSS AFTER DENTAL IMPLANTS TREATMENT 7 YEARS FOLLOW-UP

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Aim: To evaluate peri-implant bone loss, clinical success and satisfaction of patients submitted to rehabilitation treatment with dental implants in Oral and Maxillofacial Surgery Area of Piracicaba Dental School - Unicamp. **Methods:** The records of patients submitted to treatment with dental implants between January 2008 and December 2013 were reviewed. Patients were contacted and invited to attend for clinical and radiographic follow-up for evaluation of the following criteria: bleeding on probing, probing depth, peri-implant bone loss, pain on percussion, presence of associated symptoms and patient satisfaction. Dental implants periapical radiographs were performed and both initial and current radiographs were digitized for peri-implant bone loss measurement. **Results:** A total of 644 patients records were analyzed. In total, 576 patients were contacted, of which 53 attended for evaluation. Among the patients evaluated, 24 were male and 29 were female. All patients reported satisfaction with the treatment. One patient presented mobility of the dental implant, and in one case a peri-implant bone loss involving more than 50% of the implant surface was verified. For the other evaluated implants, the probing depth was ≤ 3 mm. **Conclusion(s):** From the results, it was observed greater peri-implant bone loss for implants with longer follow-up. Nevertheless, the bone loss observed over time for patients evaluated in this study was smaller than those reported in the literature, considering the postoperative period studied. This fact may possibly be attributed to the best selection of cases receiving treatment in this institution.

026 EXTENSIVE ODONTOGENIC INFLAMMATORY CYST: CASE REPORT AND LITERATURE REVIEW.

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Odontogenic inflammatory cysts are generally asymptomatic and present a slow development. Extensive cysts are less common and can be associate with sensitivity, mobility and displacement of adjacent teeth. **Aim:** The aim of this study is to review the literature and to report a case of an extensive odontogenic inflammatory cyst involving the inferior jaw. A male patient, 43 years old, presented to the Oral and Maxillofacial Surgery Area of Piracicaba Dental School - UNICAMPin 2013. **Methods:** At initial clinical evaluation, the patient presented a painless swelling in vestibular fornix of the anterior mandibular region and anterior inferior teeth crowding, which the patient reported that appeared about 1 year before the initial evaluation. At radiographic exam, a radiolucent unilocular lesion was observed extending from the left mandibular canine to the right first premolar. Endodontic treatment of teeth involved in the lesion was requested previously to the surgical procedure. Surgical treatment consisted of curettage of the lesion, under general anesthesia, and installation of a reconstruction plate to prevent the risk of mandibular fracture due to the extension of the lesion. The modeling of the reconstruction plate was performed preoperatively, using a costumized prototype made from patient's computed tomography. This technique allowed improvement of surgical time and installation of the reconstruction plate through an intra oral access, reducing the morbidity associated to the surgical procedure. **Conclusion(s):** Nowadays the patient has 1 year and 4 months of follow-up with no recurrence of the lesion and no postoperative complaints

027 GENE CHARACTERIZATION OF OSTEOBLASTIC PHENOTYPE MARKERS DURING THE ALVEOLAR HEALING PROCESS IN RATS

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Aim: To evaluate the gene expression of Runx2, alkaline phosphatase (ALP), Osteopontin (OPN) and osteocalcin (OC) during the alveolar healing process. **Methods:** The right upper incisor of 15 adults male rats was extracted under general anesthesia. At 7, 14 and 28 days after extraction, biopsies of repairing dental socket were removed to perform the RNA extraction. RNA samples were evaluated normalized a separated for the experiments of rt-PCR. Osteogenic phenotypes were characterized and 7 days group values were considered the control to calculate the relative gene expression of 14 and 28 days. Statistical analysis was performed with Kruskall Wallis test. **Results:** the markers presented the peak of expression at 14 days; Alp, Opn and Oc kept increased at 28 days. Runx 2 make of osteoblastic differentiation and osteoblasts presents the ALP enzyme in the external surface of plasmatic membrane, contributing to the increasing of mineral cristals of bones and interrupts the activity with the decrease of the proteic synthesis. OPN presents the property of adhesion and presents conection to calcium ions to hidroxyapatite and in the same way, the OC also have high affinity to hidroxiapatite and is expressed by osteoblasts terminally differentiated and inhibits the osteoblastic function. **Conclusion(s):** The markers begin their expression since the initial steps, period of the major proteic activity into the dental socket. At 28 days, OC continue increased, characterizing higher quantity of mineralized bone tissue. Considering this, the osteoblastic phenotypes stay expressed in different moments during the alveolar healing process.

028 MANAGEMENT OF CONDYLAR FRACTURE THROUGH INTRAORAL APPROACH: CASE REPORT.

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Aim: Condylar fractures are among the most common facial fractures. It affects mainly young adults (third decade of life) with predominance in males. Although the etiology varies according to the population studied, interpersonal violence and motor vehicles accidents are the most frequent associated factors etiology. **Methods:** Treatment of condylar fractures is a topic of great controversy in the field of Oral and Maxillofacial Surgery. The treatment options range from nonsurgical treatment (closed reduction) with maxillomandibular immobilization and / or functional treatment to surgery (open reduction). In recent decades, with the advent of rigid fixation materials, the surgical approach has gained more popularity. It allows the restoration of anatomical relationship and early return to function. However, in relation to the extraoral approach, facial scars and facial nerves injuries are referred like disadvantages which have been always associated, with different variations degree. The intraoral approach has emerged as surgical alternative allowing open reduction and fixation of fractures with low risk of these complications. **Conclusion(s):** This study aims to report a case of surgical treatment of condylar fracture by intraoral access, reporting technique, indications, advantages, disadvantages and the results achieved through this approach.

029 MAXILLOMANDIBULAR ADVANCEMENT FOR THE TREATMENT OF OBSTRUCTIVE SLEEP APNEA

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Aim: Obstructive sleep apnea (OSAS) is a common sleep-related breathing disorder of major public health importance. However, the treatment remains challenging. Many surgical techniques have been reported initially as an alternative treatment to these patients. Uvulopalatopharyngoplasty (UPPP) has long remained the most common OSA surgery but suffers from technical failure. Maxilomandibular advancement (MMA) is the most effective surgical treatment for OSA. **Methods:** The authors present a case of a pre-obese female (body mass index (BMI) = 27.1) with morbidly severe OSAS (apnea-hypopnea index (AHI) = 87.6, lowest oxyhemoglobin saturation level = 63%), arterial hypertension (HT) and type 2 diabetes mellitus, who was submitted to UPPP without success and underwent a successful combination of MMA surgery and genioplasty. It was performed a counter-clockwise rotation and mandibular advancement. The overall advancement of the mandible and the chin were 12 and 10 mm respectively. Six months post-surgery the patient lose about 10 Kg weight and report improvement of symptoms: excessive daytime sleepiness, loud snoring and awakening with a dry mouth or sore throat. HT and diabetes mellitus showed improvement and medications were changed. **Conclusion(s):** The aim of this MMA is increase the caliper of upper airway, thereby preventing its collapse during sleep. The authors suggest that this surgical combination should be seriously considered in obese and pre-obese patients with severe OSAS and CPAP intolerance.

030 RETENTION STRENGTH OF THREE RETAINED AURICULAR PROSTHESIS SYSTEMS IMPLANT-SUPPORTED

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Auricular prosthesis is among the facial prosthesis used to restore artificially or alloplastic the partial or total lesions that effects of the auricular. The auricular prosthesis retention can be mechanical, adhesive or implant-supported. **Aim:** This study aimed to evaluate the mechanical behavior of 3 retained auricular prosthetic connections when submitted to a mechanical cycling test. **Methods:** Twelve acrylic resin models with installed implants were obtained and divided into three groups according to their retention system with four samples in each group. Three retained auricular prosthesis systems implant-supported: I Bar-Clip system; II Magnet System and III Ball/O-ring system were considered as study factors. Each of the samples were submitted to the pull-out test (f = 0,5 Hz) to determine its tensile strength. The mechanical cycling test was performed using the servo-hydraulic with 2.5mm shift at a 10 mm/s velocity. The retaining strength for each of the samples were obtained at 7 intervals. Kruskal-Wallis test was used to compare the differences in tensile strength and statistical analysis, p values ≤0.05 were considered significant. **Results:** The tensile strength for the group retained by the bar-clip system (29,61 N) was higher with statistically significant difference when compared to the group retained by the ball/o-ring system (9,41 N) and magnets system (8,62 N). **Conclusion(s):** The groups retained by the magnets system and the ball/o-ring system differed with statistical significance only for the initial traction, which was higher for the ball/o-ring system.

031 SURVIVAL OF IMPLANTS IN ATROPHIC MAXILLAE RECONSTRUCTED BY CALVARIAL BONE GRAFT: A RETROSPECTIVE STUDY

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Aim: The objective of this study was to evaluate the clinical success in reconstructing atrophic maxillae by using the calvarial bone as the donor site, analyze bone level after recovery, and assess patient satisfaction with treatment and survival of implants. **Methods:** Were included in the study 25 patients that inserted implants approximately six months after the harvesting procedure requiring treatment for atrophic maxilla underwent calvarial onlay bone grafts. The prosthesis was placed at least six months after the implant surgery. **Results:** Implant survival rate stood at 92.8% in a one- to ten-year period following prosthesis placement on the implants; bone loss averaged 1.76 mm in the maxilla and 1.54 mm in the mandible up to ten years after prosthesis placement. The survey indicated a high level of patient satisfaction regarding the procedure, with little discomfort and high recommendation rates. **Conclusion(s):** The results showed that the calvarial bone proved to be an excellent donor site, providing stability and bone maintenance over the 12-year observation period, as well as patient satisfaction with the surgical procedures, esthetics and function achieved.

032 THE SURGICAL APPROACHES TO ORBITAL CAVITY.

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Aim: The success in surgery of the facial bones begins with an appropriate approach and exposure of the indicated area. However, besides the surgical convenience, another factor must accompany the approach: facial aesthetics. An exacerbate scar on the face can bring aesthetic and psychological impairment to the patient. **Methods:** The use of camouflaged or even distant incisions to the fracture site is essential to prevent this. Incisions located on the skin follows basic principles, aiming less visible scars, such as, positioning the incision perpendicular to the skin in tension lines. The orbital cavity has shaped pear-pyramid, which is composed of seven bones, so, the surgical approach will depend of the addressed region. The most commonly used approaches to the orbital floor are subciliary and transconjunctival. Aiming to view lateral wall of the orbit the supraorbital approach is indicated, but there are alternative approaches as upper-eyelid approach. When the visualization of the roof and medial wall regions is necessary, the most commonly performed access is the coronal approach. **Conclusion(s):** The aim of this study is to show the experience of Oral and Maxillofacial Surgery Area of FOP-Unicamp, with respect to commonly access performed for treating of orbital region fractures, as well as the advantages and disadvantages of each.

033 TRANSVERSAL DISTRACTION OSTEOGENESIS OF THE MANDIBLE: INDICATION AND TECHNIQUE'S DESCRIPTION

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Aim: Mandibular transverse deficiency and crowding of the anterior teeth are problems shared by some orthodontic patients. An adequate transverse mandibular dimension is an important factor for stable occlusion. **Methods:** Classical approaches for treating those clinical conditions are teeth slicing, dental compensation, extraction or orthodontic arch expansion. In adult patients, symphyseal osteotomy has been proposed as a solution for correction of transverse mandibular deficiencies. Symphyseal mandibular osteotomies, however, have not been well accepted, perhaps because of the risk of periodontal problems that might occur when the bone segments are rapidly and excessively separated. An alternative solution for these cases would be the use of osteogenic distraction in the mandibular symphysis region. To perform distraction osteogenesis can be used bone-borne or tooth-borne devices. **Conclusion(s):** Due to the high cost, bone-borne devices are not accessible to all patients. The aim of this presentation is to demonstrate the technique of transversal distraction osteogenesis of the mandible using tooth-borne device.

034 ASSOCIATION BETWEEN TOOTH WHITENING AND MICROABRASION: AN ALTERNATIVE FOR AESTHETIC RESOLUTIONS

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The teeth color change is one of the main complaints observed at dental offices and it has an implication on smile harmony. The bleaching and enamel microabrasion techniques are some alternatives to the aesthetic treatment of superficial enamel stains. **Aim:** The aim of the present study is to present and discuss a case of removal of white stains, which was resolved through the association of bleaching and enamel microabrasion techniques. **Methods:** After clinical and radiographic examination mild fluorosis was diagnosed. It was performed clinic bleaching treatment with hydrogen peroxide 35% (HP Whitness Blue Calcium- FGM) in 3 clinical sessions of 45 minutes each with an interval of 7 days. After one week the end of bleaching, the microabrasion with an agent hydrochloric acid-based microparticles and 6.6% of silicon carbide (Opalustre - Ultradent) was carried out, for 10 seconds on each tooth (15 to the 25), as a polishing and topical application of neutral fluoride for 10 minutes each tooth. Posteriorly, the poor restoration present in the tooth 11 was replace. At the end of treatment, the patient was satisfied with the result achieved and did not report tooth sensitivity. **Conclusion(s):** Thus, it can be conclude that the associantion of conservative techniques, bleaching and enamel microabrasion, are safe and effective procedures for removing surface stains without the need to wear the vestibular enamel. Leading to a satisfactory cosmetic result.

035 CLINICAL CRITERIA FOR DECISIONS BETWEEN REPLACEMENT OR REPAIR OF COMPOSITE RESIN RESTORATIONS – A REVIEW OF LITERATURE

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Composite resins are appointed as strong allies for dentists in the current restorative treatment, arising as an esthetic alternative to amalgam. However, clinically, restorations using this material still present failures and, therefore, often indicate its replacement or repair. Thus, in order to avoid the subjectivity of each professional and standardize assessments of composite resin restorations the USPHS and the modified USPHS criteria were created. **Aim:** This study aimed to analyze these criteria and offer subsidies for clinical decision between repair and replacement of composite resin restorations. **Methods:** We have selected, through literature searching, papers published between 2000 and 2015 on CAPES Journal Portal, PubMed, Cochrane and Medline. The key-words used were: USPHS, clinical trial, composite resin, permanent dental restoration. **Results:** The evaluated studies indicated that the most prevalent criteria on unsatisfactory restorations are the "secondary caries" and "loss of anatomical shape". Besides that, a majority of the evaluated studies indicate the repair of restorations with minor and localized failures as a strategy to increase longevity of composite resin restorations. **Conclusion(s):** The USPHS criteria assist in the correct clinical decision between replacement or repair of composite resin restorations. Repairing the restoration is a clinical alternative that should be performed whenever it is possible.

036 DIGITAL PLANNING IN DENTISTRY: FROM CEPHALOMETRIC STUDY TO SMILE HARMONY.

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Aim: Correct planning for aesthetic or rehabilitative total cases is critical in the success of rehabilitation treatment. Information acquired by the patient should not be overlooked, however, some information may be lost in the initial consultation. **Methods:** At this point the digital planning, through a photographic protocol ensures the case study in depth, and mainly integrates all the needs, wants, functional and biological problems of the patient within an aesthetic treatment project, improving the quality of care and the conversation with the patient. This is accomplished by evaluating facial and dental characteristics in presentation software in which is possible to draw reference lines in extra and intraoral photos, allowing cephalometric analysis and a new smile design that will help in the evaluation of limiting factors of the particular case. The clinical case presents a female patient, 30 years old, Caucasian, with giroversion problems in upper incisors and canines. It was conducted the digital planning, through photographic protocol and with the help of presentation software. **Conclusion(s):** Patient satisfaction is sharp when passed all the planning in the mouth, with the help of the mockup.

037 EFFECT HIGH CONCENTRATION HYDROGEN PEROXIDE WITH NANO-HYDROXYAPATITE ON WHITENESS EFFECTIVENESS AND ENAMEL BOND STRENGTH

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Aim: To evaluate the effect of bleaching with 35% hydrogen peroxide with different nanohidroxiapatita concentrations (nHA) on color and bond strength to enamel. **Methods:** Bovine enamel blocks were randomly divided into 5 groups (n=10): 1)without bleaching (NC); 2)bleaching with PH (EC) 3)PH + 5% nHA (nHA5%), 4)PH + 10% nHA (nHA10%), 5)PH + 15% nHA (nHA15%). The samples were subjected to 3 bleaching sessions with an interval of 7 days between the frames and were stored in artificial saliva for all experiment. The color was measured with spectrophotometer (CIE L*a*b) in enamel and opposite dentine. In final, the enamel was restored (Z350 flow/ Single Bond 2) and was performed the enamel bond strength by microshear (Mpa) test and fracture pattern was evaluate. The data were submitted to ANOVA and Tukey´s test. **Results:** In enamel, the bleached groups did not differ between them in relation to color evaluation. In dentin, the delta E and delta b values of nHA15% group did not differ from NC or PC groups and, delta L values were statistically lower compared to nHA5%. The bond strength values showed no difference between groups. The NC group showed lower adhesive failure rate (45%) and high cohesive in resin (15%) when compared to EC (adhesive - 65%; cohesive resin - 5%). nHA10% showed adhesive failure rate (50%) similar to NC (45%) and lower when compared to bleached groups (EC-65%; nHA5%-70%; nHA15%- 55%). **Conclusion(s):** The addition of nHA to 35% hydrogen peroxide did not affect the effectiveness of tooth bleaching and the enamel bond strength. The addition of 10% nHA decreased the pattern of adhesive failures.

038 EFFECT OF BLEACHING GEL ENRICHED WITH CHITOSAN AND/OR CALCIUM ON TOOTH COLOR AND SURFACE PROPERTIES.

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Aim: To evaluate the association of Chitosan and/or Calcium to 35% Hydrogen Peroxide (HP) on enamel properties. **Methods:** Fifty enamel bovine blocks were divided into 5 groups (n=10) in according to the bleaching compound: 1) Without bleaching (Control); 2) HP 35% (HP); 3) HP/Chitosan (Chi); 4) HP/Calcium (Ca); 5) HP/Ca/Chi. The evaluation of roughness (Ra) and color (ΔE, ΔL, Δa e Δb) were performed before (T0) and after the bleaching (T1); and after saliva storage (T2). The surface microhardness (SMH) was evaluated in T2. Data were subjected to ANOVA and Tukey's test (α<0.05). **Results:** For ΔRa, the groups with Ca and/or Chi showed the lowest ΔRa values statistically different from HP (p<0.05). HP/Ca/Chi demonstrated the best ΔRa result, with statistical difference in relation to the others (p<0.01). Besides, the HP/Chi was not statistically different from unbleached control in T0xT2 (p>0.05). About to ΔE and ΔL values, the control and experimental groups did not differ statistically between them in the frames analyzed (p>0.05). The HP/Chi presented the highest Δb values, with statistical difference compared to all groups (p<0.01). For SMH, the groups with Chi showed the highest values without statistical differences in relation to the unbleached control group (p>0.05). **Conclusion(s):** The addition of the Chitosan to hydrogen peroxide may be a reliable option for the bleaching therapy, once this association showed reduction of the deleterious effects of HP on enamel without compromising its whiteness efficacy.

039 EFFECT OF CIGARETTE SMOKE AND PH CYCLING ON ENAMEL PROPERTIES AND THE BOND STRENGTH USING DIFFERENT ADHESIVES

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Aim: To evaluate the influence of exposure to cigarette smoke on the physicochemical properties of tooth structure and microshear bond strength (MBS) using different adhesive. **Methods:** 40 bovine tooth blocks (enamel/dentin), divided into 4 groups (n=10): Control (C) no treatment; exposure to cigarette smoke (CS); pH cycling (PC); and exposure to smoke and pH cycling (CSPC). After that, samples are subjected to X–Ray Microfluorescence (μ-XRF), X–Ray Fluorescence (XRF) and surface (SMH) and cross-sectional microhardness (CSMH). Microshear test was performed simultaneously to C and CS groups. 80 blocks were divided into 8 groups (n=10), according to the adhesive: SBMP-Scotchbond, SB-Single Bond; CSEB-Clearfil and SBU-Universal. Microshear test was accomplished for enamel and dentin in the same block. Data were analyzed using ANOVA, Tukey (α= 0.05) and Fisher (μ-XRF). μ-XRF: Cadmium, Nickel, Lead and Arsenic to CS and CS-PC. SMH and CSMH were higher for CS differing from C. To the groups exposed to pH cycling, there was less SMH and CSMH, with no influence of cigarette smoke exposure. But the groups PC and CSPC differed from the C and CS groups. For enamel, there was no difference in the MBS in relation to exposure or not to smoke, only between the adhesives (p<0.001). For dentin, CS had lower values than C (p<0.001). For C, CSEB showed greater MBS differing from SBMP. For CS, SBU showed greater MBS differing from SB and CSEB. **Conclusion(s):** Exposure to cigarette smoke promoted: incorporation of heavy metals; increased enamel SMH and CSMH, with no effect on in vitro caries and decreased MBS for SB and CSEB in dentin, but not in enamel.

040 EFFECT OF DIFFERENT STORAGE MEDIUMS ON MICROHARDNESS AND COLOR OF BLEACHED ENAMEL: AN IN VITRO VS. IN SITU STUDY

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Aim: To evaluate the effect of different conditions of in vitro storage vs. in situ on bleached enamel structure, by Knoop microhardness (KHN) and color analysis variation. **Methods:** 48 tooth blocks were divided into four groups (n=12), based on storage media (SM): purified water (PW), artificial saliva (AS), natural saliva (NS), in situ (IS). Three whitening sessions were carried out using hydrogen peroxide at 35%, with a week interval between the sessions. Color and KHN measurements were taken before the samples were placed in the SM (t1), after 24h in the SM (t2), and after 24h at the end of the bleaching treatment (t3). Two extra samples from each group were analyzed using a scanning electron microscope (SEM). KHN results were analyzed by PROC-MIXED and Tukey-Kramer test (a=0.05), and color changes were evaluated using ΔL, Δa, Δb, ΔE between the different times Δ1(t1-t2), Δ2(t2-t3) using the Kruskal-Wallis test and Dunn's test (a=0.05). **Results:** Significant statistical difference was noted in KHN at t3, with the lowest values found for PW. For color analyses in ΔE2 and Δb2, IS showed lower values differing statistically from AS. In Δb1 the IS group showed higher values as compared to the other groups. In ΔL1 there was no difference between the groups, however in ΔL2, PW and AS statistically differed from IS, and NS showed similar values to IS. SEM showed change in the enamel surface in PW. **Conclusion(s):** The storage conditions had different effects on color and microhardness analysis. Natural saliva was the only one that showed, similar behavior to in situ storage.

041 EFFECT OF TOOTHPASTE APPLICATION PRIOR TO DENTAL BLEACHING ON ENAMEL.

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Aim: To investigate the effect of toothpaste application prior to dental bleaching with 35% hydrogen peroxide (HP). **Methods:** 70 enamel blocks (4x4x2 mm) were submitted to protocols in a tooth-brushing machine (n=10): with distilled water and exposure to placebo gel (NC-negative control) or HP bleaching (PC-positive control); and brushing with differing toothpastes prior to HP, including: KNO3 toothpaste (PN) containing NaF, MFP toothpaste (FT), arginine-based toothpastes (PA and SAN) or a toothpaste containing bioactive glass (NM). Color changes were determined (ΔE, L, a, b) and roughness (Ra) analysis was performed before and after treatments. Surface microhardness (SMH), cross-sectional microhardness (CSMH) and Phosphorus concentration in gel ([P]) were analyzed after treatment. The data were subjected to ANOVA and Tukey's test (α<0.05). **Results:** Color changes were statistically similar in the bleached groups. SMH and CSMH decreased in PC. SMH increased significantly in the toothpastes groups versus controls (NM>PA=SAN>all other groups) or decreased HP effects (CSMH). Ra increased in all bleached groups, with the exception of NM, which did not differ from the NC. PC increased the [P] loss, however only NM did not differ of NC. **Conclusion(s):** The toothpaste use prior to dental bleaching did not interfere with the effectiveness of treatment. The bioactive glass based toothpaste protected the enamel against the deleterious effects of dental bleaching.

042 EFFECT OF WHITENING TOOTHPASTES ON ENAMEL SURFACE EXPOSED TO CIGARETTE SMOKE.

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Aim: To evaluate color and surface roughness of enamel submitted to the exposure to cigarette smoke (CS) followed by brushing with whitening toothpastes. **Methods:** Sixty bovine enamel blocks were submitted to pigmentation by cigarette smoke (20 cycles – Smoke Machine) and brushed (2500 cycles - Tooth-Brushing Machine) according to the following groups treatment (n=10): G1- Purified water (NC - negative control), G2-toothpaste with conventional MFP toothpaste (MF), G3- Close up® White Now (WN), G4-Colgate® Luminous White (LW), G5- Colgate® Total 12 Professional Whitening (PW) and G6- Colgate® Pro-Argin Whitening (PA). Roughness surface (Ra) was analyzed by rugosimeter and color changes were determined using the CIE L*a*b* system (ΔE, ΔL, Δa, and Δb) using spectrophotometer (Konica Minolta CM 700D). The results were analyzed by ANOVA and Tukey's test (α=0.05). **Results:** Exposure to CS promoted color change on enamel. After toothpaste treatment, WN increased L* values and LW presented ΔE values statistically different from NC (p<0.05). The CS promoted Ra increasing, however the LW decrease the Ra values differing statistically from NC and others groups (p<0.01). MF, PW and PA increased the surface roughness, which were statistically different from others groups (p<0.01). **Conclusion(s):** The toothpastes did not promote significant color change when applied to pigmented enamel. Nevertheless, the toothpaste increased the surface roughness of enamel exposed to cigarette smoke. Key-words: cigarette smoke, toothpastes, surface roughness, color

043 ESTHETIC RESTORE OF THE SMILE: INTERRELATION PERIODONTICS-OPERATIVE DENTISTRY

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The presence of diastema of maxillary anterior teeth is considered an aesthetic adversity. The reestablishment of smile harmony may be performed trough different ways, many times including more than one dental speciality. **Aim:** The aim of the present study is to report a clinical case of diastema closure of maxillary anterior teeth (canine to canine), in which an integrated planning between Periondontics and Operative Dentistry was established for final resolution of the displeasing aesthetic aspect of the patient. **Methods:** After the diagnosis wax-up and mock-up confection, was made the gingivoplasty in order to fix the height of zeniths and gingival contour. The second step, after the correct cicatrisation of soft tissue, the direct restorative procedure with composite resins nanoparticles and nanohybrids was executed, restoring form, contour and aesthetics in order to mimic the lost structures. Therefore, was possible to observe that to conduct direct restorations in anterior teeth, the correct diagnosis and interdisciplinary planning is required. **Conclusion(s):** The achievement of an appropriate relation among teeth, gingiva and lips, is essential to restore harmony and naturalness of the smile. Key-words: Aesthetic, composite resin, diastema, gingivoplasty

044 IMPROVEMENT OF ORAL HEALTH-RELATED QUALITY-OF-LIFE BY ANTERIOR DENTAL TREATMENT: CASE REPORT

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Aim: To verify the hypotheses that anterior dental treatment with biomimetic dental materials (resin and ceramic) improves Oral Health Impact Profile (OHIP-14). **Methods:** This report describes an integrated rehabilitation of a female patient at 40 years of age, using esthetics materials. The patient presented dental fracture and previous unsatisfactory composite restorations with dental structure pigmented. This clinical situation promoted negative impact in her life, especially in psychosocial aspects. The treatment purposed was to perform the resin restorations in lateral incisors (Filtek Z350 xt, Single Bond, 3M/ESPE) and metal free ceramics of lithium disilicate glass in central incisors (IPS e.max, Ivoclar Vivadent). The impact on quality of life was measured using the OHIP-14, validated for the World Health Organization, which evaluate the importance of biological and social dimensions in oral disease and treatments. **Results:** The patient presented an overall OHIP-14 score of 36 prior to treatment and after treatment the score decreased to 4, showing that negative impacts in smile could be deleterious for oral health conditions and decrease the quality of life. **Conclusion(s):** This case report showed that anterior dental treatment with resin restorations and ceramic crowns could promote functional and aesthetics rehabilitation. In addition, the attractive smile promoted by this treatment improvement the oral health-related quality-of-life of the patient.

045 INFLUENCE OF COMPOSITE RELINING AND DIFFERENT DENTIN BOND APPROACHES ON FIBER POSTS PUSH-OUT BOND STRENGHT

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Aim: This study aimed to investigate the influence of composite resin relining and the use of different dentin bond approaches on push-out bond strength of fiber posts. **Methods:** Sixty bovine teeth roots were endodontically treated and randomly divided into 6 groups according to the presence or absence of composite relining and luting technique: G1: post + dentin etching (CAD) + Scothbond Multi-Purpose (SBMP) + RelyX ARC cement (ARC); G2: post + Single Bond Universal (SBU) + ARC; G3: post + CAD + SBU + ARC; G4: relined post + CAD + SBMP + ARC; G5: relined post + SBU + ARC; G6: relined post + CAD + SBU + ARC. Each root was sectioned into 1 mm thick discs that were separated according to the root area (cervical, middle or apical). Then, push-out bond strength test was performed at a 50kg load and 0.5mm/min speed. Data were submitted to split plot 2-way analysis of variance (α =0.05). The post relining did not influence the obtained values , however, the bond strength was higher in the coronal area, followed by the middle and apical area, respectively. There were no statistical differences between the luting techniques. **Conclusion(s):** It was concluded that the resin composite relining and different dentin bond approaches did not affect the post retention performance. However, the greater the coronal to apical depth into the root worse is the dentin bond performance.

046 INFLUENCE OF THE INCREMENT'S THICKNESS ON PHYSICAL AND PHOTOELASTIC PROPERTIES OF DENTAL COMPOSITES

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Aim: This study aimed to evaluate the Knoop microhardness, the degree of conversion and the photoelasticity of three dental composites: a bulk-fill flowable base composite (Surefil SDR Flow - Dentsply), a conventional microhybrid (Filtek Z250 – 3M Espe) and a nanohybrid composite (N'Durance - Septodont), submitted to different thicknesses of increments. **Methods:** For microhardness and degree of conversion tests 45 samples were made, light-activated with LED 3rd generation device (Valo - Ultradent). The samples were divided into 9 groups (n = 5 each), according to the type of composite and increment's thickness. For photoelasticity testing, photoelastic models were created from a maxillary second premolar prepared with a class I cavity. The composites were placed in the photoelastic model cavity and light-activated also with LED 3rd generation device (Valo - Ultradent). The results showed that the highest degree of conversion values were obtained by the composite Surefil SDR Flow, regardless of the increment's thickness. The degree of conversion of all composites was lower in bigger increments. The highest microhardness values were obtained by Filtek Z250 and minors by Surefil SDR Flow. Filtek Z250 showed lower shrinkage stress when handled with 3 increments, while N'Durance showed less tension when manipulated with 1 increment. Surefil SDR Flow was the only one who showed no statistical difference in tension between increments. **onclusion(s):** Furthermore, in general, was the one which obtained the smallest contraction stress values compared to the other composites.

047 LAMINATE VENEERS: A CLINICAL REPORT

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The treatment of healthy but unesthetic teeth has always presented a challenge for the dental practitioner. The development of adhesive technique improved the options for treatment of healthy teeth that were of improper shape, size, or color. The continued development of dental ceramics offers clinicians many options for creating highly aesthetic and functional porcelain veneers. **Aim:** This report describes an integrated rehabilitation using esthetics materials of a young patient, who presented improper shape in maxillary anterior teeth. **Methods:** The treatment purposed was canines composite restorations (Filtek Z350 XT, 3M/ESPE) and porcelain restorations of lithium disilicate glass ceramic in lateral incisors (IPS e.max, Ivoclar Vivadent) with a minimum thickness. This report aim to guide the clinician for the most important parameters determining the long-term success, correct application, and clinical limitations of laminate porcelain veneers to enhance the patient's smile in a minimally to virtually noninvasive manner. **Conclusion(s):** In conclusion, it is possible to achieve great aesthetic results with minimally invasive veneer laminates when well indicated.

048 SMILE TRANSFORMATION: FROM DIGITAL PLANNING TO INCREMENTAL LAYERING WITH DIRECT COMPOSITE RESIN

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The search for aesthetic procedures has increased considerably in recent years and the restoration of a harmonious smile becomes a major challenge for restorative dentistry. Nonetheless planning is essential for carrying out a correct diagnosis and definition of materials and techniques to be employed. **Aim:** Thus, the objective of this study is to describe a clinical case addressing its planning and the applicability of the composite resin in aesthetic and functional recovery of a patient with color and shape change of the upper incisors. **Methods:** For this a digital planning was performed to assist in making the waxing and subsequent mock-up. After this step the restorations were conducted using nanoparticulate composite resins by dental layering technique. **Conclusion(s):** We can then conclude that the many advances in the science of restorative materials and adhesive systems in addition to the knowledge of appropriate technique, allows the dentist to perform restorations in anterior teeth safely and satisfactorily in patients.

049 TOOTHPASTE USE DURING HOME-BLEACHING: EFFECTS ON ENAMEL MORPHOLOGY AND STAINING SUSCEPTIBILITY

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Aim: Toothpaste use during home-bleaching: effects on enamel morphology and staining susceptibility. **Methods:** Sixty enamel bovine blocks were divided in two groups: Carbamide Peroxide 16% (CP) and Hydrogen Peroxide 6% (HP). Each group were subdivided in according to the toothpaste use (n=10): A) No toothpaste - distilled water (control); B) Conventional toothpaste - CT (1450 ppm F - NaF); e C) Toothpaste with Chitosan - Chi. The home-bleaching was performed for 14 days and, 3 hours after the treatment, the samples were exposed to the toothpaste slurry (20s). After this time, the samples were stained with coffee solution. The roughness and color evaluations were performed before (T0) and after (T1) bleaching; and after staining (T2). Statistics was applied with 1-way ANOVA and Tukey test (α<0.05%). **Results:** The exposure to Chi was efficient in preventing ΔRa, once in T1xT0 and T2xT0, these groups showed the lower ΔRa values, with statistical differences in relation to the control. The toothpastes did not influence the whiteness effectiveness (T1xT0). In T2xT1, the use of Chi resulted in the lowest values of ΔE for CP and HP, being statistically different from CT. For ΔL, after staining, the results for Chi were statistically different from the control. For the bleaching with HP, the use of Chi was efficient in reducing the staining, once this group presented the lowest ΔL values in relation to the other groups. **Conclusion(s):** The exposure of the bleached enamel to chitosan-based toothpaste was efficient in preventing the roughness changing of enamel during the home-bleaching treatment. As consequence, the chitosan can also reduce the susceptibility of the bleached enamel to staining.

050 ABILITY OF ENDODONTIC SEALERS MINERALIZATION AFTER PULPOTOMY: A MICROCT ANALYSIS

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Aim: The aim of this study was to evaluate the mineralization ability of the endodontic materials BiodentineTM and White Angelus® MTA when compared with calcium hydroxide. **Methods:** Pulpotomy was performed in 48 Wistar rats, on the first right and left lower molars. Access was made with 1/2 carbide bur at high speed, with continuous irrigation, and pulp was cut with an adapted curette. After coronal pulp removal, the chamber was irrigated with saline until hemostasis. The pulp capping was performed with Biodentine, White Angelus® MTA or Calcium Hydroxide and crown sealed with glass ionomer and a sealant (PermaSeal, Ultradent). The control group did not receive capping material, and was directly restored with glass ionomer. Microtomography analysis (SKY SCAN 1174) was performed after 7, 15 and 30 days. Transverse sections were used to measure the largest area of hard tissue bridge formation through CTAn software. The data were statistically analyzed with two way ANOVA. **Results:** At 7, 15 and 30 days Biodentine produced an average of 65%, 71% and 68% of hard tissues in the area of mineralization, respectively; calcium hydroxide produced 38%, 56% and 53%, while White Angelus® MTA produced 27%, 21% and 41%. **Conclusion(s):** Biodentine™ induced highest mineralization areas followed by calcium hydroxide and White Angelus® MTA. Financial Support: FAPESP/2014-03134-0

051 CYTOTOXICITY PROFILE OF EPOXY RESIN SEALER PROVIDED BY A NEW 3D CELL CULTURE EXPERIMENTAL MODEL

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Aim: The aim of the present study was to evaluate the cytotoxic effects of an epoxy resin sealer (AH Plus, Dentsply DeTrey, Konstaz, Germany) using a three-dimensional cell culture model. **Methods:** A conventional bi-dimensional cell culture model was used as a reference technique for comparison. Balb/c 3T3 fibroblasts were cultured in conventional bi-dimensional cell culture and in rat-tail collagen type I three-dimensional cell culture models. Then, cell cultures were incubated with elutes of freshly mixed AH Plus and with elutes of AH Plus after 7 days of mixing for 24 hours. Cell viability was measured by the methyl-thiazol-diphenyltetrazolium assay. Data were statistically analyzed by independent t-test (P<0.05). In all tested conditions, AH Plus exhibited cytotoxic effects; however, it was cell and time dependent. In both conditions, AH Plus was highly cytotoxic in fresh conditions (P<0.05). Moreover, AH Plus showed high cytotoxic effects in the 2D cell culture model when compared to the 3D cell culture model (P<0.05). **Conclusion(s):** A 3D cell culture can be used as an alternative in vitro experimental model able to provide reliable guidance on endodontic sealer toxicity under more close conditions related to the physiological scenario found in real-life 3D tissue microenvironments.

052 DIAGNOSIS OF ROOT RESORPTION IN TRAUMATIZED TEETH USING CONE BEAM COMPUTED TOMOGRAPHY AND PERIAPICAL RADIOGRAPHY

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Dental trauma is a worldwide public health problem and the root resorption are the main complications. For allowing a three-dimensional analysis of tooth structure, computed tomography can be used for the detection of root resorption. **Aim:** The aims of this study were to evaluate the accuracy of cone beam computed tomography (CBCT) and digital periapical radiography in diagnosing root resorption following dental trauma. **Methods:** Periapical radiographs and CBCT images of patients with root resorption and a history of dental trauma from the database of a private radiology clinic were retrospectively reviewed. The sample comprised 28 teeth with external inflammatory resorption, 8 teeth with internal inflammatory resorption, 4 teeth with replacement resorption and 20 normal teeth as the control group. Images were analyzed by two radiologists and two endodontists who were previously calibrated. The results showed that the sensitivity, specificity and accuracy of CBCT in diagnosing internal and external inflammatory resorption was significantly higher than for radiography ($p < 0.05$ / t test). For replacement resorption, no statistical difference was noted ($p > 0.05$ / t test). In endodontically treated teeth, CBCT was also statistically superior in diagnosing external inflammatory resorption ($p = 0.0138$ / t test). Based on these findings, **Conclusion(s):** It was concluded that CBCT was superior to periapical radiography in diagnosing inflammatory root resorption following dental trauma, and presents itself as an important resource of as an auxiliary diagnosis for the detection, location and planning of the clinical treatment of root resorption.

053 EFFECT OF CHEMICAL-MECHANICAL PREPARATION AND INTRACANAL MEDICATION ON THE MICROORGANISMS IN ENDODONTIC FAILURE.

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Root canal failure is characterized by the permanence of intracanal infection or the emergence of apical periodontitis after obturation of root canals. **Aim:** The objectives of this study were: a) To characterize the microbiota of endodontic failure by Nested PCR; b) To evaluate the effect of the chemical-mechanical preparation (CMP) and of the intracanal medication (ICM) on bacterial reduction. **Methods:** Microbiological samples were collected from 20 endodontically-treated single root canals with periapical lesions before (C1) and after CMP (C2) with 2% chlorhexidine gel (CHX) or 6% NaOCl, and after ICM (C3) with Ca(OH)2 + CHX or Ca(OH)2 + saline. After DNA extraction, the samples were subjected to two PCR reactions, the first amplification being with universal primers and the second with species-specific primers targeted to s 16S and 23S rRNA. regions. The reading was performed by electrophoresis in 1% agarose gel. **Results:** The results showed the presence of a mixed microbiota where the most prevalent species were: E. faecalis (97.5%), P. gingivalis (88.75%), F. nucleatum (56.25%) and A. actinomycetemcomitans (37.5%). CMP was able to reduce the levels of A.israelii, A. naeslundii, F. nucleatum, G. morbillorum, P. gingivalis and T. forsythia ($p < 0.05$). ICM with CHX 2% gel reduced A. actinomycetemcomintans ($p < 0.05$). **Conclusion(s):** It was concluded that microbiota of teeth with endodontic failure is mixed and contains microorganisms difficult to grow. Only CMP was effective in reducing the bacterial levels. (Supported by CAPES, FAPESP (12/23697-4) & CNPq 308162/2014-5).

054 EFFECT OF SODIUM ASCORBATE THE UNION OF RESISTANCE OF A SYSTEM TO ROUND DENTIN TREATED WITH IRRIGATION ENDODONTIC

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Aim: NaOCl is known to impair the bond strength of adhesive systems to dentin surfaces. Sodium ascorbate (10% solution) has been reported to re-establish bond strength to dentin. The aim of this study was to compare the in vitro effects of 10% sodium ascorbate on the bond strength of a two-step self-etching adhesive system to dentin of bovine teeth treated with 5.25% sodium hypochlorite, 17% EDTA, and their combinations. **Methods:** Thirty crowns of incisors were assigned to six groups: G1 (control) - 0.9% sodium chloride for 30 min; G2 - 5.25% NaOCl for 30 min; G3 - 17% EDTA for 3 min; G4 - 5.25% NaOCl for 30 min + 17% EDTA for 3 min + 5.25% NaOCl for 1 min; G5 - protocol for G4 plus 10% sodium ascorbate for 1 min; G6 - protocol for G4 plus 10% sodium ascorbate for 10 min. The adhesive system Clearfil SE Bond (Kuraray) was then applied. Blocks of resin (Filtek Z250 - 3M) were built on the dentin surface. Five sequential sticks were obtained from each tooth using in metallographic cutter (ISOMET 1000). The toothpicks were submitted to microtensile bond strength test. **Results:** Groups in which 17% EDTA (G3) was tested alone or associated with 10% sodium ascorbate for 1 min (G5) showed statistically higher values than those in which 5.25% NaOCl was tested alone or combined with 17% EDTA (G2 and G4, respectively). **Conclusion(s):** Within the limitations of the present study, the treatment using 10% sodium ascorbate for 1 min was effective in reversing the deleterious effects of 5.25% NaOCl on dentin adhesion.

055 EVALUATION OF CHEMICAL AUXILIARY SUBSTANCES IN ENTEROCOCCUS FAECALIS REDUCTION.

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The mechanical instrumentation may not remove all of the microorganisms during endodontic therapy, therefore such as significantly as the instrumentation is the use of chemical auxiliary substances (CAS) in the disinfection of root canals. **Aim:** To evaluate the microbial reduction of teeth contaminated with Enterococcus faecalis using different CAS. **Methods:** In triplicate, bovine teeth were contaminated with E. faecalis (ATCC 29212) for 15 days. Subsequently, they remained in contact for 1 minute with the CAS: 17% EDTA, 0.9% sodium chloride (SC), 10% citric acid (CA), 2% cat's claw (CC), mouthwash (MW) Colgate®, 30vol. hydrogen peroxide (H2O2), 6% and 2.5% sodium hypochlorite (NaOCl), 2% chlorhexidine (CHX) liquid and 2% CHX gel. Then, each specimen was transferred to a tube containing 1 ml of BHI broth and serial dilution (10-1 to 10-5) was performed. The samples and dilutions were seeded in petri dishes containing BHI agar for colony forming units (CFU) counting. **Results:** The CAS that showed better results in terms of bacterial reduction were: 6% NaOCl, 2.5% NaOCl, 2% CHX liquid and 2% CHX gel; eliminating E. faecalis from the samples tested. While the specimens treated with EDTA, CS, CA, CC, MW and H2O2 had 2.2x105; 1.9x105; 9.6x103; 2x103; 4x102 and 45 UFC counts, respectively. **Conclusion(s):** There were differences between CAS antimicrobial activity against the bacteria E. faecalis; the NaOCl and CHX solutions, at the concentrations tested, had a higher than 99.99% microbial reduction. (Supported by PIBIC-EM; FAPESP 2012/23697-4; CNPq 308162/2014-5; & CAPES)

056 INFLUENCE OF DIFFERENT IRRIGATING SOLUTIONS ASSOCIATED TO PHOTODYNAMIC THERAPY: (IL-1B; AND IL-6) PRODUCTION IN RATS

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Aim: This study evaluated the production of cytokines IL-1B; and IL-6 in vivo of photodynamic therapy compared with different irrigating solutions (2% chlorhexidine, 2.5%, 5% sodium hypochlorite and 0.9% sodium chloride as control) in the subcutaneous tissue of rats. **Methods:** The solutions were placed in polyethylene tubes and implanted into the dorsal connective tissue of 50 Wistar rats for 7, 15, 30, 60, and 90 days. The tubes was collected for cytokine evaluation by using an enzyme-linked immunosorbent assay. Statistical analysis was performed using ANOVA, with Bonferroni correction ($p < 0.05$). **Results:** The results showed no statistically significant difference ($P > 0.05$) for IL-1B;. The PDT showed higher levels at 7 and 90 days. At 15 and 60 days, 2% chlorhexidine reached the highest averages. At 30 days, 2.5% sodium hypochlorite was the group that had the highest average. For IL-6, there was a statistically significant difference, ($P < 0.05$). At 7 days and 60 days 2% chlorhexidine expressed higher. In 15 days, the sodium hypochlorite 5% had the largest average and at 30 days, 2.5% sodium hypochlorite. Control group and 2.5% sodium hypochlorite caused mild reactions after 30 days. **Conclusion(s):** PDT induced release of IL-1B; and IL-6, but similarly amounts compared to other sodium hypochlorite irrigating solutions (2.5% and 5%) and 2% chlorhexidine, showing biocompatibility.

057 MICROBIOTA ANALYSIS AND EFFECT OF CHEMO-MECHANICAL PREPARATION AND INTRACANAL MEDICATION IN ENDODONTIC FAILURE

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The persistence of intracanal infection is a major cause of endodontic failure. **Aim:** a) To characterize the microbiota associated with endodontic failure phenotypically (biochemical test) and genotypically (partial 16S rRNA gene sequencing) ; b) To analyze the efficiency of both techniques in microbial identification; c) To evaluate the effect of the chemical-mechanical preparation (CMP) and intracanal medication (MIC) in reducing bacteria. **Methods:** Microbiological samples from 20 single-rooted teeth with chronic apical periodontitis were collected before CMP, after CMP and after MIC. After culture and bacterial isolation, identification of isolates strains was performed. **Results:** The results showed the presence of a mixed microbiota containing Gram positive and Gram negative, facultative anaerobic and strict. Enterococcus faecalis was the most prevalent species, identified phenotypically (19/158) and genotypically (42/158). The sequencing has identified 10.12% of the samples in the genus level and 89.88 % at the species level, whereas the biochemical test identified 13.29% and 51.26% , respectively. After the CMP there was a bacterial reduction of 94.3 %, but after the use of MIC this value decreased to 86.7 %. **Conclusion(s):** Enterococcus faecalis was the most prevalent bacteria in teeth with endodontic failure; the most efficient identification method was the sequencing; the CMP showed significant effect on the reduction of infection content, whereas the MIC showed no additive effect in reducing these levels. (Supported by CAPES, FAPESP (12/23697-4) & CNPq 308162/2014-5).

058 SODIUM THIOSULFATE FOR RECOVERY OF BOND STRENGTH TO DENTIN TREATED WITH HYDROGEN PEROXIDE: IN VITRO STUDY

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Aim: The aim of this study was to evaluated the efficiency of sodium thiosulfate ($Na_2S_2O_3$) for restoring the bond strength to intracoronary dentin treated with 35% hydrogen peroxide (H_2O_2). **Methods:** Eighty crowns of bovine incisors were cut to expose the intrapulpal dentin. The samples were randomly distributed into 10 groups: G1- without bleaching; G2- bleaching (35% H_2O_2 for 40 min) + washing with 0.9% NaCl; G3 and G4- bleaching + washing with 0.9% NaCl + restored after 1 week and 2 weeks, respectively; G5 and G6- bleaching + 10% $Na_2S_2O_3$ for 5 and 10 min, respectively; G7 and G8- bleaching + 20% $Na_2S_2O_3$ for 5 and 10 min, respectively; G9 and G10- bleaching + 35% $Na_2S_2O_3$ for 5 and 10 min, respectively. After drying the specimens, the adhesive protocol was performed using the Scotchbond Multipurpose, followed by the confection of composite resin blocks. After 24 hours, the specimens were sliced to obtain 48 sticks for each group. The microtensile test was performed in the universal testing machine EMIC and converted into MPa. The resulting data were submitted to one-way ANOVA and Tukey-Kramer test ($p < 0.05$). **RESULTS:** The bond strength of the group 2 (positive control) was found to be statistically lower than groups 1 (negative control), 4, 6, 7 and 8. However, the negative control showed bond strength statistically equal to all groups in which was used the antioxidant protocol. **Conclusion(s):** washing with 20% sodium thiosulfate for 5 min has proved so effective in restoring the bond strength, than the waiting of 2 weeks for realize the adhesive restoration after internal bleaching.

059 TREPONEMA SPP. IN PERIAPICAL LESIONS ASSOCIATED WITH THE FAILURE OF ENDODONTIC RETREATMENT.

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Extraradicular root canal infections represent an obstacle to the resolution of the infectious after nonsurgical endodontic retreatment. Treponema species, are fastidious strict anaerobic spirochetes difficult to grow under current laboratory conditions, have been found in root canal infections and acute apical abscesses. **Aim:** This study investigated the presence of Treponema species in endodontic retreatment-resistant apical periodontitis; their association with the clinical/radiographic features; and the association between the target species. **Methods:** Microbial samples of periradicular lesions were collected from twenty-five adult patients referred to endodontic surgery after unsuccessful root canal retreatment. Nested-PCR and conventional PCR were used for Treponema detection. Twenty-three periradicular tissue samples showed detectable levels of bacterial DNA. Treponema species were detected in 28% of cases. The most frequently species were T. socranskii, followed by T. maltophilum, T. amylovorum, T. lecithinolyticum, T. denticola, T. pectinovorum and T. medium, T. vicentii was not detected. Positive statistical association was found between T. socranskii and T. denticola, T. maltophilum and T. lecithinolyticum. No association was detected between any target microorganism and the presence of clinical or radiographic features. **Conclusion(s):** In conclusion, Treponema spp. are present in periapical lesions from teeth with failure of the endodontic retreatment and can participate in the microbial communities associated with the maintenance of the inflammatory process in the apical tissues.

060 CAPTOPRIL EFFECTS ON PERIODONTAL DISEASE EXPERIMENTALLY INDUCED IN RATS - HISTOLOGICAL DATA

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Periodontal disease (PD) consists of a group of inflammatory diseases which result in destruction of tooth supporting structures. They are infectious, with etiological factors related to gram-negative microorganisms, and may have manifestations in several ways. Findings showed that mRNA expression exists in rat gingival tissue for all components of the Renin-Angiotensin System (RAS), the presence of renin as well as Angiotensin Converting Enzyme I (ACE) activity in rat gingival tissue, thus suggesting a possible correlation between the RAS and PD. **Aim:** Therefore, the aim of this study was to investigate whether captopril, an ACE inhibitor, alters the progression of experimentally-induced PD in rats. **Methods:** Thus, the model of PD induction by ligature placement around rat lower first molar was used. Animals were divided groups of 10 animals each, which were treated with captopril (via gavage, 30 mg/kg/day) or water (vehicle). It was performed pre- and post-induction treatment of PD. The techniques used in this study were: PD induction in rats, total RNA extraction, reverse transcription-quantitative polymerase chain reaction (RT-qPCR) and histological analyses. All the results were subjected to one-way analysis of variance (ANOVA) and represented means and respective standard errors. Differences between groups were considered statistically significant when $p < 0.05$. **Conclusion(s):** Based on the results, it was concluded that captopril was not able to decrease bone loss in PD in rats, although this drug altered the expression of mRNA for one RAS target (AT1a) and some mediators of inflammation in periodontal tissue such as, COX-2 and others.

061 COMPARISON OF SIMVASTATIN ANTIMICROBIAL ACTIVITY AGAINST REFERENCE AND CLINICAL STRAINS OF S. AUREUS

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Aim: Staphylococcus aureus is one of the main pathogens implicated in nosocomial infections; its ability to form biofilms makes treatment difficult. Simvastatin, which are important lipid-lowering agent were effective in the reduction of in vitro S. aureus biofilms. However, there are marked differences in the characteristics of reference strains and clinical strains, especially in relation to pathogenicity and biofilm formation. Thus, the aim of this study was to evaluate the effect of Simvastatin against clinical strains compared to reference strains of S. aureus. **Methods:** Cultures of 5 reference strains (ATCC 29213, 33591 MRSA, MRSA 43300, 14458 and 6538) and 5 clinical strains (HC 3817719, 10106876, 9120358, 12092392, 985444) of S. aureus were submitted to the Test of Minimum Inhibitory Concentration (CLSI). Biofilm formation capacity was subjected to staining quantification with crystal violet. Statistical analysis was performed using Kruskal-Wallis test and the significance level was 5%. **Results:** The MIC values were 15.65 µg/ml for strain 29213 and 31.25 µg/ml for the others. Simvastatin in concentrations from 1/16xMIC up to 4xMIC significantly reduced S. aureus 29213 biofilm formation. Furthermore, despite clinical strains have formed more biofilm, Simvastatin was also able to reduce biofilm formation of clinical isolates in concentrations from 1/32xMIC up to 4xMIC. **Conclusion(s):** These results strengthen the potential of simvastatin as an antibiotic prototype, since it showed an ability to reduce biofilm formation in both clinical and reference strains.

062 EFFECT OF VANCOMYCIN ENCAPSULATION IN LIPOSOMES ON STAPHYLOCOCCUS AUREUS BIOFILMS.

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Aim: The objectives of this study were to develop and characterize three liposomal formulations of vancomycin containing cationic (CAT), fusogenic (FG) and neutral lipids (NT), and evaluate the antimicrobial activity of these formulations on Staphylococcus aureus. **Methods:** Vancomycin in a concentration of 10 mg/mL was incorporated in three types of liposomes: NT (EPC:Col:α-tocopherol, 4:3:0.07), FG (DOPE:DPPC:CHEMS:α-Tocopherol, 4:2:4:0.07) and CAT (EPC:Sa:Col:α-tocopherol, 1:0.5:0.5:0.07), and then obtained vesicles of 100 nm. The formulations were characterized in terms of size, polydispersity and Zeta potential. For antimicrobial activity, it was performed the Minimum Inhibitory Concentration tests (MIC) and Adherence Inhibition test against S. aureus (ATCC 29213) biofilm. **Results:** The average and standard deviation of liposomal size for NT, FG and CAT were respectively: 175,7±0,5, 135,7±2,36 and 174±0,46 nm; the values of polydispersity were 0,162±0,004, 0,121±0,01 and 0,208±0,01; and the Zeta potential were -11,1±0,4; -54,7±1,6 and +76,5±1,5 mV. The MIC for the free vancomycin, NT and FG liposomes was 1,56 µg/mL, while for the CAT liposome was 3,13 µg/mL. In respect to the biofilm formation, all liposomal formulations had a similar inhibition profile to the free vancomycin (p>0,05, ANOVA, Bonferroni). **Conclusion(s):** The liposomal formulations developed showed satisfactory physicochemical characteristics, while its antimicrobial activity was similar to the free vancomycin. Future studies will be performed to assess the penetration ability of vancomycin liposomal formulations in mature biofilm.

063 INHIBITION OF BACTERIA AND YEAST BIOFILM ADHESION BY VEGETABLE RESIDUES AND GEOPROPOLIS.

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Brazil is one of the largest producers of agro-industrial residues in the world. In addition to this issue, there has been an increase in the number of resistant microorganisms to antimicrobials, which encourages the investigation of sustainable alternative sources of naturally-occurring compounds. **Aim:** The aim of this study was to verify the effect of plant residues on the inhibition of adhesion of oral bacteria and yeast biofilms. **Methods:** Agro-industrial residue extracts of pomegranate 1 and 2 (Punica granatum); geopropolis (Melipona scutellaris bee), grapes (Vitis sp, varieties Pinot noir, Petit verdot and Verdejo) and coffee (Coffea arabica) were tested for their ability to inhibit biofilm adhesion of bacteria (n = 10) and yeast in 96-well plates for 24-72 h at 37°C. The results indicated that geopropolis residue (125 - 250µg/mL) inhibited *S. mutans* UA159; pomegranate 2 was active against P. aeruginosa ATCC27853 (125 - 250µg/mL); both pomegranate 1 (62.5 - 125µg/mL) and pomegranate 2 (250-500µg/mL) inhibited *C. albicans* CBS562. **Conclusion(s):** These results point out the need to isolate active compounds from residues, which may be useful for the control of virulence and infection caused by these microorganisms. Therefore, the use of such residues that would otherwise be discarded in the environment could lead to the discovery of new molecules with antibiofilm activity.

064 EVALUATION OF TRANSCRIPTION FACTORS EXPRESSION ON ODONTOBLAST-LIKE CELLS EXPOSED TO PARATHYROID HORMONE (PTH).

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Dentinogenesis is a complex process where odontoblasts secrete a collagen-based organic matrix, which gradually become mineralized by hydroxyapatite crystals deposition. Many non-collagenous proteins synthesized by odontoblasts are responsible for promoting and regulating the mineralization of collagen fibers and growth of hydroxyapatite crystals. The expression of these proteins is modulated by various transcription factors during the dentinogenesis. Parathyroid hormone (PTH) is the main regulator of calcium ion homeostasis in the body. It has been shown that changes in serum PTH levels lead to an abnormal formation of dentin and that intermittent PTH administration causes an increase in the dentin apposition rate, microhardness and Ca and P relative concentration in dentin of mice incisors. In previous studies, we demonstrated that PTH modulates mineralization, gene expression, apoptosis and cell proliferation of odontoblast-like cells (MDPC-23) in a time-dependent mode. Furthermore, the PTH-induced proliferative and apoptotic modulation was mediated differently by PKA and PKC signaling pathways. **Aim:** In the present study, we propose investigate in vitro expression of the transcription factors Runx2, Osterix, Twist1 and Klf4 in odontoblast-like cells (MDPC-23) exposed to hPTH (1-34) for different times, and investigate whether this modulation is PKA-dependent and/or PKC-dependent pathways.

065 ASSESSMENT OF ADHESIVE POTENTIAL AND CHEMICAL PROPERTIES OF NEW SELF-ETCH MONOMERS

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Aim: The aim of this study was to assess the adhesive potential and chemical properties of new Self-etch monomers: HEMA based. **Methods:** A experimental blend was prepared: BisEMA (25%), UDMA (22%), TEGDMA (15%), water (10%), ethanol (25%), 0,5% de CQ, 1% EDAB and 1% de DPIHP. The main blend was divided into three groups with 15% wt of Succinate-HEMA, Phtalate-HEMA, Phosphate-HEMA. Water sorption test were made (n=10) using a 6mm x 1mm disc. The contact angle was assessed using 3µL of each adhesive. Flexural strength and Young modulus was tested using ISO 4049. Degree of Conversion (DC) was tested (n=5) using a ATR-FTIR, Atomic Absorption Spectroscopy was used to assess the Ca++ bond potential of each monomer (n=5) and µTensile Bond Strength (µTBS) (Bovine teeth) (n=10). The results showed that HEMA-Suc had a better water sorption, however the HEMA-Pht obtained a better solubility. The three had a similar DC, HEMA-P had a better behavior bonding Ca++, and µTBS just HEMA-Suc was similar to HEMA-P. **Conclusion(s):** Concluding that the HEMA-Suc could be used as a Self-Etch monomer in adhesives.

066 CORROSIVE AND MICROSTRUCTURAL BEHAVIOR OF CPTI AND TI6AL4V ALLOY SUBJECTED TO SIMULATOR BODY FLUID AND ARTIFICIAL SALIVA

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The electrolyte changes in the peri-implant environment can degrade the oxide layer which allows the exchange of surface titanium (Ti) ions, promoting to the corrosion process. **Aim:** The aim of this study was to investigate the corrosive and microstructural potential on Ti-6Al-4V alloy and cpTi with machined surface or conditioned with double acid-etched, in simulator body fluid or artificial saliva. **Methods:** It were obtained 12 discs of cpTi and 12 discs of Ti-6Al-4V alloy with 15 mm diameter and 2 mm thickness. For the electrochemical assay (n=3), tests such as open circuit potential and electrochemical impedance spectroscopy were conducted in SBF and saliva. The corrosion current density and passivation, corrosion potential, capacitance and polarization resistance were determined. The surface discs were characterized by scanning electron microscopy (SEM), atomic force microscopy (AFM) and hardness before and after of the electrochemical test. The potentiodynamic curve of cpTi and Ti-6Al-4V showed active-passive transition in all groups. Discs with conditioned surface had lower constant passivation compared to the machined surface, in both electrolytes, regardless of the Ti. SEM and AFM images of both Ti showed no changes in the Ti microstructure when compared baseline and post-corrosion. The microhardness on the post-corrosion period showed a slight decreasing in cpTi and Ti-6Al-4V conditioned with acid. **Conclusion(s):** In conclusion, under physiological conditions the cpTi and Ti-6Al-4V showed similar corrosion behavior, and the machined surface showed lower corrosion resistance.

067 EFFECT OF ACIDIC SOLUTIONS IN THE EROSION OF TOOTH ENAMEL RESTORED WITH MATERIALS ABLE OF RELEASING FLUORIDE PROCESS

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Aim: The aim of this in vitro study was to evaluate the effect of erosive pH cycling with solutions that simulate dental erosion, the Knoop hardness of dental enamel, restored with different materials able of releasing fluoride. **Methods:** The factors are: restorative materials in three levels (total etch adhesive system + composite resin , self-etching adhesive system with fluoride + composite resin , self-etching adhesive system with fluoride and bromide + composite resin) , the distance from the interface at two levels (30 um , 70 um) and the acid solution into three levels (deionized water , citric acid and hydrochloric acid). 18 selected bovine teeth were used and divided into 3 groups according to the restorative material and means for dipping used (n = 6). The samples were subjected to alternate treatments of demineralization (steps 30s) and remineralization (steps 1h) up to a total of 150s demineralization (beginning and ending with the demineralization). The hardness obtained before and after cycling erosive was used to determine changes in the dental substrate, the enamel. The microhardness data were subjected to statistical normality tests and specific tests to verify the significance between means (a= 0.05). **Conclusion(s):** The results show that acid solutions were able to change the hardness of dental enamel, and the adhesive material provided higher values of microhardness for both the distance of 30um, and for a distance of 70um, was the adhesive system Clearfil SE Protect.

068 EFFECT OF CURING MODE ON BOND STRENGTH OF TWO RESIN CEMENTS TO DENTIN

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Aim: The aim of this study was to evaluate the effect of curing modes on bond strength of two resin cements (RelyX Ultimate and GCem LinkAce) to dentin. **Methods:** Occlusal dentin surfaces of 40 human third molars were exposed, flattened and randomly divided into 4 groups (n=10): 1- RelyX Ultimate self-cure, 2 – RelyX Ultimate dual-cure, 3- GCem LinkAce self cure; 4 – GCem LinkAce dual-cure. Resin disks (2.00 mm high) simulating indirect restorations were cemented to the teeth. After 24 hours, the teeth were sectioned to obtain sticks with approximately 1 mm2 at the cross-sectional interface area. They were tested in tension until failure in a universal testing machine (EZ Test, Shimadzu). The failure modes were analyzed to determine where the failure occurred: 1- cohesive failure within dentin; 2- cohesive failure within the hybrid layer; 3- cohesive failure within cement; 4- adhesive failure between adhesive and resin cement, 5- adhesive failure between dentin and adhesive/cement, 6- mixed failure. Data were analyzed by two-way ANOVA and Tukey's test (5%). When polymerizing, the light-activation increased the bond strength only for RelyX Ultimate, which was significant higher than GCem LinkAce in both curing modes. Dentin bond strength of GCem LinkAce was not affect by curing mode. **Conclusion(s):** The light-activation can increase the dentin bond strength of resin cement, but this outcome is material-dependent.

069 EFFECT OF TEMPERATURE, CURE MODE AND AGEING ON BOND STRENGTH OF RESIN CEMENTS TO DENTINE

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Rising the temperature of the composite between 54°C and 60°C may reduce the composite viscosity, improving manipulation, restoration placement, mechanical properties and it may not harm the pulpal tissues. On this temperature range, polymerization kinetics may be fast and hinder the restoration placement. **Aim:** However, as oral cavity temperature is around 37°C is that this study tried to evaluate the influence of temperature rising of dual-cured resin cement (Rely X Ultimate with Scotchbond Universal adhesive) until this physiological oral temperature, and the effect of curing mode, on bond strength to dentin after 6 months of ageing in water. **Methods:** Twenty human third molars were sectioned into two halves and divided into four groups (n=10). Indirect resin blocks were cemented to the dentin, following the manufacturer's instructions. The treatment groups were: I - Rely X Ultimate cement (RU) light-cured at 37°C; II- RU self-cured at 37°C; III - RU light-cured at 25°C; and, IV- RU self-cured at 25ºC. Hemi-teeth from all groups were sectioned into beans (cross-sectional area: 0.8±0.1mm2) and divided in two equal parts to be stored during two ageing periods (24h/6 months at 37°C). All specimens were submitted to tensile bond strength test. Failure modes were classified using scanning electron microscopy. Statistical analysis consisted of a split-split plot ANOVA (three factors) and Fisher's LSD test (α=0.05). **Conclusion(s):** Providing light curing to restorations significantly improved bond strength to dentine. Six-months ageing period reduced about 50% the bond strength for self-cured mode, while temperature revealed no significant influence.

070 EFFECT OF WATER STORAGE AND BONDING MATERIAL ON BOND STRENGTH OF CERAMIC TO DENTIN

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Aim: this study evaluated the effect of adhesive systems associated two different resin cements, on the microtensile bond strength (μTBS) of the ceramic(IPS Empress Esthetic) and bovine tooth, at water storage(24 hs and 6 months). **Methods:** Thirty ceramic blocks (8mm long x 8mm wide x 4mm thick) were fabricated and divided into 3 groups (n=10): 1-RelyX U200(U200);G2-RelyXU200+Single Bond 2 (U200 SB);and,G3-Variolink II+Single Bond2 (VAR SB). The ceramic blocks were bonded to a bovine tooth blocks according to groups 1, 2 and 3 and placed under a 500-g load for 2 min.The cement excess was removed and light-activation was carried out with 100s total exposure time using BluephaseG2.After, stored in distilled water at 37ºC for 24 h, the specimens were sectioned perpendicular to the bonding area to obtain sticks with a cross-sectional area of 1mm²(100 sticks per group). Half of the sticks(n=50) were stored in distilled water at 37oC for 24 h and half for 6 months. The μTBS testing was performed after storage times in a testing machine (EZ Test) at a crosshead speed of 1.0 mm/min. Data were submitted to ANOVA and Tukey post hoc test (n=0.05). **Results:** The μTBS values (MPa) were U200(20.7±2.2); U200 SB(27±0.5); and, VAR SB(30±2.5) for 24 h and U200(10.5±0.8); U200 SB (18.2±0.7); and, VAR SB(22.6±1.6) for 6 months. The group VAR SB showed significant higher μTBS (p<0.05) than other two groups.Significant differences in μTBS (p<0.05) were found between 24 h and 6 months storage times. **Conclusion(s):** storage time and bonding materials showed significant influence on the μTBS of ceramic to bovine tooth.

071 EFFECTIVENESS OF PRIMER APPLICATION FOLLOWED BY PLASMA TREATMENT ON THE BOND STRENGTH OF A RESIN CEMENT TO ZIRCONIA

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The aim of this study was to evaluate the bond strength of a resin cement (Panavia F, Kuraray) to two zirconia ceramics (Lava, 3M ESPE and Katana, Noritake), after the application of priming agents (Z-Prime, Bisco or Monobond Plus, IvoclarVivadent) followed by non-thermal plasma treatment. **Methods:** Sixty Lava zirconia and 60 Katana zirconia plates were cut accordingly to the study required dimensions (13 mm long X 5 mm wide X 1 mm thick) and divided randomly among 12 groups. The surfaces of the pieces were smoothed with sandpaper of granulation # 600 and treated in accordance with each experimental group. For all specimens, two resin cement cylinders were made using a silicone matrix with 1, 4 mm internal diameter and 1 mm height. The shear test was conducted in a testing machine (EZ-Test, Shimadzu, Japan) and bond strength values were reported in MPa. Data were analyzed by two-way ANOVA and Tukey's test (5%). **Conclusion(s):** The plasma or primer application did not increase the bond strength of resin cement to zirconia (Katana and LAVA) and when plasma was applied overprimed zirconia the bond strength reduced.In conclusion, any treatment (plasma and primer) purposed in this study did not improve the bond strength of resin cement to zirconia.

072 EFFECTS OF RADIOTHERAPY ON PHYSICAL-MECHANICAL PROPERTIES OF COMPOSITE RESINS: A SYSTEMATIC REVIEW

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Background. Radiotherapy is one of the therapeutic options for head and neck cancer patients due to high doses of ionizing radiation applied during the treatment affect neoplastic cells. Nevertheless, side effects in surrounding tissues have been observed during and after radiotherapy. Many dental materials, including composite resins have been used to restore teeth in these patients, but little is known about the effects of ionizing radiation on physical-mechanical properties of these restorative materials. **Aim:** To study the scientific evidence about the effects of radiotherapy on physical-mechanical properties of composite resins. **Methods:** A systematic search in PubMed, EMBASE and Scopus databases was performed, using the keywords (MeSH): "radiotherapy", "ionizing radiation" and "composite resins". The search resulted in 82 articles but in the end, only 3 articles were included in the present systematic review because they met all inclusion criteria. Results. Main physical-mechanical properties evaluated in the studies were flexural strength, radiopacity, micro hardness, wear resistance, diametral tensile strength, water sorption and solubility of composite resins. Maximum doses of ionizing radiation ranged from 60 to 80Gy and were applied by Cobalt-60 devices. Radiotherapy did not affect physical-mechanical properties of these restorative materials. **Conclusion(s):** Regardless of therapeutic doses of ionizing radiation applied during radiotherapy and type of composite resins, no alteration in physical-mechanical properties of these restorative materials was observed.

073 INFLUENCE OF BIOACTIVE PARTICLES CONCENTRATION ON SORPTION, SOLUBILITY AND CONTACT ANGLE OF RESIN INFILTRANTS.

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Aim: to evaluate the water sorption (WS), solubility (S) and contact angle (CA) of experimental resin infiltrants with different bioactive particles concentrations. **Methods:** A control blend was made with TEGDMA (75wt%) and BisEMA (25wt%). Four bioactive fillers were added in different concentrations (1%, 5%, 10% and 15%wt) in the control blend: Hydroxyapatite (Hap), amorphous calcium phosphate (ACP), Zinc-polycarboxylate bioactive glass (BAG-Zn) and tricalcium phosphate (TCP) modified calcium silicate cements (HCAT). The WS and S were evaluated according to ISO 4049:2009 and the CA was evaluated in a goniometer. Data were submitted to 2-way ANOVA and Tukey's test (p<.05). The experimental groups were compared to control by 1-way ANOVA and Dunnet test (p<.05). **Results:** ACP showed the lowest CA, except for 15% concentration; Hap produced the highest CA. Control group (22.1°) showed significantly lower CA than 15% ACP. The WS of 5% BAG-Zn (36ug/mm3), 10% TCP (36.6ug/mm3) and 10% Hap (49.1ug/mm3) were significantly lower than infiltrants with the same particles in different concentrations. The addition of bioactive particles significantly reduced WS, except for 1% particles. The S significantly decreased as the concentration of particles increased. The 15% concentration of particles significantly reduced the solubility of infiltrants (TCP-15%-8.3ug/mm3; Hap-15%-5ug/mm3; BAGZn-16.6ug/mm3; ACP-6.2ug/mm3) compared to control (38.7ug/mm3). **Conclusion(s):** high concentration of particles decreased the water sorption and solubility of the resin infiltrants. The contact angle depends on the type and amount of bioactive particles.

074 ANTIMICROBIAL ACTIVITY OF COMMERCIAL DENTIFRICE AGAINST *STREPTOCOCCUS GORDONII* AND *STREPTOCOCCUS SANGUINIS*

MARIANA VALÉRIO PALLONE; FELIPE JÓIA; TALITA SIGNORETI GRAZIANO; JOSÉ FRANCISCO HOFLING; RENATA DE OLIVEIRA MATTOS-GRANER; RAFAEL NOBREGA STIPP*

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Primary colonizers (Pc) adhere to tooth surfaces and allow the attachment of others species known as late colonizers, which are associated with diseases such as caries. **Aim:** The aim of this study was to evaluate the antibacterial activity of 34 commercial dentifrices against PC *Streptococcus* gordonii and *Streptococcus sanguinis*. **Methods:** A Minimum Inhibitory Concentration (MIC) and a Minimum Bactericidal Concentration (MBC) assays were done according to the CLSI protocol (dentifrices' dilutions ranging from of 1:8 to 1:4096). Microorganisms were cultivated for 24 hours at 37°C and 10% CO2. **RESULTS:** All dentifrices were bactericidal for both species, but varied among potency: for S. gordonii, 35.3 % had a low activity (1:8 – 1:64); 61.8 % had a satisfactory activity (1:128 – 1:512); and 2.9 % showed an excellent activity (1:1024 – 1:4096); for S. sanguinis, these values were: 8.8 % (1:8 – 1:64); 82.4% (1:128 – 1:512) and 8.8% (1:1024 – 1:4096). **Conclusion(s):** There is variation in the antimicrobial activity of dentifrices available on the market, and most dentifrices have a satisfactory activity against S. gordonii and S. sanguinis. (CAPES PNPD 2905/2010, FAPESP 2012/50966-6, PIBIC-CNPq)

075 ANTIMICROBIAL ACTIVITY OF COMMERCIAL DENTIFRICE AGAINST *STREPTOCOCCUS* MITIS AND *STREPTOCOCCUS* SALIVARIUS

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Primary colonizers (Pc) adhere to tooth surfaces and allow the attachment of others species known as late colonizers, which are associated with diseases such as caries. **Aim:** The aim of this study was to evaluate the antibacterial activity of 34 commercial dentifrices against Pc *Streptococcus* mitis and *Streptococcus* salivarius. **Methods:** A Minimum Inhibitory Concentration (MIC) and a Minimum Bactericidal Concentration (MBC) assays were done according to the CLSI protocol (dentifrices' dilutions ranging from of 1:8 to 1:4096). Microorganisms were cultivated for 24 hours at 37°C and 10% CO2. **RESULTS:** All dentifrices were bactericidal for both species, but varied among potency: for S. mitis, 11.8 % had a low activity (1:8 – 1:64); 85.3 % had a satisfactory activity (1:128 – 1:512); and 2.9 % showed an excellent activity (1:1024 – 1:4096); for S. salivarius, these values were: 8.8 % (1:8 – 1:64); 82.4% (1:128 – 1:512) and 8.8% (1:1024 – 1:4096). **Conclusion(s):** There is variation in the antimicrobial activity of dentifrices available on the market, and most dentifrices have a satisfactory activity against S. mitis and S. salivarius. (CAPES PNPD 2905/2010, FAPESP 2012/50966-6, PIBIC-CNPq)

076 ANTIMICROBIAL ACTIVITY OF PLANT ESSENTIAL OILS ON *STREPTOCOCCUS* SPP

THAINÁ MARINA RIBEIRO PAREDES, SIMONE NATALY BUSATO DE FEIRIA, FELIPE JÓIA, TALITA SIGNORETI GRAZIANO, JOSÉ FRANCISCO HOFLING, RENATA DE OLIVEIRA MATTOS-GRANER, RAFAEL NOBREGA STIPP.*

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Primary colonizers (Pc) adhere to tooth surfaces and allow the attachment of others species known as late colonizers, which are associated with diseases such as caries. **Aim:** The aim of this study was to evaluate the antibacterial activity of plant essential oils (EOs) on the Pc: *Streptococcus* sanguinis; S. gordonii; S. oralis; S. mitis; and S. salivarius. **Methods:** A Minimum Inhibitory Concentration (MIC) and a Minimum Bactericidal Concentration (MBC) assays for thyme, cardamom and D-dihydrocarvone EOs were done according to the CLSI protocol (MIC ranging from 1000 µg/mL to 43 µg/mL). Microorganisms were cultivated for 24 hours at 37°C and 10% CO2. **RESULTS:** Thyme EOs MIC was 0.17 mg/mL and MBC was 0.17 mg/mL, inhibiting all species equally. Cardamom and D-diydrovarvone EOs showed no inhibitory effect. **Conclusion(s):** Thyme EO has bactericidal activity even at low concentrations and thus might be considered as a potential bacterial growth inhibitor. CAPES PNPD 2905/2010, FAPESP 2012/50966-6, SAE/UNICAMP

077 CALCIUM INDUCES PORPHYROMONAS GINGIVALIS BIOFILM FORMATION

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Periodontitis affects the supporting tissues of the teeth and is caused by microorganisms such as Porphyromonas gingivalis growing in biofilms. **Aim:** to evaluate substances including proteins, amino acids, metallic elements and vitamins that may induce biofilm formation in P. gingivalis. **Methods:** Biofilms were grown with or without additives under anaerobic atmosphere at 37 ºC for 24 hours. Total biomass was quantified by colorimetric assay and the biofilm structure was characterized using Confocal Laser Scanning Microscopy. **RESULTS:** Among the tested substances, only CaCl2 at >0.8 mg increased biofilm formation (p>0.05, Kruskal-Wallis). The bacterial attachment was lost when a Ca++ chelator was added in the culture medium. **Conclusion(s):** The findings suggest that calcium could induce biofilm formation in P. gingivalis and it may be related with the initial stages of the biofilm development.

078 EVALUATION OF THE SUSCEPTIBILITY OF ORAL *STREPTOCOCCUS* SSP. TO THE MARKING BY THE COMPLEMENT SYSTEM

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Aim: to investigate the frequency and intensity of C3b marking by the complement system between strains isolated from human blood and oral cavity in 4 species of oral *Streptococcus*. The deposition of C3b was evaluated in 36 strains among the species S. mitis, S. oralis, S. sanguinis and S. gordonii isolated from blood and oral cavity. **Methods:** For that objective, 10 µl of bacteria (1x106 ufc/ml) were incubated with 10 µl of 20% human serum (30 min, 37ºC), and C3b proteins bonded to the bacterial surface were marked with anti-C3b-FITC antibodies. The frequency of marked bacteria and the intensity of C3b deposition were acquired by flow cytometry. **Results:** The average of the frequencies and intensities of C3b deposition in blood isolated strains of the species S. mitis, S. oralis, S. sanguinis e S.gordonii was respectively 3.251,287 (± 3472,915), 4.713,881 (± 3793,789), 5.051,933 (± 7611,742) and 2.809,332 (± 743,9583). The C3b deposition for the oral cavity isolated strains of the respective species was significantly superior (p<0,05; Kruskall-Wallis with Dunnet post-test); respectively 17.567,67 (+ 14.019,52), 8.922,10 (+3938,128), 687,57 (+477,0285) and 7.011,899 (+3450,832). **Conclusion(s):** There is great diversity on the susceptibility to C3b deposition in the evaluated species. Blood isolated strains present lower susceptibility to the marking by Cb3 than strains isolated from the oral cavity. Financial Support FAPESP: Proc. 2012/50966-6 Proc. 2013/07098-6

079 INHIBITION OF HYPHAE FORMATION AND ANTIFUNGAL ACTIVITY IN CANDIDA SPP. BY MENTHA SPP. ESSENTIAL OIL

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Studies with essential oil of Mentha species related from the literature have shown a potential antimicrobial activity against Candida species. **Aim:** The aim of this study was to evaluate the activity of essential oils of Mentha spp. against Candida spp. **Methods:** leaves of Mentha spp. (M. aquatica, M. arvensis and M. piperita) were collect monthly for one year and its oil extracted by hydrodistillation (Clevenger) and analyzed according to your yield and composition by GC-EMS. The essential oils were test against Candida species (C. albicans, C. parapsilosis, C. dubliniensis, C. guilliermondii, C. krusei, C. rugosa, C. tropicalis and C. glabrata) determining minimum inhibitory concentration (MIC) by the microdilution broth method (CLSI, 2008). The oils had better antifungal activity were tested on the formation of hyphae, in which the yeast was incubated in the presence of 10% FBS and 2mg/ml of essential oils for 16 hours in 10% CO2, the amount of hyphae was estimated by reading spectrophotometer microplate. **Results:** Essential oils of Mentha spp. collected from april to september showed growth inhibition of planktonic cells of Candida spp. at a concentration of 2mg/ml. The activity of inhibiting the formation of hyphae of C. albicans (CBS 562) was up to 38% for these oils. **Conclusion(s):** The results of the study show that environmental conditions can influence the performance antifungal for Candida spp. and essential oils of Mentha spp. can be a potential inhibitor factor hyphae formation on the yeast Candida albicans.

080 INHIBITORY EFFECT ON ORAL MICROORGANISMS, IN VITRO, BY THE OIL OF COPAIFERA MULTIJUGA.

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Introduction: Extracts, oils and bioactive components of medicinal plants has long been employ in the treatment of diseases. In this context, plants as Copaifera spp., has shown some potential for the discovery of new bioactive components that may act in the development of a new antimicrobial drugs. **Aim:** The purpose of this study was to evaluate the antifungal and antibacterial activity in vitro of Copaiba oil (Copaifera multijuga) against microorganisms found in the oral cavity. **Methods:** The oil of Copaifera multijuga was tested for antibacterial and antifungal activity by determining minimum inhibitory concentration (MIC) on different species of microorganisms as *Streptococcus mutans*, *Streptococcus* gordonii, *Streptococcus* mitis, Staphylococcus aureus, Pseudomonas aeruginosa, Escherichia coli and Candida albicans through the technique of microdilution broth of susceptibility to antimicrobials (CLSI, 2008/CLSI, 2003). **Results:** The oil showed inhibiting effect of growth only in the species: *S. mutans* (0,031mg/ml) S. gordonii (0,062mg/ml) and S. mitis (0,250mg/ml). For the others tested species inhibitory effect was not observed, and the initial concentration of oil used for tests was 2mg/ml. **Conclusion(s):** The oil of Copaifera multijuga shows inhibitory activity of planktonic growing cells on some species of oral streptococci in different concentrations for each species tested, being more effective in inhibiting the growth of *Streptococcus mutans*.

081 BITE MARKS IDENTIFICATION SKILLS IN SEXUAL CRIMES

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In today's society women, GLBTS, children and adolescents have suffered numerous attacks culminating with rape or death. Generally such crimes leave a number of known brands like bite marks. These have differentiating characteristics that allow the individualization of the dentition of the attackers as efficiently detected and duly registered by molding and subsequent measurements. The dentist has the task by Law 5081/66 the right to conduct civil skills, criminal, labor and administrative headquarters. Such marks can often be seen in homicides, sexual offenses, cases of domestic and child abuse, among others. **Aim:** This study aimed to demonstrate the importance of studying the bite marks as a method capable of establishing the identity of individuals, practitioners or not offenses, and assist in the exclusion of suspects or point guilt elements. In cases of sexual crimes can be used as an expert evidence more for allowing their incorporation into the probative set of a criminal investigation, with the possibility of giving a great incriminating or exclusive power. **Conclusion(s):** The authors concluded the need of the surgeon-dentist expert, become part of the professionals that meet the situations of rape, necrophilia and aggression against children and adolescents, especially highlighting the responsibility of the same by claiming the identity of any bite mark, as there is a series of restrictions on freedom to criminals in this criminal classification and even to life.

082 HUMAN IDENTIFICATION BY MORPHOLOGICAL RECONSTRUCTION OF FRONTAL SINUS; THE EVOLUTION OF A TECHNIC

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Human identification is a cluster of processes that have a standard methodology and are internationally accepted to determine the identity of a person, alive or dead, fully or just fragments. There are considered primary methods of identification the DNA analysis, fingerprinting and forensic dentistry. In this last, this seeks to compare the dental characters recorded in life and compared with those obtained after death. **Aim:** This work report the identification of a missing victim that had a medical tomography (held in life and constant medical records), due to a stroke. **Methods:** The skull of a corpse found suggestive of belonging to the alleged victim was subjected to cone beam CT was compared with the existing examination. A semi-automatic segmentation software was used to reconstruct the frontal sinus of both CT and these were compared by overlapping, obtaining perfect combination, indicating a positive identification. The improvement of the identification technique by frontal sinus overlapping using three-dimensional technology of CT scans shows unique anatomical details, fact that the conventional technique using X-rays barely would noticed. **Conclusion(s):** The authors conclude that dentists or forensic-dentists who will make forensics investigation should improve and be prepared for the technological innovations which allow identify a person more efficiently, faster, and better quality of forensic examinations, with a low cost when compared to DNA tests, collaborating with justice quickly and accurately.

083 LABOR DENTAL EXPERTISE

MARIA JÚLIA ASSIS VICENTIN; CRISTIANE SCHMIDT, VIVIANE ULBRICHT, RAFAEL ARAUJO, ALÍCIA PICAPEDRA, MARÍLIA DE OLIVEIRA COELHO DUTRA LEAL, LUIZ FRANCESQUINI JÚNIOR E PAULO ROBERTO NEVES.*

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The Dental-Surgeon has by Law 5081/66, the right to perform civilian expertise, criminal, labor and administrative headquarters. Expertise is the whole operation ordered by judicial or police, which is intended to give technical explanations to justice. **Aim:** This search among to verify the existence of a causal link between the accident and the damage suffered by periciado. **Methods:** The periciado in his work, was a trench of 2.30 m deep and large extent, however, the lateral bounds of the same, plummeted come to bury it. After the incident, stayed 2 days unconscious, and after 54 days was placed contention plate on the chin region, through a late diagnosis of mandibular symphysis fracture, in addition to this region was draining pus. The Periciado aimed at a small repair damage, having a negative in the first instance and only after the completion of expertise is that obtained a favorable decision on appeal.. The expertise that it had hypertension, Class I occlusal with midline deviation of 1.5 mm, and a discrete scar at the bottom of Council region and periodontitis, with widespread presence of tartar and horizontal bone loss. As a result of the generated sequels, the periciado reported feeling "tingling" in the mental region, even after the expiry of 10 years. Said the periciado that this situation hinders in their daily activities (eating, talking, playing the saxophone in worship, etc.). **Conclusion(s):** We conclude that this is due to numbness in the chin region and the Dental-Surgeon (Expert) should know the labor laws, social security and civil, and dental knowledge that permit establishing a diagnosis and prognosis safe and reliable.

084 OSTEOLOGICAL COLLECTIONS: BACKGROUND AND APPLICATION IN FORENSIC ANTHROPOLOGY

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The viability of research in this area requires the establishment of documented osteological collections - whose biographical data of individuals are known. These collections validate scientific methods to be used in anthropological research of a Forensic anthropology emerged from the need to know human skeleton characteristics. particular population group. Forensic anthropology based on these documented skeletal collections provides reliable data for determinations and measurements to be done on human remains. **Aim:** The objective of this paper is to present - from literature review - the scientific basis, ethical and legal about the osteological collections. **Methods:** A search was performed in the databases Pubmed (Medline) and Bireme. We included articles published between 1988 and 2015. Among publications, were considered articles in: English, Portuguese and Spanish and 46 of them were selected. **Results:** Throughout the twentieth century the number of museums with remains of human skeletons increased rapidly; in 1998, 700 institutions had about 110 individuals on average. In surveys, the vast majority of large-scale indices used worldwide were produced from Terry collections at the Smithsonian and the Hamman-Todd in Cleveland. The collections continue to form, one of the latest is Caritas Collection in Argentina. **Conclusion(s):** This work demonstrates the enormous importance of osteological collections for the strengthening of forensic anthropology and his great contribution worldwide, boosting the production of scientific papers and the training of students in the area.

085 PILOT PROJECT: DETERMINING THE TIME OF DEATH AND ITS FEATURES IN THE STATE OF RORAIMA IN FORENSIC DENTISTRY

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The cronotanatognose is used in Forensic Dentistry when unidentified bodies are found and usually these are already in the decay phase, making it difficult to determine the time of death. This moment is important for justice and serve from the time they know their appearance and evolution, according to the climatic conditions of the environment for a correct diagnosis. **Aim:** The objective of this study is to present a pilot project on the time of death in the state of Roraima. **Methods:** Thus, they studied 05 cases identified who provided the day of the disappearance of the individual, body meeting day, exam in the IML and cadaverous features. The state's climate is sub-humid tropical and humid equatorial, with fairly regular temperature. Throughout the year the average temperature ranges from 20º C in the higher areas, the 38 C in part of the territory at low levels compared to the sea. The pluvial indexes varies from 1,500 mm annually in the areas around the city of Boa Vista, the state capital. There are two distinct periods during the year, lasting almost similar: (1) the wet season, including the months from April to September, when the total rainfall result in high water surplus; and (2) the dry season, from October to March, characterized by significant decrease of rainfall, resulting in large water deficit (50mm). The bodies analyzed showed divergence with respect to the time of death with cadaveric phenomena being earlier than those present in literature. **Conclusion(s):** The study of more cases is indicated for regional knowledge and assistance of justice, function of forensic dental expertise.

086 POST-MORTEM ADVANCED CHANGES OF A BODY SUBMERGED: A FORENSIC DENTISTRY PERSPECTIVE IN AQUATIC ENVIRONMENT

YULI ANDREA LÓPEZ QUINTERO; SARAH TEIXEIRA COSTA; ALEXANDRE RODRIGUES FREIRE; GILBERTO PAIVA DE CARVALHO; TALITA MAXIMO CARREIRA RIBEIRO; EDUARDO DARUGE JÚNIOR; ANA CLÁUDIA ROSSI; FELIPPE BEVILACQUA PRADO.*

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There are a wide diversity of factors, which can affect the human bodies found in aquatic environments. The submerging of a body hampers the identification process and will hinders some of the main facts of a crime, namely: time of death, cause of death and submersion time. **Aim:** Case reports of bodies found in the water helps in the forensic context, due to the scarce literature about and the great diversity of aquatic fauna in the world. **Methods:** The Candiru is a fish that lives in South America Rivers including the White River, characterized by its greed it can attack other animals, carcasses or even humans. This work showed a case report of a subject that fell in the White River and found semi-skeletonized after staying in this for 42 hours. Unlike current taphonomic process, it is an extremely short time for such a breakdown. The Candiru was pointed like the main responsible. **Conclusion(s):** The subject was identified by the dental records at Legal Medicine Insitute of Roraima - Brazil.

087 SEX DETERMINATION BY NASAL AREA- A PILOT STUDY

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Aim: Sex determination is one of the first parameters of an anthropological examination in order to establish an identity. Qualitative exams have great differentiation power, but results may present subjectivity. The objective of this study was to develop a pilot project to examine the nasal lozenge area, defined by four craniometric points: left alar, right alar, nasion and nasospinal. **Methods:** A sample of 40 CT scans belonging to the database of Oral Radiology Area from Piracicaba Dental School, 20 male and 20 female, were randomly chosen. Measurements performed were: nasal width (alar-alar distance) in the coronal plane and nasal height (distance between nasio and nasospinal points) in the sagittal plane. Measurements were made by two examiners, previously calibrated, and repeated after 14 days. Nasal area was obtained by formula (Width X Height / 2). For statistical analysis, Bioestat 5.3 software (Mamiaurá Institute, Pará, Brazil) and R CRAN for Linux 3.0.2 (open source) were used. Data distribution was verified by the Shapiro-Wilk test. Differences concerning sex areas were analyzed by Student t-test. Intraclass Correlation Coefficient (ICC) was applied to test intra- and inter-examiner agreement. **Results:** Intra-examiner (ICC:0.9) and inter-examiner (ICC:0.991) agreement tests indicated high reproducibility between the examiners ($p<0.05$). Data presented parametric distribution and t test indicated a significant difference between the areas ($p <0.05$). **Conclusion(s):** This pilot study provides indicative efficiency of this index and data to delineate population studies in other samples.

088 THE USE OF SOCIAL MEDIAS AS MARKETING TOOLS BY DENTISTS IN LIGHT OF THE ETICAL CODE

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All kind of marketing tools to attract new patients that Brazilian dentists may use must follow the rules dictated by the Ethical Code (CEO) in which, a whole chapter is designated to rules about marketing and advertising, including banners, signs, billboards, advertising in magazines, TV, radio and websites. With the launch of the Facebook, created as a kind of interpersonal communication channel, a new concept of marketing strategy emerged, changing the communication in all branches of commerce and service. **Aim:** Aimed to analyze the Facebook as it is used as marketing tool by Brazilian dentists in light of the CEO. **Methods:** A search was made inside the Facebook net, with the keyword "dentist" and selecting the option "places", which provided a list of commercial pages, representing dentists or dental clinics; from the search results, 50 pages were analyzed until its 20th most recent publication. As a commercial page, all the information accessed were available for the public. Yet, no name of the dentists responsible for the investigated pages will be exposed. **Results:** From the pages analyzed, among the compulsory information in advertisements, the most absent element is the number of inscription. Among forbidden elements, the most frequent infraction is the exposure of pictures before and after treatment, and pictures from the patients. **Conclusion(s):** It can be seen that dentists use Facebook pages as marketing tools, disregarding that it is also a kind of advertise, in which ethical principles must be followed. The use of Facebook among dentists is an urgent discussion of vital importance for the maintenance of ethics.

089 EFFECT OF PERIODONTAL THERAPY ON GLYCEMIC CONTROL IN TYPE 2 DIABETES OLDER PEOPLE: SYSTEMATIC REVIEW AND META-ANALYSIS

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Aim: Epidemiologic studies have reported increased prevalence of chronic periodontitis (CP) in older people with type 2 diabetes (T2DM) and some have suggested that periodontal therapy (PT) may improve their glycemic control. The aim of this study was to answer to the following question: ''Does PT improve glycemic control in older people with both T2DM and CP?'' **Methods:** This meta-analysis was conducted according to the Cochrane Collaboration. A search of electronic databases was performed for randomized controlled trials involving older people samples and reporting the effects of PT on T2DM. Weighted mean differences (MD) and 95% confidence intervals (CI) were calculated for HbA1c. All outcomes were evaluated as changes from baseline to the end of follow-up. Heterogeneity was assessed with the x2-based Cochran Q and Z tests, and I2 statistic (α=0.05). **Results:** After the selection process of the 5,856 papers, 22 studies were included in the systematic review and 12 in the meta-analysis. **Results:** of the meta-analysis indicated that PT was effective in the reduction of HbA1c (MD= 0.65; 95% CI 0.09 to 0.36; P <0.001). Heterogeneity was detected x2= 2.36 ($p=0.04$; Z test=3.17; $p<0.001$). The clinical implications only for older people were not possible to determine, since the trials not showed results separated by age group. **Conclusion(s):** The meta-analysis results seem to support the effectiveness of PT in the improvement of glycemic control in patients with both T2DM and CP; however, future studies are needed to confirm these results in specific older people samples.

090 IMPACT OF DENTAL SEAT ON WORKING POSTURE: A SYSTEMATIC REVIEW

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Musculoskeletal disorders (MD) have been identified as a significant occupational health issue in the dental profession. Limited evidence regarding the effectiveness of seating designs currently used in the workplace have been reported. **Aim:** The aim of this systematic review study was to answer the following question: what is the impact of the different types of dental seats on working posture and in the reduction of MD in dentists? **Methods:** Two independent reviewers performed electronic survey, update 2015 March, in MEDLINE, SCOPUS and LILACS databases, in randomized clinical trials (English language) that evaluated the use of different types of dental seats. Different characters of appropriate truncation and Boolean operators were used. The quality of the studies was assessed using the Delphi List. **Results:** Database search resulted in 876 studies. The final analysis included 4 papers, one study was of high methodological quality, one was of good quality, and two were weak. Two studies used the saddle seat (open and closed), suggesting that there was a postural risk lower than conventional seat. The other two studies used conventional seat with abdominal support, showing the effectiveness of this support in the reduction of muscle activity. **Conclusion(s):** The type of dental seats influenced on working posture and in the reduction of musculoskeletal disorders in dentists. Future research should be developed to assess this complex occupational health issue.

091 IMPORTANCE TO ADOLESCENTS OF DIFFERENT SOCIAL STRATA KNOW ABOUT BUCCAL HEALTH

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Health promotion can be defined as a combination of educational and environmental support actions aimed at achieving and living conditions conducive to health. **Aim:** The aim of this study is to discuss about the important to adolescents of different social strata know about buccal health for identifying the importance of dental aesthetics, and the care that these students take in relation to their buccal health. **Results:** Collective actions in oral health are encouraged by the technical areas in oral health the government as an effective alternative in combating the most prevalent diseases oral cavity The need to develop actions that target adolescents' health has become imperative in the face of expressiveness they present for both the overall population as well as their significance in terms of future generation. **Conclusion(s):** This study allows us to know the motivations of adolescents to preserve their buccal health, and we believe to be so valid to develop health promotion through health education.

092 NATIONAL EDUCATION PLAN AND MUNICIPAL EDUCATION PLAN

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Aim: The aim of this work is to relate on National Education Plan (PNE) and the Municipal Education Plan (PME). The PNE (Law No. 13005/14) is an ordinary law, pursuant to the Federal Constitution, which came into force on June 26, 2014 and will run for 10 years (2014 – 2024). It establishes guidelines, goals and implementation strategies in the education field. From the time the PNE begins to enforce all state and local education plans should be created or adapted in line with the guidelines and goals set for him. The PNE has 20 goals covering all levels of education, from early childhood education to higher education, with attention to details such as inclusive education, improving the average schooling rate of Brazilians, training and career development programs for teachers, as well as the management and financing of education. The PME is a education planning for each city and integrates objectives, goals and actions proposed in the short, medium and long term for education within ten years, and as a guideline the National Plan and State Education. **Conclusion(s):** For the proposed PME, it is recommended to be presented diagnosis of each of the levels of education (early childhood education, elementary education I, elementary education II, secondary education, technical education, higher education, youth and adult Education, education special, democratic management), as well as the guidelines, objectives and targets set by the committees, guided by the National Plan of Education in order to strengthen more and more the education of children and youth in the municipality, which will continue the rich history built up here by citizens.

093 OBESITY AND CARIES IN BRAZIL: DISTRIBUTION OF TWO CHRONIC DISEASES RELATED TO DIET

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Aim: To describe the distribution of diseases obesity and decay over the years among adolescents in Brazil. **Methods:** In this descriptive study, secondary data from national obesity surveys were used performed by the Brazilian Institute of Geography and Statistics and oral health of the Ministry of Health. National Survey on Health and Nutrition (1989) and the Family Expenditure Survey (2003 and 2009) were used for obesity. Epidemiological Survey Data on Oral Health 1986 and SB Brazil, 2003 and 2010 were used for evaluate dental caries. The distribution of diseases was verified by geographical regions of Brazil, and the age group for obesity was 10-19 years old and dental caries were determined at age 12 and the age group 15-19 years. **Results:** Obesity and dental caries are found in all Brazilian regions with high prevalence. The surveys show that the prevalence of obesity has increased over the years, in all regions. The South, with the largest population of obese increased from 2.3% to 6.5% in 20 years. Caries experience, in contrast, reduced its prevalence in all regions, although still high, as observing the variations of the DMFT in these surveys. Among children aged 12 years in 2003, 68.9% had experience of dental caries, reducing to 56.5% in 2010; and adolescents showed 88.9% and 76.1%, respectively. **Conclusion(s):** Caries and obesity are highly prevalent in Brazil, but the caries experience was reduced and the occurrence of obesity has not stopped growing. Risk factors in common, such as diet and socioeconomic factors should be investigated to assess the behavior and the possible association of these diseases.

094 ORAL DISEASE AND THE IMPACT ON SPORTING PERFORMANCE

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Aim: To discuss about the oral disease and trauma in the athlete population; and the impact of oral health on sporting performance. **Results:** Oral health is an important element of overall health, well-being and quality of life. The nexus between sport and oral health has largely been investigated through studies focused on the risk of trauma to oral health. Studies show that regardless of the sport, rely on a dentist to take care of the oral health of athletes - acting both guidance and prevention as well as in treatment - contributes significantly to increase performance and achieve good results. Athletes may have poor oral health including high levels of dental caries, dental erosion and dental trauma. Poor oral health can reduce quality of life and induce a systemic inflammatory response. Poor oral health could affect athletic performance. The relationship between oral health and performance is not well understood. **Conclusion(s):** Most importantly, at a time of increasing studies to provide evidence on the oral health and better performance.

095 ORAL HEALTH SELF-PERCEPTION AND KNOWLEDGE AMONG OLDER PERSON CAREGIVERS

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Aim: The lack of appropriateknowledge and skills among caregivers develop negative attitudes tooral health care in older person. The aim of this study was to evaluate oral health status, oral health care self-perception and knowledge among older person caregivers. **Methods:** The sample was composed by caregivers, both gender, from two long-term care institution in Piracicaba-SP, Brazil. Oral health status was determined according to World Health Organization for basic surveysby calibrated dentist (Kappa=0.85). The Oral Health Impact Profile (OHIP-14) index was used to measure the oral health self-perception. A questionnaire assessed socio-demographic, self-perception of general and oral health status, and oral health care knowledge and attitudes. Qui-square and Fisher's Exacttests were applied. **Results:** A total population of 70 caregivers was enrolled, being women (80%), nurses (11.4%), mean aged of 41.7 years, and working more than 7.5 years. The DMF-T founded was high. The lost component was the most prevalent (62%).Of the total, 52.8% used maxillary prosthesis and 41.4% need for the mandible prosthesis. OHIP-14 mean was 8.98. A significant association was found for educational level ($p<0.05$). All professionals recognized the link between oral health and general health, 81.4% with depression, 80.0% with diabetes, 75.7% with us of drugs and 74.3% with weight loss. **Conclusion(s):** The caregivers showed bad oral health status, related to lower self-perception and knowledge. Further educative actions are needed to improve oral health status for these caregivers.

096 ORAL HEALTH STATUS AND HEALTH PROMOTION FOR PRESCHOOLERS IN PIRACICABA-SP

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Preventive oral health education programs are important for the health promotion. **Aim:** The study objective is to evaluate the oral health status of preschoolers in Piracicaba-SP and the effectiveness of a preventive education program in relation to caries. **Methods:** The study began with an intraoral examination assessing the inition decay rate, white spot index, plaque index and classification of the risk of caries disease, both in the test group as in the control. It was instituted preventive education program for the test group, recreation activities and supervised brushing were carried out fortnightly. After two years of preventive educational program, the initial average of visible biofilm was 4,95, and the final average was 0,21 in the test group. Since the initial and final average in the control group was 4,11 and 0,84, respectively. There was no difference between the beginning and the end of the program for the variables of caries experience among the groups, but there were differences between the test and control groups at the end of the program with the average biofilm. The clinical impact of the program was to decrease the biofilm in the test group after the intervention. The behavioral impact was associated with decrease of children who themselves perform their oral hygiene, one-way increase the dentist as well as a higher prevalence of parentes who reported receiving oral care information. **Conclusion(s):** To observe differences in other variables probably need one more extensive education program and long-term monitoring could reflect major differences.

097 ORAL NEOPLASMS IN ELDERLY INDIVIDUALS IN BRAZIL: AN INTEGRATIVE REVIEW

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Oral Cancer is considered a problem of Public Health, according to 2014 estimates by the National Institute of Cancer of Brazil, it is found in 7th place amongst the most frequent cancers, being most prevalent in men. Owing to the changing demographics over the last few decades in Brazil, a new at risk group has arisen for oral cancer which is the elderly. **Aim:** The objective of this study is to describe the frequency and types of oral neoplasms that occur in elderly individuals from different states of Brazil. **Methods:** The search strategy was used in the following databases: MEDLINE/PUBMED, BVS, LILACS and IBECS, obtaining 495 articles, 11 articles being selected which comply with the criteria of inclusion and exclusion. The included studies were published between 1985 and 2012, the length of studies range between 4 and 50 years to compile. The most frequent histological type is Squamous-cell carcinoma. Of those studies 5 investigated the frequency of odontogenic tumors, Ameloblastoma being the most frequent, now in the case of salivary gland tumors the most frequent was Adenoid cystic carcinoma and Acinic cell carcinoma. Based on the evaluation of the studies, we verify that there exists a vast literature covering oral neoplasms in the general population however there exists few works about oral neoplasms in the elderly. **Conclusion(s):** Thusly, more inquiry into the elderly population in all Brazilian states is necessary, this information will serve to create programs and bring about campaigns about the importance of oral cancer prevention. Keywords: Mouth neoplasms, Aged, Brazil.

098 PREVALENCE OF DENTAL TRAUMA ASSOCIATED WITH RISK FACTORS ON SCHOOL CHILDREN FROM PIRACICABA-SP AND REGION

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Dental Trauma exhibit significant prevalence worldwide and children and young people are the most affected. **Aim:** The aim of this study was to evaluate the prevalence of traumatic injuries to the permanent teeth of children from public schools in Piracicaba and region (SP) and its relationship with the presence of risk factors such as overjet and lip seal. **Methods:** A cross-sectional study among students aged 6 to 17 years was conducted in thirteen public schools in the elementary and high school in Piracicaba -SP and region (Americana, Limeira e Campinas) from June 2007 to June 2014. The evaluation was conducted in a school environment and used the diagnostic classification modified O"Brien. Through clinical examination and completion of a standardized case report form, was analysed the incisal overjet and the lip seal (adequate and inadequate). Was evaluated 610 male children (51.91%) and 565 female (48.09%), totaling 1.175 students. The prevalence of dental trauma found was 13.36% (n = 157). Were affected by traumatic injuries 92 school males (15.08%) and 65 females (11.05%) (p>0,05%). The students who had higher than 3 mm overjet and inadequate lip sealing were more susceptible to dental trauma (p <0,01). **Conclusion(s):** It was concluded that the presence of higher than 3 mm overjet and inadequate lip sealing are risk factors to dental trauma recommending the implementation of preventive and health programs through information to parents, teachers and schoolchildren.

099 PREVALENCE OF TOOTH LOSS, DECAY AND USE AND NEED PROSTHESES IN OLDER PEOPLE

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Aim: The objective of this cross-sectional study was to analyze the prevalence of tooth loss, decay, and use and need of prostheses in older people residents in Eastern District of Campinas, Brazil. **Methods:** The clinical trial was performed in accordance with the standards of the World Health Organization for oral health surveys. The inclusion criteria were: cognitive domain; aged 60 years or over; both genders; participation in the influence vaccination campaign; signature in the consent form for research. The data was analyzed by descriptive statistics. **Results:** Of the 20,010 older people, was selected a sample of 833 subjects, 464 (55.7 %) women and 369 (44.30 %) men, mean age of 72.4 years. The DMFT founded was 27.68; the lost component was the most prevalent (23.71). Among the sample, 32.42% (n= 270) were edentulous and 67.58% (n= 563) partially edentulous. As regards the conditions prosthetic, 82.24% (n= 685) used some type of prosthesis for replacement of missing teeth, 32.41% (n= 270) used total upper and lower prosthesis. The need for prosthesis use was 49.10% (n= 409) of the sample. Of the prostheses users, 25.4% (n= 174) needed replacing and 74.60% (n= 511) showed adequate conditions. **Conclusion(s):** These data should be to conclude that the older people living in this region of Campinas city need collective actions of education, prevention and oral care for prosthetic rehabilitation.

100 PREVENTION, RISK FACTORS AND EARLY DETECTION IN ORAL CANCER

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Aim: The aim of this study is to discuss oral cancer focusing on prevention, risk factors and early detection. **Results:** The cancer problem in Brazil becomes relevant for epidemiological profile that this disease has shown, and this theme is gaining ground in the political and technical agendas of all levels of government. Knowledge about the state of the disease allows to set priorities and allocate resources as directed for positive change this scenario in the Brazilian population. Oral cancer affects the lips and the inside of the oral cavity. Inside the mouth should be observed gums, buccal mucosa (cheeks) hard palate (roof of the mouth) and language (mainly edges), floor (area under the tongue). Lip cancer is more common in white people and occurs most often in the lower lip. We know that smoking and alcohol increase the risk of oral cancer. Watch for sores on the lips and in the mouth that do not heal within fifteen days. **Conclusion(s):** Cancer is prevalent in the rapidly growing in many communities, should know more and more about this disease to safe lives

101 RELATIONSHIP BETWEEN PERIODONTAL DISEASE AND SYSTEMIC DISEASE IN WOMAN

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The possibility that periodontal diseases have an effect on systemic health is being widely investigated. **Aim:** This study reviews the potential links and the mechanism of these effects. **Results:** Postmenopausal osteoporosis may be a possible risk factor for periodontal disease. Two third-party providers are now modifying their dental reimbursements for patients who have periodontal disease and are pregnant or have cardiovascular disease. Research presented at the annual meeting of the European Society of Human Reproduction found that women with periodontal disease - gums - lingered about two months longer to become pregnant than those with healthy gums. Several large randomized controlled clinical trials failed to find that standard periodontal therapy during pregnancy reduces the incidence of adverse pregnancy outcomes (eg, preterm birth and low birthweight). **Conclusion(s):** Although the effects of periodontitis on systemic health do not yet have an effect on clinical decisions, knowledge and understanding of the link, effects and mechanism are important.

102 SOCIAL INCLUSION EXPERIENCE IN PUBLIC INSTITUTION

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One of the most important advances brought by the child and adolescent statute was the distinction between the treatment being meted out to child victims of violence and abandonment and the treatment to be accorded to adolescents who infraction.The Socio Educational Service Center aims to develop coexistence service,strengthening family ties and community among children and adolescents 6-15 years of age who are in situations of social vulnerability. **Aim:** To report a social inclusion experience in public institution. **Results:** It was held activities with children and adolescents.First one was transmitted an explanatory and demonstrative video about how the process of decay and periodontal disease in a very simple way and also how important it is tooth brushing,etc.In groups of 6 students,had activity of brushodrome,with brushing supervision. After that,this group of children went to a classroom where a volunteer dental surgeon performed clinical examination and if there were any problems,the child was sent to a treatment unit.After clinical examination,this same group headed for a table which we set up with various objects,photographs, models.It was explained everything that was present,such as photos of mouths with exaggerated amount of plaque and decay,macro mannequins representing a mouth and a macro toothbrush.These activities were held in the morning,with 50 children 6-10 years old,and in the afternoon with 60 children 10-15 years. **Conclusion(s):** The results of this study were presented to the coordinators to support decision making by managers and it seems to have motivated a reflection and discussion of the results.

103 TOPICAL FLUORIDE APPLICATION PROFESSIONAL: MYTHS AND TRUTHS

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Aim: To discuss the true concepts related to topical application of fluoride (TAF) in the clinical routine of dentists, focusing on: indication, fluoride action in the oral environment, means of implementation, application time, indicated often experiments. **Results:** Fluoride is used worldwide in the prevention of dental caries, which is caused by two factors: the organization of oral bacteria to tooth surfaces and frequent exposure to dietary sugars which are converted into acids by dental biofilm, leading to the dissolution of minerals from teeth by a process called demineralization. Fluoridation of public water supplies is an important collective means of fluoride use in Brazil. Of all the ways to use fluoride, fluoride toothpaste is the most rational. In TAF teeth should be clean. The fluorine reaction is extremely fast, and the mineral type calcium fluoride dissolves quickly upon exposure to saliva, then the patient's mouth wash will not interfere with the anti caries effectiveness of the method. **Conclusion(s):** It is extremely important to know the benefits of fluoride on dental protection against decay and know the truthful fundamentals related to fluoride application process to be no doubt on the clinical procedures with its use, thus avoiding mistakes that can change its efficiency or its properties.

104 UNDERGRADUATE STUDENT EXPERIENCE IN SOCIAL ACTION "CHILD IN THE PARK"

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Social action "Child in the Park" was scheduled in allusion to the Children's Day, celebrated on October 12, in Itapira - SP. This was a multiple event for children and their families with attractions all day. **Aim:** To report the experience of undergraduate students in dentistry about the importance of services provided to society, as a return of public educational institution. **Results:** It was developed activities in the dentistry tents in the park, which counted on: 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(s):** The student experience won this social action in order to promote oral health to present, through the knowledge and practice. With regard to who provided the service, they gave them a physical experience with public health practice and in the ability to transform scientific knowledge into simple language for contact with the population; in order to health promotion.

105 UNICAMP: OPEN TO STUDENTS FROM ELEMENTARY AND HIGH SCHOOLS

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Aim: To report the experience of participation of Piracicaba Dental School in Unicamp Open Doors (UPA). **Results:** Elementary and high students from public and private schools have the opportunity to talk to teachers,researchers,undergraduate and graduate students,from all areas of knowledge. The Piracicaba Dental School attended the event,occupying three classrooms where we can introduce visitors through panels,videos and clinical tables. The clinical tables were arranged in a logical sequence,from the most basic to the most specific,through various specialties and raw routed along the five-year course.In the first,an institutional video,dentistry as a profession,the labor market and educational activities,scientific and extension. In the second,the basic areas of the course, such as anatomy,physiology,etc. There was the presence of multiple explanations of preventive dentistry and its importance.In the third,dental specialties:radiology,periodontics,etc.Topics discussed and as doubts and interest of visitors.In the three classrooms and even in the hallway,there was an intense exchange of experience and knowledge and we believe that captivate the interest of the students, which many might decide more clearly about the profession they were choosing. **Conclusion(s):** UPA is an important event whose main objective has been met with much success,which promoted integration,spread knowledge and enabled visitors knew the UNICAMP.The presence of Piracicaba Dental School was important, answer questions about the course and the exam, indirectly contributing to the formation of new professionals,including dentists.

106 WE WANT TO SCHOOL, LEARNING CENTER, COEXISTENCE, INTELLECTUAL GROWTH, QUALITY OF LIFE.

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Aim: School is ideal place for promotion of application broad range of health and impact because has a great influence on children and teens every stage of development bio-psycho-social thereof and also be the best in vehicles transformers of information received for the family environment and still the in school education center to be an important, learning, and coexistence growth, and where se proposes hives core values for life. **Methods:** Every school is the physical elements combination, cultural, social and psychological to you from a special character defining the process of teaching and learning, determining the education quality to be achieved. Experiences have been reported in other Brazilian municipalities, showing that teachers prepared, managers concerned and students willing to learn have changed the reality then existing. social reality that school is entered, determine its peculiarities, in that leads to want to know them and between-si compare. For both heard all actors such senario seeking to orient a situation in comfortable minimum. **Conclusion(s):** To develop good practices to reach the promotion and balance bio-psychic-social aspects of power we approach, tobacco, alcohol, drugs, security and information of health policy framework within. Violenci, social relations, school dropout and fail within context of social environment. Accident control, environmental projects, physical inside context of the physical environment. health topics: teacher training, educational approach context of the curriculum in. Involvement of parents, collective projects, health services, within context relationship with the community.

107 "ACUPUNCTURE POINTS RELATED TO DENTISTRY"

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Acupuncture is an area of Traditional Chinese Medicine and in the last years it has been widespread and accepted in the occidental society due its positive results in several pathologies, especially the ones related to chronic diseases. In dentistry, acupuncture has been used in the pain treatment associated to the temporomandibular dysfunctions and trigeminal neuralgia. To understand the acupuncture action in the organism, we must understand some concepts, about the meridians of acupuncture that are present in the body. The acupoints are very sensitive and are connected by longitudinal lines which are called meridians, with Yang or Yin nature. There are twelve main meridians. Within them the Qi (energy) circulates continuously. The disease develops when there is an interruption or disruption in the flow of energy and acupuncture will act returning the harmony of this flow. **Aim:** The objective of this study was to investigate the participation of the acupuncture points of each meridian in the management of orofacial alterations. **Methods:** We developed a search of the indication of acupuncture points by checking which acupoints were advised to orofacial alterations and presented the results in percentage terms. Meridians with greater use of indication of interest in dentistry were in descending order: Triple Heater (34.78%), Gallbladder (27.27%) and Stomach (17.78%). Lung, Spleen and Kidney had no direct indication of use of acupoint in orofacial alterations. **Conclusion(s):** It was concluded that not all meridians are given equally to the orofacial changes, and the yang meridians were the most suitable.

108 "QUALITY ASSESSMENT OF EDUCATIONAL LEAFLETS ON ORAL HEALTH"

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Aim: The quality of evaluation research of educational leaflets on oral health is to examine the difficulties of understanding the target audience it is intended for research (students from two public schools). **Methods:** The study was conducted with five (5) different types of folders containing different information of oral health among these: dentin hypersensitivity, oral cancer, tooth decay, periodontal disease and oral health rights of all. Questionnaires were applied concerning folders for 5 weeks, over that period the mentioned theme followed by a brief explanation applied the questionnaires aimed at understanding students' difficulties on the folders in total were applied 1,039 questionnaires. Most of the students which is designed to search, answered that they were used everyday words understanding would become easier and wider. **Conclusion(s):** The students concluded that the folders were a good size, the lyrics were easy to read on a general appearance did not find it very difficult to understand what it was about the certain folders and the information contained therein could be useful and easy to apply. One can understand that students have a good understanding and they learned new things with the material available and consequently will transmit this information to their respective families.

109 ACTION OF SODIUM HEXAMETAPHOSPHATE NANO-SIZED IN FLUORIDE TOOTHPASTES TO TOOTH DEMINERALIZATION: AN IN VITRO STUDY

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Aim: The aim of this study was to evaluate in vitro the capacity of fluoride toothpaste containing 1100 ppm F, supplemented or not with different concentrations of sodium hexametaphosphate nanoparticles (HMPnano), to reduce the demineralization of tooth enamel. **Methods:** For this study, blocks of bovine enamel (n = 72) were selected through surface hardness (SHi) e and then divided into six experimental groups (n = 12): 1) Toothpaste without F / HMPnano (placebo), 2) Toothpaste 550 ppm F, 3) Toothpaste 1100 ppm F, 4) Toothpaste 1100 ppm F associated with 0,25% HMP nanoparticulate (1100 0,25%HMPnano), 5) Toothpaste 1100 ppm F associated with 0,5% HMP nanoparticulate (1100 0,5%HMPnano), 6) Toothpaste 1100 ppm F associated with 1,0% HMP nanoparticulate (1100 1,0%HMPnano). the blocks were subjected to repeated cycling pH and treatment 2x / day, with slurry of toothpastes. To evaluate the mineral loss, the surface hardness end (SHf) and the percentage of surface hardness loss (%SH) were calculated. The data were subjected to analysis of variance (one-criterion)followed by Student-Newman-Keuls tests ($p<0.05$). **Results:** Blocks treated with 1100 0,5%HMPnano showed significantly less loss when compared to the other groups ($p<0,001$). The group 1100 did not differ statistically in relation to groups 1100 0,25%HMPnano and 1100 1%HMPnano ($p>0,001$). **Conclusion(s):** It was concluded that the supplementation of toothpastes with 0,5%HMPnano produced greater protective effect on the inhibition of enamel demineralization, when compared to conventional toothpaste (1100 ppm F).

110 AESTHETIC AND FUNCTIONAL REHABILITATION OF ANTERIOR TEETH AFTER TRAUMA: A CASE REPORT.

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Traumatic dental injuries are significant clinical problems in childhood, which may have complex etiologies and cause physical and physiological impairment. **Aim:** The aim of this study was to report the management of a severe traumatic dental injury in 8-year-old female patient, victim of a motorcycle accident, who sought pediatric dentistry clinic of the Piracicaba Dental School –FOP/UNICAMP after 3 months. **Methods:** At clinical and radiologic examinations was diagnosed the avulsion of teeth 11, 21 and 22 with considerable lingual interposition, interfering in speech and swallowing. The treatment plan included immediate care and subsequent monitoring to psychosocial reestablishment. For this purpose, was made an acrylic partial denture to replace the missing anterior teeth, maintaining the characteristics of the mixed dentition and preserving the aesthetics and function. An expansion screw appliance was used to release and monitor the cross growth of the maxila. Follow-up appointments were performed at one, three and six months after the first visit to monitor the adaptation of the prosthesis and the child's growth. **Conclusion(s):** Thus, the aesthetic and functional rehabilitation was achieved regarding the patient's satisfaction, enabling her immediate social reinsertion.

111 ANTI-EROSIVE/ABRASIVE POTENTIAL OF VARNISHES SUPPLEMENTED WITH SODIUM TRIMETAPHOSPHATE ON BOVINE DENTIN

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Aim: The present study evaluated the effectiveness of fluoride varnishes supplemented or not with sodium trimetaphosphate (TMP) on dentin erosion and abrasion. MATERIAL AND **Methods:** Bovine dentin discs (n = 60; diameter of 4 mm) were sequentially polished and selected using surface microhardness (SMH). They were divided into 5 groups (n = 12) according to the type of varnish used: placebo (no F / TMP), 5% NaF (5% NaF), 2.5% NaF (2.5% NaF), 2.5% NaF associated with 5% TMP (2.5% NaF + 5% TMP), and 5% NaF associated with 5% TMP (5% NaF + 5% TMP). The erosive challenge was promoted by immersion in citric acid (0.05 M, pH 3.2) for 5 minutes (4 times daily) in addition to abrasive treatment by mechanical brushing for 15 seconds, for a period of 5 days. After the experimental phase, dentin loss (µm) was determined by profilometry. The type of experimental varnish was considered as the variation factor and the dentin surface loss (µm) as the dependent variable. Data was subjected to 1-way analysis of variance, followed by Student-Newman-Keuls test ($p<0.05$). **RESULTS:** There was no statistical difference among the groups regarding SMH ($p>0.05$). Varnishes with 2.5% NaF + 5% TMP and 5% NaF + 5% TMP promoted the lowest dentin loss compared to the other groups ($p<0.05$). Moreover, the groups 2.5% NaF and 5% NaF presented similar dentin loss ($p>0.05$). **Conclusion(s):** The results suggest that it is possible to reduce the dentin erosion/abrasion by supplementing fluoride varnish with sodium trimetaphosphate. Financial assistance: CNPq/ PIBIC

112 ANTICARIES EFFECT OF PRODUCTS WITH HIGH FLUORIDE CONCENTRATION AFTER ORAL RINSE: IN SITU STUDY.

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Aim: The aim of this study was to evaluate in situ the clinical importance of not allowing the patient to rinse the mouth after topical application of fluoride (ATF) in remineralization of artificial caries lesions using a fluoride gel foam and neutral pH. **Methods:** Enamel blocks were selected by surface hardness (SH) and divided into 5 experimental groups: Gel no fluoride; gel and foam without fluoridated rinse for 30 minutes; fluoridated gel and foam after ATF. Nine volunteers used palatal appliances with four enamel blocks with artificial caries lesions for 3 days after the ATF. Immediately after the ATF two blocks were removed for analysis of calcium fluoride (CaF2) formed. In the remaining blocks determined to be the hardness of the end surface, to calculate the percentage of surface hardness recovery (%SHR) and the concentration of CaF2 retained after remineralization. Fluoride systems produced greater remineralization (%SHR) compared with the placebo group ($p<0.05$). There was no difference in the remineralization capacity between the experimental regimes using fluoride ($p> 0.05$). The concentration of CaF2 formed and retained was similar regardless of the experimental scheme fluoride ($p>0.05$). **Conclusion(s):** It concludes that the mouthwash immediately after topical application of fluoride, did not reduce the ability of fluoride products in the remineralization of caries lesions. Keywords: Fluoride, dental remineralization, gel.

113 CORRELATION BETWEEN MARGINAL ADAPTATION AND BOND STRENGTH OF GLASS FIBER POST TO PRIMARY ROOT USING DIFFERENT CEMENTS

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Aim: To evaluate marginal adaptation (MA), bond strength (BS) and correlation between them, of glass fiber post to primary root dentin using resin cements. **Methods:** Bovine primary roots were endodontically treated and filled with Calen®+zinc oxide. After 7 days, filling material was removed and glass fiber post was luted according to cements (n=10): G1- RelyX ARC (3M/ESPE); G2- Allcem (FGM); G3-RelyX U200 (3M/ESPE); G4- seT PP (SDI). Specimens were sectioned (1-mm thick slabs), storage for 24h, polished and replicas were observed by scanning electron microscopy (SEM) (40x). MA analysis (% gap formation-G) was performed using Image J 1.45 software. Also, specimens were submitted to push-out test in a universal machine (500N – 0.5mm/min) and failure patterns were analyzed by SEM (40x). Data were submitted to one-way ANOVA, Tukey and Pearson correlation tests ($p<.05$). **Results:** For %G there was no significant difference among groups: G1-38.57±24.65; G2-55.49±31.44; G3-36.43±7.72; G4-49.78±25.11. Highest BS values were observed in G1 (15.01±7.96) compared to G2 (5.07±4.14) ($p<.05$). G3 (9.45±4.90) and G4 (10.01±6.85) showed similar results compared to G1 and G2 ($p>.05$). There was significant ($p<.0001$) and moderate negative correlation ($r=-0.66$) between MA and BS. The failure adhesive-type between dentin/cement was the most observed in G2 (80%), G3 (80%) and G4 (70%). G1 showed adhesive (50%) and mixed failures (50%). **Conclusion(s):** Different resin cements influenced BS of glass fiber post to primary root dentin and the lower %G the higher BS values. The best resin cement for luting glass fiber post to primary root was RelyX ARC.

114 DENTINOGENESIS IMPERFECTA HEREDITY: REPORT OF CASES

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Dentinogenesis impercecta is an inherited developmental disorder of the dentin which may occur in isolation or in conjunction with hereditary systemic changes in bone, called osteogenesis imperfecta. Unlike amelogenesis imperfecta, the diagnosis of dentinogenesis imperfecta should be reserved for the defective dentin formation with opalescent teeth, both deciduous and permanent, in the absence of systemic disease. It presents great variability, and is classified into types I, II and III. Type I is related to the presence of osteogenesis imperfecta. The clinical features of dentinogenesis imperfecta usually show a translucent or opalescent gray dentine. Radiographically, crowns tend to show a bulbous shape with cervical constriction, obliteration by calcified tissues of all or part of the pulp chamber and root canals, which result from continuing dentin formation that ultimately leads to short and conical roots. **Aim:** The aim of our studyis to present clinical alterations associated with dentinogenesis imperfecta in three individuals of the same family: aunt, two nephews(brothers). **Conclusion(s):** Early diagnosis will facilitate the planning of appropriate treatment through preventive measures that avoid tooth wear, restoration of occlusion, mastication and aesthetics of the patient, as well as to lessen the damage this alteration may cause in each patient. The disease, clinical features, signs, symptoms and treatment are discussed.

115 EFFECT OF FLUORIDATED TOOTHPASTES AND SUPPLEMENTED WITH TRIMETAPHOSPHATE NANO-SIZED ON CARIES: AN IN SITU STUDY

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Aim: This study was to evaluate in situ the remineralizing potential of dentifrice supplemented with nanoparticles of sodium trimetaphosphate (TMP) in artificial caries lesions. **Methods:** This blind, crossover study was conducted on 4 experimental phase lasting 3 days each. Volunteers (n = 12) palatal appliances, containing four demineralized enamel blocks. Treatment regimens were: Placebo (without F and TMP); 1100 ppm F (1100 ppm F), 1100 ppm F supplemented with 3% TMP micrometer (1100 TMP) and 1100 ppm F supplemented with 3% TMP nanoparticulate (1100 TMPnano). The volunteers were instructed to brush your natural teeth with palatal devices in the oral cavity, and the blocks treated with the slurry of toothpaste, for 1 minute (3x/day). After each phase, the percentage of surface hardness recovery (%SHR), recovery of integrated mineral loss (IMLR) and the differential integrated mineral loss (delta IML) were calculated and fluoride (F) in particular enamel. **Results:** The results were submitted to variance analysis and test Student-Newman-Keuls ($p<0.05$). The surface of the enamel became 20% when treated with more remineralized 1100 TMPnano, compared to 1100 ppm F and reduced approximately 43% in the body of the lesion relative to 1100 TMP ($p<0.001$). The absorption of F in enamel 1100 TMPnano group was 2 times higher compared to 1100 ppm F ($p<0.001$). **Conclusion(s):** It was found that adding 3% TMPnano a conventional dentifrice, promoted significantly higher remineralizing effect when compared to 1100 ppm F.

116 GIANT CELL LESION ASSOCIATED WITH DENTAL TRAUMA: A CASE REPORT

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Aim: This case report describes the management of a traumatic dental injury in 9-year-old male patient who was driven to pediatric dentistry clinic of the Piracicaba Dental School – FOP/UNICAMP after three months of the accident. During the anamnesis, the patient reported that he had fallen during school activities and medical history was uneventful. **Methods:** At clinical examination, it was observed teeth 11 and 21 crown fractures involving enamel and dentin and a localized gingival swelling of 8mm X 8mm in size between the upper central incisors with clear signs of inflammation and a diastema. The lesion was painless and asymptomatic, firm in consistency; bleeding on probing was present. The radiographic examination revealed normal periapical tissues and no evidence of pathological changes around the offended tooth. Central incisors had no mobility and no sensitivity to percussion, only tooth 21 did not respond to thermal stimulations. The treatment plan included excisional biopsy of the gingival lesion, endodontic treatment of tooth 21 and restorations of the crowns of the central incisors by direct mock-up technique. The histopathological diagnosis was giant cell lesion. The patient was recalled every month for a checkup, when we observed healthy gingival tissues with successful healing. **Conclusion(s):** Associated with removal of the lesion, it was also observed a significant reduction in the diastema between the central incisors. There was no recurrence even at the end of 6 months. Therefore, the soft tissue health and oral aesthetic and function were re-established.

117 HOW TO ACHIEVE MOTIVATION AND HEALTH EDUCATION IN WAITING ROOM FOR PEDIATRIC PATIENTS AND THEIR PARENTS/GUARDIANS?

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Aim: the aim of this project was to promote motivation and health education in pediatric patients and their parents/guardian using playful activities in the waiting room of Piracicaba Dental School. **Methods:** students of public school that enrolled of PIBIC-EM program, conducted the project. During the 2013 calendar, playful activities were done and the results with the pediatric patients were extremely positive. So, this project continued until July, 15. The playful activities were carried out 1x per week while pediatric patients awaiting dental care in the waiting room of Piracicaba Dental School. It was done drawing, painting, playing with Lego, crafts, games, comics and toys activities. Topics of interest to dentistry were addressed using methods of health education. **Results:** the students were fully involved in playful activities and it was observed that the activities were well accepted by the pediatric patients and their parents. **Conclusion(s):** the students of public school contributed to promote health education, improving the conditions of population oral health and the satisfaction in relation to the dental care services. In addition, they motivated pediatric patients and their parents/guardians to accept dental treatment.

118 IMMEDIATE POST-APPLICATION EFFECT OF CURODONT™ REPAIR ON MICROTENSILE BOND STRENGTH: A NEW BONDING APPROACH

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Aim: This study aimed was to evaluate the effect of Curodont™ Repair, MI Paste™ and 0.2% NaF treatment on demineralized dentin on the microtensile bond strength (uTBS) of a etch&rinse adhesive system (Adper Single Bond 2-SB). **Methods:** Thirty human third permanent molars with mid-coronal portion of dentin exposed were randomized in 5 groups(n=6): G1. SD-Sound Dentin/SB; G2. DD-Demineralized Dentin/SB; G3. Remineralized Dentin (RD)/NaF-Dentin pre-treated with 0.2% NaF for 1 min/SB; G4. RD/CPP-Dentin pre-treated with MI Paste™ for 1min/SB; and G5. RD/P11-4-Dentin pre-treated with Curodont™ Repair for 5min/SB. Then, 24 dentin slices were submitted to acid gel (6% carboxymethylcellulose and 0.1 M lactic acid with KOH concentrated solution at pH 5.0), simulating the caries-affected dentin. Adhesive/restorative procedure was performed and composite blocks (Filtek Z350XT) were built with 4 mm height. They were stored in deionized water for 24 h, sectioned in beams (1mm2) and submitted to μTBS test at 1.0 mm/min and load of 50kgF. Failure sites were analyzed at SEM (50x and 150x). μTBS data (MPa) were submitted to one-way ANOVA and Tukey tests ($p<0.05$). **RESULTS:** RD/P11-4(46.42A) and RD/CPP(45.25AB) showed the highest μTBS values followed by SD(40.85B), RD/NaF(33.43C). The lowest uTBS were found for DD(26.38D). The highest uTBS was found when DD was remineralized with Curodont™ Repair(P11-4). There was a predominance of failures adhesive(DD); mixed(RD/NaF); cohesive/composite(DH); and cohesive/dentin(RD/CCP). **Conclusion(s):** Dentin pre-treatment procedure showed to be a great approach for enhancing bond strength to etch&rinse adhesive system to demineralized dentin.

119 IMPACT OF ORAL CONDITIONS ON QUALITY OF LIFE FOR CHILDREN

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Aim: The objective of this study was to evaluate the impact of malocclusion on quality of life and associated with caries and socioeconomic status. 846 students were evaluated, being 598 with 5 years old and 248 with 12 years old, of both genders. **Methods:** The impact on the quality of life was determined by OIDIP (Oral Impacts on daily activities) and clinical variables (malocclusion and caries) assessed according with the criteria recommended by the World Health Organization (WHO, 1999).A structured questionnaire containing information of income and education was sent to parents. The OIDP was considered response variable and estimated linear models generalized by the GENMOD procedure of the SAS program. The first model was estimated with only the intercept, providing the basis for assessing the reduction in the variance of other models and variables, tested sequentially, considering how permanence criterion $p \leq 0.05$. Results;At 5 years old, the biggest impact on the quality of life was observed only in relation of the socioeconomic variables (income and mother's education), unlike of the 12 age of, when was affected by the caries and didn't suffer influence of socioeconomic factors. **Conclusion(s):** So, we can conclude, that the impact on the quality of life suffers negative influence of social factors at 5 years old and clinical at 12 years old.

120 IN VITRO EFFECT OF APF FLUORIDE ASSOCIATED WITH IMMERSION IN MILK ON MINERAL LOSS OF DEMINERALIZED BOVINE ENAMEL.

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Introduction: Application of acidulated phosphate fluoride (APF) not deliberately increases with the concentration and application time. The increasing availability of calcium ions from milk would allow increased formation of CaF2. **Aim:** The objective of this study was to evaluate in vitro the effect of APF associated with immersion in milk in des/remineralization process of previous demineralized enamel. **Methods:**: Bovine enamel specimens, selected by microhardness were submitted to demineralization, and randomized into four groups: (I) APF, (II) milk, (III) milk + APF, (IV) APF + milk. Treatments were performed after salivary pellicle formation. The CaF2 content (mg F / cm2) was determined in 12 specimens of each group and SEM morphological analysis was performed on the remaining two specimens. Others 14 specimens were subjected to pH cycling. Next, these specimens were cut in half and subjected to longitudinal microhardness to calculate the mineral loss (ΔS: kg / mm2 x μm). Group IV (41.91 ± 5.25) showed higher ($p = 0.036$), CaF2 content than Group I (33.29 ± 6.37) and II (0.23 ± 0.10). In the SEM images we can observe the CaF2 globules. Mineral loss of groups I (-3852.85 ± 1893.86) and IV (-3439.92 ± 2174.99) were significantly lower ($p = 0.005$) than the control (± 4156.53 -7885.74). However, it did not differ among group I and IV. **Conclusion(s):** It can be concluded that immersion in milk after APF increased the CaF2 precipitation, but had no additional effect on the reduction of mineral loss. Acknowledgement: Fapesp Process nº 2014/15620-7.

121 IN VITRO EFFECT OF FLUORIDE AND PHOSPHATE ASSOCIATION ON DENTAL CARIES

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Aim: The aim of this study was to evaluate the action of conventional toothpastes containing 1100 ppm F with or without different concentrations of sodium trimetaphosphate (TMP) micrometer or nanoparticulate on enamel demineralization, using a pH cycling model. **Methods:** Bovine enamel blocks (4 mm x 4 mm, n = 96) were selected by initial surface hardness test (SHi) and then divided into eight groups (n = 12), according to the experimental toothpastes: without fluoride and TMP (Placebo), 1100 pm F (1100 ppm F), 1100 ppm F associated with TMP micrometer (TMP) and nanoparticulate (TMPnano) at concentrations of 1% (1100 1%TMP; 1100 1%TMPnano), 3% (1100 3%TMP; 1100 3%TMPnano) and 6% (1100 6%TMP; 1100 6%TMPnano). The blocks were treated 2x/day with tootphastes slurry and subjected to pH cycling for five days. Then, the final surfasse hardness (SHf), integrated mineral loss (PMI), and the concentration of fluoride in the enamel (F) were determined. The results were subjected to ANOVA followed by Student-test Newman-Keuls test ($p<0.001$). The blocks treated with 1100 3%TMPnano in had significantly lower mineral loss (SHf and PMI), followed by the group in 1100 3%TMP ($p<0.001$). 1100 3%TMPnano group had higher concentration of F in the enamel followed by the 1100 6%TMPnano ($p<0.001$). **Conclusion(s):** It was concluded that supplementation of toothpastes with 3%TMPnano produced a greater protective effect on inhibition of enamel demineralization when compared to a conventional toothpaste (1100 ppm F).

122 INFLUENCE OF INORGANIC FILLER CONTENT AND POST-POLYMERIZATION METHODS ON DEGREE OF CONVERSION OF EXPERIMENTAL COMPOSITES

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Aim: to evaluate the influence of different inorganic fillers content and post-polymerization methods on degree conversion (DC) of experimental composites. **Methods:** Experimental composites were prepared with 30 wt.% of organic matrix and 70 wt.% of filler constituted by C1-100%, C2-90%, C3-80% and C4-70% of silanated barium-glass fillers. Silicon matrices (5X2mm) were fulfilled with composites and photocured. After, specimens were subdivided in post-polymerization protocols (n=10): P0-without post-polymerization; P1- Beta Visio unit 470mW/cm2 for 15 min; P2- 5 min in a microwave at 500W. After 24hs, DC was analyzed on top and bottom surfaces using Fourier Transformed Infrared Spectroscopy. Data were submitted to two-way ANOVA and Tukey tests ($p<.05\%$). **Results:** There was interaction between composites X post-polymerization methods ($p<.01$) for both surfaces. In the top, C2/P2 showed the highest DC (68.77±1.96), significantly different from C2/P0 (61.59±3.06) and C2/P1 (59.32±2.56). The lowest DC was found for C3/P0 (57.87±3.66) with significant difference from C3/P1 (63.11±5.01), C3/P2 (66.82±2.28) and C1/P0 (67.39±4.14). For the bottom, the highest DC was found for C1/P0 (69.13±3.78) with significant difference from C1/P1 (58.11±3.47), C3/P0 (35.06±15.77) and C4/P0 (52.56±6.83). C3/P0 showed the lowest DC, significantly different from C3/P1 (60.95±12.06), C3/P2 (45.36±14.66), C1/P0 (69.13±3.78), C2/P0 (61.31±3.24) and C4/P0 (52.56±6.83). **Conclusion(s):** Content of inorganic fillers and post-polymerization methods influenced the DC of experimental composites showing that higher inorganic fillers, higher monomer conversion.

123 MANAGEMENT OF A CASE OF SEVERE TRAUMATIC DENTAL INJURY: A ONE-YEAR FOLLOW-UP STUDY.

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Traumatic dental injury (TDI) is considered a relevant public health problem with high frequency in primary teeth. It can be associated with a negative impact on children's quality of life, affecting functional and psychological aspects. **Aim:** This report aims to present a case of an oral aesthetic-functional rehabilitation of a preschool child who suffered a severe TDI. A 4-year-old girl was referred to the Pediatric Dentistry Division, Piracicaba Dental School, University of Campinas, complaining of pain on its upper lip and maxillary anterior primary teeth, following a monkey bar accidental fall two days earlier. **Methods:** Based on the medical/dental histories and radiographs a diagnosis of crown fracture with exposed pulp of maxillary right central incisor was made, with the presence of maxillary left central incisor extrusive luxation, maxillary left lateral incisor intrusive luxation, and fracture of the labial bone plate. Treatment plan included the extraction of all affected teeth. Patient returned 7 days after the procedure reporting no pain. The healing of surgical wounds occurred as expected and with no complications. Next, an aesthetic space maintainer was installed to establish aesthetic and oral function. Parents reported increasing on self-esteem after the patient started using the space maintainer. No signs of eruption of permanent successors was found after one year of follow-up. **Conclusion(s):** In conclusion, professional approach for TDI in pediatric patients should be conscious, safe and include rehabilitation of functional and psychological aspects of children.

124 MUCOCELE DURING PREGNANCY: CASE REPORT

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The mucocele is a disease that typically presents as a swelling of the mucous, with extravasation of mucin inside of the surrounding soft tissue. It can vary in size and is usually more common in children and young adults. The etiology is basically linked to trauma and obstruction of the excretory duct. **Aim:** This case report refers to a female, 23, pregnant at 32 weeks of gestation, who attended the clinic complaining of "discomfort in the time to talk and eat". **Methods:** After history taking, clinical examination and radiographic, it was noted as a possible diagnosis of mucoceles in the bottom lip region. The proposed treatment protocol was the surgical removal of the lesion due to pathology be a factor of discomfort, and hamper the feeding of the patient. The surgical procedure began with intra oral and extra antisepsis, after the patient was anesthetized with lidocaine 2% with vasoconstrictor epinephrine 1: 100,000. The blocking technique of the right inferior alveolar nerve and infiltrating the swollen area. Excision to the surrounding mucosa with a scalpel to expose all glands and with the forceps 'mouse teeth' the same have been removed. Finally, there was the suture region. The material collected was sent for histopathologic examination, which later confirmed the diagnosis. The patient was oriented about the post- operative care, it being: oral hygiene with chlorhexidine mouthwash 0.12%, avoid eating hot food and feed of pasty food. It was prescribed only analgesics, paracetamol for 48 hours. **Conclusion(s):** After 7 days, the suture was removed and it was observed that the fabric had healed.

125 PARTIAL CARIES REMOVAL IN YOUNG PERMANENT TOOTH: A CASE REPORT

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Partial caries removal is intended to minimize the risk of accidental pulp exposure, contributing to the achievement minimally operative dentistry. **Aim:** The objective of this case report was to relate the therapeutic approach through the partial removal of caries. **Methods:** Patient NEG, 10.4-year-old-girl, presence of shallow carious lesions in teeth 16 and 26 (without pain symptons) and extensive deep in the teeth 36 and 46 (pain during chewing). Periapical radiograph examination showed no pathological changes periapical and through interproximal confirmed to extensive carious lesion and proximity to the pulp. The plan initially consisted of visible plaque index, oral hygiene instruction, prophylaxis and partial caries removal in a single step and indirect pulp capping it was done with calcium hydroxide cement as liner base in order to promote the pulp recovery and remineralization/deposition of dentin in the teeth 36 and 46. In subsequent sessions, it was performed adequacy of the oral environment and direct composite resin restorations on teeth 16 and 26. For indirect pulp capping, glass ionomer cement was used as a temporary restoration and signs and symptoms were accomplished. After 45 days, it was observed in the periapical radiographs the formation of reparative dentin and integrity of periapical region. **Conclusion(s):** Therefore, the partial caries removal was a curative therapy that prevented the pulp exposure and led to recovery of dental tissues.

126 PROSTHETIC REHABILITATION IN DECIDUOUS TEETH

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Despite all the used preventive proceedings, there are still frequent cases of children who need prosthetic rehabilitation. **Aim:** The objective of this study was to report a case of prosthetic rehabilitation due to loss of deciduous teeth caused by early childhood caries. **Methods:** NFC patient, 6 years and 6 months of age, had active white spots in the teeth 53, 54, 55, 65, 72, 73, 74, 75, 83, 84, 85; early loss of the teeth 51, 52, 61, 62, 64, 65; presence of fistula in the tooth 54; anterior crossbite; loss of vertical dimension; unilateral chewing and atypical swallowing. The behavior adequation enclosed dental biofilm evidence, prophylaxis, oral hygiene instruction and request of the diet diary. A highly cariogenic diet was observed. It was performed extraction of tooth 54, application of fluoride varnish on all the teeth with active white spots and ionomer sealant on the element 46. Besides, the dietary guidance was carried out. After four months was noted reduction of biofilm, stabilization of the white spots and changing eating habits. Finally, a removable superior prosthesis was made, adapted and installed. The patient is in orthodontic maintenance to monitor the growth and consequent adaptation of the prosthesis. **Conclusion(s):** Thus, the prosthetic rehabilitation in pediatric dentistry provided the aesthetic-functional reestablishment, normalized the speech, and more improved the children's self-esteem.

127 RELATIONSHIP AMONG THE STAGES OF EARLY CHILDHOOD CARIES, FLUORIDE CONCENTRATION IN DENTAL PLAQUE OF PRESCHOOLERS

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Aim: The aim of the present study was to assess the relationship among different stages of early childhood caries, fluoride concentration in dental plaque, as well as presence of visible plaque in preschoolers aging 36-60 months. **Methods:** A total of 108 preschoolers, enrolled in public preschools in the urban area of Piracicaba-SP/Brazil, were clinically examined according to Nyvad criteria and the dmf-t (decayed missing and filled surfaces/teeth) was also recorded. Key words: early childhood caries, dental plaque, fluoride. Introduction Early childhood caries (ECC) is defined as the presence of one or more decayed (noncavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any primary tooth in a child 71 months of age or younger1. The objective of this study was to evaluate the relationship among early childhood caries, fluoride concentration of dental plaque, as well as presence of visible plaque in preschoolers aging 36 to 60 months. **Conclusion(s):** There was association between the presence of clinically visible dental plaque and caries cavitated lesion. Fluoride concentration in dental plaque was significantly higher in Caries-free children than in the Cavitated lesion and Early caries lesion children.

128 SODIUM TRIMETAPHOSPHATE ENHANCES THE REMINERALIZING EFFECT OF FLUORIDE VARNISH IN SITU

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Aim: Considering the limitations of in vitro protocols and the uncertainty surrounding the mechanisms of action of TMP, the present study evaluated the effects of a fluoride (F) varnish supplemented with TMP on the remineralization of caries-like lesions in situ. **Methods:** Bovine enamel discs were selected by surface hardness after induction of caries-like lesions, and divided into 3 groups: Placebo (no F or TMP), 5% NaF and 5% NaF/5% TMP. Twelve subjects used palatal devices with four demineralized enamel discs for 3 days, after varnish application, following a double-blind, crossover protocol. Two blocks were removed 6 h after varnish application for analysis of loosely (CaF2) and firmly bound F. In the remaining discs, the percentage of surface hardness recovery (%SHR), cross-sectional hardness (ΔKHN) and CaF2 and F were determined after completion of the in situ phase. Data were subjected to ANOVA and Student-Newman-Keuls' test ($p<0.05$). **RESULTS:** The 5% NaF/5% TMP varnish promoted significantly higher %SHR and lower ΔKHN when compared to the other groups. A more pronounced effect of TMP on enamel remineralization was seen at deeper regions of the lesion when compared to the external part of the subsurface lesion (9%). Higher concentrations of CaF2 and F were observed for 5%NaF, followed by 5% NaF/5% TMP and Placebo ($p<0.05$). **Conclusion(s):** The addition of TMP to a fluoridated varnish leads to enhanced remineralization of artificial caries lesions in situ and that its effects are more pronounced in depth when compared to a conventional formulation.

129 THE IMPORTANCE OF BEHAVIORAL MANAGEMENT STRATEGIES IN PEDIATRIC DENTISTRY: A CASE REPORT

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The professional-patient interaction is essential for carrying out the dental treatment. In pediatric dentistry, this fact is even more relevant, since children are under development and have behavioral variables. **Aim:** The objective of this study was to relate the importance of behavioral management strategies in a treatment of a non-collaborative child. **Methods:** Patient RRO, 5.5-year-old, with visible biofilm on smooth surfaces, presence of active caries lesions (teeth 55, 63, 64, 65, 74, 84), fistula (61, 54), residual roots (54, 52, 61, 62, 75, 85) and loss of posterior vertical dimension. The main complaint of the child's guardian was the incessant search for treatment, since his son had difficult behavior, which makes it impossible to care properly for the child. The planning consisted of identification and implementing of the appropriate behavior management strategies to the patient. As the patient did not communicate verbally, it was indifferent and fearful to treatment, the first strategy used was modeling, followed by tell-show-do and positive reinforcement, obtained the active participation of the patient. Concurrently to management, the preparatory phase included visible plaque index, oral hygiene instruction, prophylaxis, oral environment adequation (64, 65, 74), teeth extractions (54, 55, 52, 61, 62, 75, 84, 85) and glass ionomer sealing (16, 26, 36, 46). The restorative and rehabilitative phases included direct (63, 65) and indirect (74, 64) restorations and removable space maintainers. **Conclusion(s):** Therefore, behavioral strategies were essential to patient compliance and consequently safe and effective completion of the treatment.

130 "MICROBIOLOGICAL CHARACTERIZATION OF THE BIOFILM ON THE CARIOUS SURFACE IN PRESCHOOLERS WITH EARLY CHILDHOOD CARIES"

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Aim: The aim of this study was to identify species of the microbiota present in biofilm at different stages of early childhood caries. **Methods:** Biofilm samples of 75 preschool children aging 36-60 months from Piracicaba-SP, were collected, identified among the different groups (no caries surface, white spot lesion and cavitated caries lesion) and stored under cooling. It was carried out DNA purification, quantification of samples by spectrophotometry (Nanodrop® 2000) and quantification of total bacteria using 16S gene by qPCR .

131 CONTENT VALIDITY OF DISABILITIES OF ARM, SHOULDER AND HAND SCALE

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Aim: This study aimed to carry out a Content Validity of Disabilities of Arm Shoulder and Hand scale (DASH) for dental students. **Methods:** The culturally adapted DASH's version to Brazilian Portuguese was used. This instrument consists of 30 items which the answers are presented as Likert scale of 5 points. Its original structure is presented in one-factor form. The Content Validity process involved eight judges, four dentists and four physiotherapists, experts in occupational health. Each item of the instrument was evaluated and classified by judges as "essential," "useful, but not essential" and "not required". Thereafeter of data collection, the calculation of Content Validity Ratio (CVR) was performed. It was observed that CVR values ranged from 1 to -1, three items presented negative values of CVR and eleven items with values below the recommended (CVR8; 0.05 = 0.69). **Conclusion(s):** This study concludes that fourteen items of the DASH scale cross-culturally adapted to Brazilian Portuguese should be removed during the Construct Validity, when using the DASH in dental students.

132 ERGONOMIC FACTORS AND DENTAL PROFESSION-RELATED POSTURES

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Work-related musculoskeletal disorders commonly experienced by dental professionals are one of the main occupational health problem affecting their health and well-being. **Aim:** This study was conducted to discuss ergonomic factors and profession-related postures. **Results:** It is known that the consolidation and implementation of ergonomic principles that identify point and suggest modifying the inadequacies posture are needed as an effective way to ensure the health, safety, high performance, motivation and satisfaction in dental practice. The prevalence of discomfort and pains of this nature reaches a rate of 62% of the general population; its percentage in dentists covers 93%. Headaches and vertebral pain are positively correlated to poor ergonomic working posture adopted by dentists. **Conclusion(s):** The risk and perspective of the musculoskeletal disorders related to unbalanced postures should determine the dentists take postural corrective actions and compensation measures in order to limit the negative effects of working in a bad posture.

133 IDENTIFICATION OF RISK FACTORS FOR MUSCULOSKELETAL DISORDERS IN DENTISTRY BY MEANS OF FOCUS GROUP

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Aim: To obtain information about students' knowledge regarding risk factors in Dentistry that may contribute to musculoskeletal symptoms in order to assist in the development of a specific screening instrument for students and dentists. **Methods:** Initially a researcher conducted a brief presentation about the objectives of the Focus Group. Then an open discussion was conducted for two hours in which 10 students from Araraquara Dental School - UNESP discussed the risk factors for musculoskeletal disorders in their work/study environment. The discussions were recorded for later analysis. The students' speech was then transcribed and was confectioned a table with the risk factors mentioned, the number of citations and the dimension to which each factor could be part: repetitiveness, working posture and external factors. Results. Regarding to the dimension External Factor, the "lack of appropriate equipment for the job" was the most remembered factor, with 15 citations, followed by "lack of training for work" (fi=11) and "difficulty of visualization the operating field" (fi=10). In relation to dimension Work Posture, the most frequently cited factors were "static posture for an extended period of time" (fi=4), "inadequate posture" (fi = 4) and "absence of elbows close to the body." As for Repetitiveness dimension, the factor "performing repetitive movements" was mentioned three times. **Conclusion(s):** The risk factors reported by students were part of the three dimensions proposed in a previous study and will assist in the development of a specific screening instrument for Dentistry.

134 A NEW DESIGN OF RAPID PALATAL EXPANSION SUPPORTED BY MINISCREW FOR CORRECTION OF SKELETAL CLASS III IN GROWING PATIENT

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Skeletal Class III correction in growing patient is traditionally treated by performing rapid palatal expansion (RPE) and maxillary protraction with face mask. Considering that orthopedic forces need to be delivered to the basal bone, rapid palatal expansion supported by miniscrews can be an efficient appliance in order to obtain bone anchorage to protract the maxilla and to control dental adverse effects such as buccal tipping and risk of bone fenestrations, during expansion. **Aim:** The aim of this case report is to show a 13 year-old patient presenting skeletal Class III by maxillary deficiency with mild vertical growth pattern and high potential for mandibular growth. **Methods:** The new design of RPE supported by miniscrew appliance consists in a 10 mm orthodontic palatal expansion screw (Hyrax type) and two adaptable ring socket (Peclab®, Belo Horizonte, Brazil) attached to the perpendicular wires of the Hyrax screw. The adjustable ring socket served as a guide and as miniscrew housing on the palate. Miniscrews used were 7mm length. Activation was performed twice a day during 10 days. Periotest evaluation was performed before and after activation and no changes were seen in miniscrew stability. After this period, face mask was used for maxillary protraction. **Conclusion(s):** The results showed that this new design for RPE supported by miniscrew appliance represents a simple method that can be adjusted to a conventional Hyrax screw and provide a reliable and stable bone anchorage for minimal undesirable effect during expansion and maxillary protraction.

135 A SIMPLE AND EFFECTIVE TECHNIQUE TO DRIVE A PERMANENT MANDIBULAR FIRST MOLAR IN ECTOPIC ERUPTION: A CASE REPORT

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Early diagnostic of problems in the mixed dentition is fundamental to avoid more complex treatments and possibilite the normal occlusion, especially in the eruption of the first permanent molar like ectopic position, terminal relationship of second deciduous molar, impactation in this side, space of retromolar region of mandible. **Aim:** The aim of this paper is to report a case of a pacient, 5-year-old, male, that was diagnosted with ectopic eruption of the permanent mandibular left first molar, which was mesially inclined to the primary mandibular second molar based inicially by clinical examination and follow by a radiographic examination. **Methods:** The treatment consisted in a elastic separator between the terminal molars. **Conclusion(s):** After one week the therapy applied was efective, once provided a normal course of the eruption of the first left mandibular molar.

136 HANDLING METHOD AND IT INFLUENCE ON THE COMPRESSIVE STRENGTH OF THREE TYPES OF DENTAL PLASTERS.

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The use of pressurizing air during polymerizing is beneficial for decreasing porosity and enhancing mechanical properties in Acrylic Resins and Phosphate-Bonded Investments. However, its influence in the mechanical properties of gesso is largely unknown. **Aim:** The aim of this study is evaluate if the mechanical properties of gesso are improved when using pressurizing air. **Methods:** Gesso was prepared a) as recommended by the manufacturer (n=6); b) under vacuum (n=6); c) under manual pressurization (10 pounds) (n=6); d) plus 5% water (n=6) and e) with 50% gesso-water. Groups were prepared with raw materials: Regular gesso Type II, Type III and Type IV. **Conclusion(s):** The pressurization increases the compressive strength only in Type IV gesso, probably due its fine particles and the smaller amount of water requirement.

137 ASSOCIATION BETWEEN SYMPTOMS OF TMD AND CLINICAL, FUNCTIONAL AND BEHAVIORAL ASPECTS OF 12-YEAR-OLD CHILDREN

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Aim: This study aimed to evaluate the association between symptoms of Temporomandibular disorders (TMD), malocclusion, joint sounds, asymmetrical mandibular lateral movement, facial asymmetry, teeth grinding/clenching, and quality of life of 12-year-old children. **Methods:** 248 children answered screenings questionnaires (Temporomandibular disorders and orofacial pain/American Academy of Orofacial Pain, Child Perceptions Questionnaire and one question about the habit of grinding and clenching the teeth). Dental Aesthetic Index (DAI) was used in order to evaluate the malocclusion. MBGR protocol was used to the measurements of the face and the mandibular lateral movement. Joint sounds were diagnosed on TMJ bilateral palpation.. Data collected were submitted to Chi-Square of independence, Mann-Withney tests and Odds Ratio logistic ($p<0.05$). It was observed an association between TMD symptoms and worse quality of life ($p<0.0138$) and between pain, quality of life and teeth grinding/clenching ($p=0.0120$ and 0.0007). The odds ratio test showed that a better quality of life decreases the chances of pain (OR=0.43; 95% IC= 0.221-0.840; $p=0.0134$). No significant association were found between asymmetrical lateral movement of the mandibular movement ($p=0.2880$) and facial asymmetry ($p=0.4284$), and between asymmetrical mandibular lateral movement and facial asymmetry. **Conclusion(s):** The study concluded that no associations were found between the symptoms of TMD and malocclusion, joint sounds, asymmetrical mandibular lateral movement and facial asymmetry. There was an association between teeth grinding/clenching and worse quality of life.

138 FACTORS ASSOCIATED WITH THE SYMPTOMS OF TMD AND THE QUALITY OF LIFE IN COLLEGE STUDENTS

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Aim: The objective of this research was to evaluate the prevalence of symptoms of temporomandibular disorders (TMD) in college students and relate them to socio demographic factors and quality of life. **Methods:** We evaluated 3,048 individuals aged between 18-44 years (mean age of 22.4 years). To evaluate the symptoms of TMD it was used the screening questionnaire for orofacial pain and temporomandibular disorders recommended by the American Academy of Orofacial Pain. The instrument used to measure the impact on quality of life related to oral health of students was the Oral Health Impact Profile (OHIP-14 / time reference: last year), which was applied along with a form containing demographic questions members. The results showed that 65% of students had at least one possible symptom of TMD, with 74% female and 50% male. Women had a higher risk of developing the DTM compared to men (OR = 2.7; 95%CI = 2.3-3,2; p = 0.0001). Marital status and children showed no statistically significant relationship with the presence of symptoms of TMD. There was an association between the presence of TMD symptoms and the evaluation of the impact of oral health on quality of life (OR=0.3; 95%CI = 0.2-0.4; p=<0.0001). **Conclusion(s):** It was concluded that the prevalence of TMD symptoms in college students was high, with higher risk for women and without influence of sociodemographic factors. However, the TMD has negative impact on the quality of life of individuals.

139 HISTOLOGICAL EVALUATION OF PERIODONTAL REACTIONS CAUSED BY TOOTH MOVEMENT ASSOCIATED WITH LASER THERAPY

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Aim: The objective of this work was to study the macroscopic, histological and molecular responses by application of low intensity laser, associated with induced tooth movement. **Methods:** Wistar rats were subjected to movement of the first upper left molar using stainless steel spring attached to the incisors (40g force / 7 days). The sixteen animals were divided into 2 groups (n =8): C - submitted to tooth movement and ML - submitted to tooth movement associated with the application of low laser therapy (670nm, 24,6J / cm²) during 60s. The jaws were evaluated microscopically and measured with a digital caliper comparing both sides. The pieces were stained with hematoxylin and eosin, picrosirius-hematoxylin and toluidine blue for histologic and morphometric analysis of fibroblasts, osteoclasts, granulocytes, blood vessels and birefringent collagen fibers. The Western blotting quantified VEGF, bFGF and TGF. **Results:** Macroscopically, the laser increased the amount of tooth movement by 26%. In the traction area of the periodontal ligament of the experimental group there was a significant increase in the number of fibroblasts and blood vessels, a significant decrease of granulocyte and no alteration in the organization of the collagen fibers. In the compression region there was no difference in the number of osteoclasts. There was an increase of VEGF and bFGF, but TGF; decreased significantly in the samples treated with laser. **Conclusion(s):** It was conclued that laser therapy has significant effect in controlling inflammation and tissue repair during induced tooth movement.

140 HISTOLOGICAL EVALUATION OF PERIODONTAL REACTIONS IN TOOTH MOVEMENT WITH LASER AND MICROCURRENT APPLICATION

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Aim: The aim of this work was to study the macroscopic responses, histological and molecular in application of low intensity laser associated with microcurrent on therapy tooth movement. **Methods:** Wistar rats were subjected to movement of the first upper left molar using stainless steel spring attached to the incisors (40g force / 8 days). The sixteen animals were divided into two groups: Control group (n = 8) - tooth movement and experimental group (n = 8) - tooth movement associated with the application of laser (670nm, 24,6J/cm²) for 1 minute, alternating the application of microcurrent (10μA) for 5 minutes on the mesial region of the molars. The tooth movement was measured with a digital caliper. The samples were colored with hematoxylin and eosin, picrosirius-hematoxylin and toluidine blue for histologic and morphometric analysis of fibroblasts, osteoclasts, granulocytes, blood vessels and birefringent collagen fibers. Western blotting quantified the expression of VEGF, bFGF and TGF-β. Macroscopically, the experimental group increased movement by 46%. On the side of the traction there was a significant increase in the number of fibroblasts and blood vessels, a significant decrease of granulocyte and no alteration in the organization of the collagen fibers. On the compression side the osteoclasts significantly increased. VEGF and bFGF increased, but TGF-β1 did not change. **Conclusion(s):** It can be concluded that the use of laser associated with microcurrent in the movement had significant effects on the control of inflammation and bone remodeling.

141 RELATION BETWEEN ORTHODONTIC TREATMENT NEED PERCEIVED AND NORMATIVE AND ASSOCIATED FACTORS

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Aim: This study aims at assessing a relationship between perceived need and normative of orthodontics treatment associated with quality of life, self-esteem and self-perception **Methods:** The sample included 248 school children of both genders and 12 years old. The normative aspect of orthodontics treatment was assessed by Dental Health Component (DHC) and the Aesthetic Component (AC) of the Index of Orthodontic Treatment Need (IOTN). To evoluate of quality of life was used the Child Perceptions Questionnaire (CPQ11–14), self-esteem, Global Self-evaluation (GSE), self-perception a Oral Aesthetic Subjetctive Impact Scale (OASIS). The IOTN-AC was considered as the response variable and generalized linear models estimated by GENMOD procedure of the SAS program. Model 1 was estimated with only the intercept, providing the basis to evaluate the reduction in variance in the other studied models and then the variables were tested in sequentially, considering as permanence criteria in the model p≤0,05. **Results:** In the model, the self-perception was statistically significant in relation to the perceived need for treatment. The normative need was significantly associated with the outcome variable, not being influenced by independent variables (gender, quality of life and self-esteem). **Conclusion(s):** It was conclued that the normative need of orthodontics treatment is not overestimated by the perceived, and the perceived need is not influenced by gender and quality of life.

142 A RARE CASE OF THE MESENCHYMAL CHONDROSARCOMA IN CHILD: CASE REPORT

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Aim: The aim is report an additional rare cases of Mesenchymal Chondrosarcoma (MC) of maxillary in 9 years old boy that was referred to Dental School for evaluation of a rapidly expansive mass in his left maxilla of 6 months duration and asymptomatic. **Methods:** On physical examination was observed firm swelling and caused diplopia in left eye. Clinical examination revealed a large, hard and ulcerated tumor in the left maxilla. A computed tomography scan revealed that the tumor contended scattred calcification and involved the left maxillary sinus.An incisional biopsy was performed and microscopic examination revealed a tumor mass composed of a dense sheets of small round or ovoid blue cells that surrounded nodules of cartilage. Mitotic figure were occasionally observed. The cartilaginous nodules varied in size and shape and consisted of differentiated cartilage. The diagnosis was the MC, however, the imunohistochemisty study was performed using the antibody against S-100, CD99, vimentin, CD57, CD56, and D240. Diffuse positivity CD99 was observed in the small cells component. In additional, the cartilaginous cell was positive for S-100 protein. Vimentine was diffuse positive. The child was referred the oncology infant service and stated chemotherapy protocol. A total maxillectomy with orbital floor was carried out. An acrylic prosthesis was made and used with obturator. **Conclusion(s):** At 4 year postoperative pertinent was well without evidence of recurrence or metastasis. Adequate treatment and long-term follow-up, including periodic systemic evaluation, are required for patients with MC of the maxilla.

143 AMELOBLASTIC CARCINOMA: CLINICOPATHOLOGICAL AND IMMUNOHISTOCHEMICAL ANALYSIS OF THREE CASES

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Malignant odontogenic tumors are rare neoplasms that account for less than 6% of all tumors diagnosed in oral pathology services. Ameloblastic carcinoma represents the most common subtype with an incidence of less than 1.73 cases/10 million person/year, being defined by the World Health Organization as a malignant neoplasia that combines the microscopic characteristics of an ameloblastoma with variable amounts of cytological atypia. It is subclassified as primary type when it develops de novo or as secondary type if it is derived from a previous central or peripheral ameloblastoma. Literature shows that adults with a mean age ranging from 40 to 50 years are the most affected patients with a slight male predominance. Posterior mandible is the most affected site and patients usually complain of swelling, rapid growth, ulceration and pain. Radiographically, it shows an infiltrative ill-defined radiolucent image with scattered radiopaque foci that might represent dystrophic calcifications. Recurrences are frequent, distant metastases are more commonly found in the lungs and patients are considered to have a mean 5-year survival of approximately 70%, but because of its rarity, the analysis of new cases can help to better understand the biological and clinical characteristics of this odontogenic malignancy. **Aim:** Therefore, the aim of this study is to describe the clinicopathological and immunohistochemical features of a series of three cases of ameloblastic carcinoma, two of them originating from a previous benign ameloblastoma.

144 DIAGNOSIS OF SYPHILIS BY AN ORAL LESION: CASE REPORT

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Syphilis is a sexually transmitted disease caused by Treponema pallidum. The infection develops in three phases, each one with different signs and symptoms. Oral syphilitic lesions are uncommon but can occur in any stage. **Aim:** To analyze the clinicopathological features of a patient with diagnosis of syphilis. **Methods:** Clinicopathological and immunohistochemical analysis (S-100, CD68 and CD138) were performed, also special stain (Warthin Starry) and laboratory tests (VDRL and FTA-ABS). **Results:** A 32-year-old man complained of a 1-month history of a nodule in the tongue with mild discomfort. There was no relevant medical history. Oral examination revealed a nodular lesion with indurated borders and a central ulceration measuring 2 cm. The histological study revealed an ulcer covered by a fibrinopurulent membrane. Underlying, intense chronic inflammatory infiltrate composed predominantly of plasma cells. The macrophages expressed S100 protein and CD68 intensely, while CD138 was positive in plasma cells. The Warthin Starry stain showed abundant corkscrew-like spirochaete organisms. The serological tests were positive for veneral disease research laboratory (VDRL) and the fluorescent treponemal antibody absorption (FTA-ABS). These results were consistent with the diagnosis of syphilis. The patient was referred to the Infectio-Contagious Disease Center (CEDIC) for treatment. **Conclusion(s):** Syphilis is a bacterial infection with important implications for dentistry, particularly because of oral manifestations can be the first sign. Therefore, early diagnosis of syphilis can avoid sistemic complications and new infections.

145 IMMUNOHISTOCHEMICAL EXPRESSION OF STIMULATORS OSTEOCLASTOGENESIS IN PERIAPICAL CHRONIC INFLAMMATORY LESIONS

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Aim: to investigate the immunohistochemical expression of RANKL and TNF alfa in radicular cyst (RC), residual radicular cyst (RRC) and periapical granuloma (PG). **Methods:** 19 PGs, 21 RCs and 10 RRCs were embedded in paraffin and subjected to immunohistochemistry technique. Data was collected considering age, gender, size and location of the lesions. Morphological information regarding the epithelial lining of the cystic lesions, intensity and quality of the inflammatory infiltrate was also revised. **Results:** Patients affected by RRCs presented the highest average age (44.5 years) and the highest dimensions (2.6 cm). The lesions most often affected the maxilla of male patients. Regarding the morphological aspects, the intensity of the infiltrate was severe for most RCs and PGs. The epithelium layer was predominantly hyperplastic for RCs and atrophic for RRCs. Immunohistochemical analysis revealed higher expression of RANKL to RCs , followed by PGs and RRCs ($p<0.05$, X^2) . The immunostaining of TNF alfa was similar between the lesions ($p> 0.05$). By analyzing the ratio of RANKL and TNF alfa, the expression of TNF alfa in the lesions was predominant. **Conclusion(s):** RANKL and TNF alfa participated in the growth of the lesions studied, having RANKL more important participation in the CRs and GPs. The TNF alfa appears to be a precursor factor for osteoclastogenesis in all stages of chronic inflammatory periapical lesions.

146 ORAL LICHEN SCLEROSUS: CASE REPORT

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The term lichen sclerosus describes a chronically relapsing dermatosis immunologically mediated which presents a potential for destructive scaring, atrophy, functional impairment and malignant evolution, predominantly affecting anogenital mucosa and skin; nevertheless, extragenital lesion might occur, rarely affecting oral mucosa, with few published cases. Although lichen sclerosus shows a slight predilection for occurring in prepurbetal girls and pre and postmenopausal women, individuals at any age might be affected. **Aim:** Case report: 12-years old female patient, Caucasian, with non-contributory medical history, presented with a white plaque in mouth involving lower lip extending to labial mucosa, buccal sulcus and gingiva which had developed for 3 months with no symptomatic manifestation. **Methods:** Incisional biopsy was performed for histopathologic analysis, which was consistent with lichen sclerosus, showing basal cells degeneration, epithelium atrophy, a clear superficial lamina propria homogenization and a diffuse band-like lymphocytic infiltrate below. Treatment plan consisted on intralesional Triamcinolone 20mg/ml infiltrations. After two applications, lesion clearly regressed; nevertheless, one more application is necessary once a slight whitish plaque can be observed in lower lip vermilion. **Conclusion(s):** Histopathologic analysis is mandatory for diagnosing oral lichen sclerosus, which is a rare lesion. Triamcinolone intralesional infiltration is a reliable therapeutic approach for improving symptomatic and esthetical aspects. Keywords: Lichen Sclerosus et Athophicus; Skin Diseases; Mouth Diseases.

147 CONSEQUENCES OF TRAUMATIC OCCLUSION IN PERIODONTAL STRUCTURES.

CONSEQUENCES OF TRAUMATIC OCCLUSION IN PERIODONTAL STRUCTURES.

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Aim: The aim of this paper is discuss the relationship between traumatic occlusion and its effects on periodontal structures, its etiological factors and the possible advantages of association between occlusal and periodontal thearapy. **Methods:** Bibliographic review in books and in the Pubmed website. **Results:** A healthy periodontum depends on mechanical stimulus from the occlusal forces of functional activity. Occlusion is the "lifeline of periodontum" because it may change when such functional stimuli are insufficient or when these forces exceed the adaptation capacity of the tissues. The American Academy of Periodontology (2001) sets the occlusal trauma as a injury which results in tissue changes within the insertion apparatus, as a result of occlusal forces. The occlusal trauma can be triggered from emotional or local factors changes (presence of defective restorations, ill-fitting dentures, extensive loss of periodontal support or inclination of the teeth). As clinic consequence, we can cite: tooth mobility, thrill, permanent discomfort and pain to percussion or occlusion; and radiographically: thickening of the periodontal ligament, disruption of lamina dura, radiolucent and condensation of the alveolar bone, angular bone defect and root resorption and alveolar bone. An effective treatment is occlusal adjustment, associeted with the removal of the etiology and treatment of periodontal disease, when present. **Conclusion(s):** A functional occlusion is essential for the maintenance of periodontals structures, and when indicated, occlusal adjustment should be performed routinely during periodontal treatment.

148 SUTURE-GUIDED LIP REPOSITIONING, WITH A PREVIEW TRIAL TECHNIQUE TO REDUCE A GUMMY SMILE: REPORT OF CLINICAL CASES

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Gummy smile can be estheticallly concerning. When the etiology is lip hypermobility, lip repositioning surgery is a treatment option. Although this is an elective procedure, traditional lip repositioning surgeries have not resulted in ability to preview the surgical outcome. These case reports introduce a new technique that allows patients to preview and prescribe the outcome of their surgery using a modification of the reversible trial technique reported by Jacobs and Jacobs in 2013. **Aim:** Case Series: Two patients with excessive gingival display were treated. **Methods:** The reversible trial technique was performed with temporary sutures approximating the programmed margins of the upper labial mucosa, thereby allowing patients to preview their lip repositioning surgery. The modification of the original technique consisted in quantifying the reduction of the vestibule depth according to the position of the sutures so that patients can further alter the desired gingival display. Thus, incisions follow the suture limits, whereby a segment of maxillary labial mucosa is excised bilaterally to the frenum. Trial sutures were replaced by permanent sutures that approximate excised margins of the tissues. The final result was a lip positioning closer to the mucogingival junction, decrease in the vestibular depth and limited labial mobility as previewed by the patients. **Conclusion(s):** The introduced modification of the technique for lip repositioning surgery allowes patients to preview and prescribe the desired increment of gingival reduction.

149 ASSOCIATION BETWEEN THE SYMPTOMS OF TMD AND BRUXISM IN PATIENTS IN DENTAL TREATMENT

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There are studies in the literature relating to different etiologies with symptoms of temporomandibular disorders (TMD). The parafunctional habit of teeth grinding (bruxism) is considered one of the etiologic factors of TMD, however there is divergence between the researchers. **Aim:** The aim of this study was to determine the prevalence of TMD symptoms and bruxism in patients in dental treatment, through a questionnaire for selection of orofacial pain and temporomandibular disorders recommended by the American Academy of Orofacial Pain and a specific questionnaire for diagnosis bruxism . **Methods:** A number of 150 patients (58 men and 92 women) in dental treatment aged 14 to 80 (mean: 47 years old) were interviewed aged between 14 and 80 years (mean 47 years). **RESULTS:** Among them, 58 % reported at least one symptom associated with TMD and 47.3 % at least one symptom of bruxism and 35 % of patients reported symptoms of TMD and bruxism concomitant. The statistical test showed that patients who report symptoms of bruxism are at increased risk for the occurrence of symptoms. **Conclusion(s):** It can be concluded that in patients interviewed, there was a high prevalence of symptoms of bruxism and TMD and a significant association between symptoms of bruxism and TMD in patients interviewed.

150 COMPLETE-ARCH IMPLANT-SUPPORTED PROSTHESES: THE IMPORTANCE OF SURGICAL-PROSTHETIC PLANNING.

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A correct surgical-prosthetic planning for the jaws have directly influence in the success of extensive rehabilitation with implants, increasing the predictability and the success rate of the treatment, consequently the satisfaction of patient. **Aim:** CASE REPORT: Patient, male, attended in the clinic and the initial clinical examination were observed unsatisfactory removable partial prosthesis and unfavorable prognosis of some teeth. **Methods:** After take a computer tomography, was evaluated and planned a complete-arch implant-supported prostheses for the jaws. In the superior arch, the rehabilitation was made in 2 steps. Initially, following the principles of dentures for rehabilitation, a maxilla multifunctional guide was made to order the position of the implants and a provisional denture was made. After the osseointegration of the implants, the abutments were selected and installed, impression followed by the installation of implant-fixed completed dental prostheses. In the inferior rehabilitation, after the surgical procedure of the implants installation, abutments were selected and an immediate loading complete-arch implant-supported prosthesis was made. **Conclusion(s):** We conclude that the rehabilitation using complete-arch implant-supported prostheses immediate becomes it's easier and more predictable when the correct planning is done, minimizing complications and the chances of failure.

151 ESTHETIC REHABILITATION WITH IMPLANTS USING CUSTOM ABUTMENTS

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Standard components do not work well in all cases such as where the peri-implant area is deep or an incline must be compensated for. Cemented prostheses are an example in which standard components should not be used due to the peri-implant depth that results in difficulty with cervical adaptation. Therefore, customs components created using different technologies should be considered. **Aim:** CASE REPORT: The examination showed abscess in the tooth 11 peri-implant region and injury in tooth 21. **Methods:** After removal of the abutment #11, showing buccally position of the implant; Provisional crown was made to involve teeth 11, 21 and 22. Increase of the clinical crown of elements 23, 22, 21. Tooth extraction 21 and a 4.3 mm internal hexagon implant was placed 3 mm below the free gingival margin, in the direction of palatal cortical place. Impression technique with squared copings with prolongations created with acrylic. Then, customs abutments that were created using UCLA with an overcasting procedure. Subsequently, the application of porcelain over the components proved to create an aesthetic gingiva within the limitations of the biological distances and an ideal gingival structure. To obtain greater precision, prosthetic components were fabricated and a clinical test was performed to confirm the anatomy of the abutments. After one year, the patient continues to present aesthetic and functional excellence. **Conclusion(s):** When implants are incorrectly angled or improperly positioned with soft tissue defects, the challenge of creating harmonious mucogingival contours may be facilitated by the replacement of custom UCLA abutments.

152 ESTHETIC RESOLUTION WITH IMPLANT IN POSTERIOR MAXILLA

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Insufficient bone volume is a common problem in the rehabilitation of the edentulous posterior maxilla with implant-supported prostheses. Sinus lift surgery increase bone volume to favored the implants placement. **Aim:** The aim of this case is to describe the rehabilitation of the right posterior maxilla with unit implant considering a multidisciplinary treatment to obtain the esthetic results. CASE REPORT: A systemically healthy female patient appeared at Dental Clinic presenting esthetic dissatisfaction in right superior first molar. **Methods:** The radiographic examination showed a radicular fracture of this tooth, and for this reason it was extracted and a removable partial prosthesis Flexite was performed. The treatment plan included: sinus lifting with autogenous bone from tuber and implant placement. The removable prosthesis was eliminated to prevent the pressure on tissue and a fixed prosthesis was installed. After six months, it was performed the connective tissue graft to reduce the esthetic defect in that region. After 20 days it was initiated the conditioning tissue with the installation of a provisional. Sixty days later, it was performed a transfer impression and the ceramic crowns 2 E-max were installation, finalizing, this way, the case. **Conclusion(s):** The treatment plan in implant dentistry is essential especially when esthetic is important in the smile. It is important to consider the tooth and gingival structure to restore the harmony with these two factors.

153 PHOTOELASTIC ANALYSIS OF STRESS DISTRIBUTION IN IMPLANT SUPPORTED PROSTHESES WITH DIFFERENT INTERNAL CONNECTIONS.

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The accurate fit between the dental implant and the prosthetic abutment is responsible for the stability of system, and provides better distribution of the occlusal load to the surrounding bone. **Aim:** This study aimed to investigate the stress distribution in screwed implant-supported prosthesis with different implant-abutment connections by using a photoelastic analysis. **Methods:** Eigth photoelastic models were fabricated in PL-2 resin and divided according to the different types of internal connections: morse taper (MT), internal morse hexagon (IMH), morse taper hexagon (MTH) and frictional morse taper (FMT) implants (3.75 x 11.5 mm), and the number of crowns (single and 3-unit piece). Models were positioned in a circular polariscope and 100-N axial and oblique (45 degrees) loads were applied in the occlusal surface of the crowns by using a universal testing machine. The stresses were photographically recorded and qualitatively analyzed using a software (Adobe Photoshop). Under axial loading, the number and distribution of high-intensity fringes did not differ among groups for both crowns types (single and splinted 3-element). Low stress values located at the implant apex were noted. The oblique loading increased the number of fringes for all groups. **Conclusion(s):** In conclusion, the internal connection tested in this study did not affect the number and distribution of stress. The different types of internal connection provided better stability of the implant/prosthesis set, which provides improved stress distribution when the prosthetic pillar is loaded. Oblique loading promoted higher stress concentration than axial loading.

154 PREVALENCE OF TEMPOROMANDIBULAR DISORDERS IN PATIENTS WITH CRANIOCERVICAL DISORDERS

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Aim: The aim of this study was to characterize and determine the prevalence of signs and symptoms of Temporomandibular Disorders (TMD) in patients with Cervical Spine Disorders (CSD). **Methods:** Were randomly selected 176 medical records from patients who were treated in the Specialization Course in Dental Prosthesis of Piracicaba Dental School. All volunteers were subjected to the evaluations defined in medical records of "Centro de Estudos e Tratamento das Alterações Funcionais do Sistema Estomatognático da FOP-UNICAMP (CETASE)" in order to identify the signs and symptoms of TMD, through anamnestic examinations, clinical and physical. All volunteers had diagnosis of CSD. The results were grouped in tables, the percentage analysis was performed using Excel 2007 computer program and the statistical analysis was performed using the Chi-square test and Pearson's correlation coefficient. The signs and symptoms of TMD more prevalent in patients with CSD were: absence of Christensen space (73.29%), spontaneous back pain (59.66%), whistle or hum (44.88%), pain spontaneous neck and/or neck (44.88%), deafness (43.18%), visual numbness (43.18%), low DVO (42.61%), pain on palpation trapezius muscle (38.07 %) and pain on palpation in the masseter muscle (33.52%). All observed signs and symptoms were more prevalent in females. **Conclusion(s):** There was a significant inter-relationship ($p \leq 0.05$) between almost all signs and symptoms observed, suggesting a high probability of occurring together.

155 RESISTANCE OF SINGLE ROOT TOOTH'S RESTORED WITH DIFFERENT INTRA-PIN ROOT SYSTEMS

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Aim: Assess single roots tooth resistance with 2.0 mm of residual coronary reinforced by two different types of intra-pin root. **Methods:** Forty bovine incisives were reinforced with different pins systems (n=10): cast metallic core (CMC), parallel glass fiber post (Reforpost fibra – Angelus, Brazil) relined with composite resin (PGP), metallic post prefabricated (Reforpost Metal, Angelus) relined with composite resin (MP), and conical glass fiber post (Exacto, Angelus) (CGP). The posts were cemented with self-adhesive resin cement (RelyX U200, 3M ESPE). The tooth's were restored with total metallic crown and subjected to thermal cycling processes (5.000 cycles, 5 – 55 oC) and mechanic cycling processes (500.000 cycles, 130 N, 4 Hz). A fracture resistance was obtained by a compression test on 45º in a universal trials machine (Instron 1144) with a speed of 0,5 mm/min. The results were assessed by variance analysis. **RESULTS:** The samples demonstrated 100% of survival rates after aging. The statistical analysis demonstrated similarity in the resistance (N) among all groups (p=0,204): CMC: 376,0±88; PGP: 315,0±66; MP: 373,0±43; CGP: 365,0±62. The prevalence of fracture patterns was: CMC: 50% middle third; PGP: 70% cervical third; MP: 60% cervical third; CGP: 80% in core. **Conclusion(s):** Glass fiber posts provide similar resistance regarding metallic posts with 2.0 mm of coronal residual. Was observed better fracture patterns on PGP group.

156 THE INFLUENCE OF INCLINATION AND TYPE OF CONNECTION ON STRESS DISTRIBUTION ON "ALL-ON-FOUR" CONCEPT.

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Aim: The purpose of this study was to assess, through the photoelastic analysis, the influence to the angulation of the distal implants and prosthetic connection type on All-on-four technique. **Methods:**Four groups were formed and submitted to five repetitions each: HE Parallel ; CM Parallel ; HE Tilted – with distal implants 30° tilted distally; CM Tilted – with distal impalnts 30° tilted to distally. Were made for each group metal infrastructures of Ti6Al4V Laser welded. From the transfer molding of a Stainless steel array, were obtained four photoelastic models with flexible resin (Polipox GIV - Indústria e Comércio Ltda. - SP), which incorporated implants 4,0 x11, 5 mm (straight) or 4,0 x13, 0 mm (tilted) External Hexagonal (Easy Grip, Conexão Sistemas de Prótese, SP, Brasil) and Morse taper (AR Torq, Conexão Sistema de Prótese, SP). Tensions generated from the tightening of the screws and the load of 0.55 kgf applied bilaterally and on cantilevers were analyzed in a circular polariscope (PTH-A-01) and recorded by camera (Cyber-Shot DCR-SX-40Sony). The results were tabulated and submitted to analysis of variance for data with two factors study (2-way Anova 2) followed by Tukey's test to compare the mean ($\alpha = 0,05$) (SAS versão 9.1 – The SAS Institute, Cary, NC, EUA). **Conclusion(s):** The results showed no statistical difference on the region evaluated in each group, except for group CM tilted. There was no statistical difference between the groups HE Parallel and HE tilted and between HE parallel and CM parallel. Groups HE Tilted and CM Tilted showed statistical difference when comparing, as well as the groups CM Tilted and CM Parallel.

157 TOOTH EXTRACTION WITH INJURY PERIODONTAL AND TREATMENT WITH IMPLANT IN POSTERIOR MANDIBULE.

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The presence of advanced periodontal disease and recurrent apical periodontitis generates a doubtful prognosis, so appropriate planning and rapid intervention can ensure the clinical success. The strategic extraction of teeth with these conditions aims to remove the primary focus of infection, preventing bone loss, which would difficult the subsequent installation of implants, enabling a prosthetic rehabilitation with greater predictability, restoring health, function and aesthetics. **Aim:** CASE REPORT: The initial clinical examination and radiographic showed in the tooth 46: periodontal abscess, presence periodontal pocket, proximal bone loss, furcation defect grade II and recurrent apical lesion. **Methods:** The treatment plan involved extraction of the tooth; Implant placement in immediate function after 6 months of healing the tooth socket; Choose the prosthetic component with switching platform suitable for the maintenance of peri-implant bone crest and soft tissue quality; Grafting subepithelial connective tissue; Provisional preparation with reduced occlusal table without occlusal contact and with sub-contour avoiding compression of the graft and modeling the gingival tissue; Carrying out the impression of the component after the implant osseointegration and color selection for making a crown metal-free on implant; Proof of the crown and installation. **Conclusion(s):** In conclusion that when is extracted compromised tooth must wait for the time regeneration of adjacent areas to an effective osseointegration of implants, performing proper planning, providing the success of treatment and patient satisfaction.

158 REHABILITATION OF ATROPHIC ANOPHTHALMIC CAVITY WITH ORTHOSTATIC OCULAR PROSTHESIS: A CASE REPORT

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The absence of the eyeball can generate psychosocial and facial harmony changes, such as atrophy of the muscles around them. In these cases, the use of orthostatic prosthesis with expanding function promotes distension of tissues for than rehabilitation. This technique consists in making individual ocular prosthesis in transitory sizes for the patient. **Aim:** The following case report aims to describe the technique used in the standing prosthetic rehabilitation of a patient, 73-year-old, who suffered from enucleation of the right eye acquired by glaucoma. **Methods:** Clinical and laboratory procedures were performed as impression, adjust curvature of the sclera, centering the pupil area and processed in heat-cured acrylic resin 3 prostheses made according to the expansion of anophthalmic cavity. **Conclusion(s):** At the end of treatment, there was an increase of the cavity, allowing for volume replacement similar to that existing in the patient's contralateral orbit, thus generating a satisfactory facial harmony.

159 ADAPTATION OF SUPERIOR COMPLETE DENTURE BASES UNDER THE EFFECT OF DIFFERENT POLYMERIZATION CYCLES

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Aim: The aim of the study was to evaluate the adaptation of superior complete denture bases under two polymerization cycles. **Methods:** Samples were maded by acrylic resins Classico and Vipi (conventional) and Onda-Cryl and VipiWave (microwave), divided in 4 groups by commercial brand and type of polymerization. Forty gypsium models were maded, wax bases were performed in the models and included in metallic (conventional) and plastic flasks (microwave) with gypsium. The liquid-powder ratio followed the manufacturers instruction, pressing of bases were maded by the conventional way and polymerized in the cycles A- heated water to 74°C for 9 hours (Classico/Vipi); B- microwave power (VipiWave/Onda Cryl following its instructions); after polymerized, the bases were cooled at room temperature and deflasked, subjected to conventional finishing and polishing process and then bonded to the respective models with cyanocrylate glue. Then were sectioned in 3 sets, corresponding distal of canines (A), mesial of first molar (B), posterior palatal region (C). In each set, misfit between the model and the base were measured in five reference points: right and left bottom labial groove, left and right crest of the alveolar ridge and palatal midline. Misfits were measured by Olympus linear microscope. To Classico resins, averages of misfit by regions were 0.2570mm(A), 0.3198mm(B) e 0.3503mm(C); Onda-Cryl averages were 0.2193mm(A), 0.2338mm(B), 0.2150mm(C). Vipi resins showed misfits 0.2442mm(A), 0.2950mm(B), 0.3566mm(C) and VipiWave: 0.2903mm(A), 0.2541mm(B), 0.2888mm(C). **Conclusion(s):** No statistical differences were founded between resins or polymerization methods.

160 COMPARISON OF MISFIT MENSURATION METHODS AND EFFECT OF WELDING TECHNIQUES ON BIOMECHANIC OF IMPLANT-SUPPORTED PROSTHESIS

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Aim: The aim of this in vitro study was to evaluate the effect of welding techniques (LASER and TIG) on the marginal misfit and induced strain on pillars of implant-supported prostheses, and to compare two marginal misfit evaluation techniques (two and three dimensional). **Methods:** 20 frameworks were casted in commercially pure titanium alloy (cp-Ti). An epoxy resin index was obtained using mini abutment conventional analogs simulating misfit of 200µm. The two and three-dimensional marginal misfit analyses were made by precision optical microscope and X-ray microtomography, respectively. Measurements of strain values were performed by extensometry (strain gauges). Welding techniques were performed according to following parameters: LASER (370V/9ms) and TIG (3:36A/2:60ms). All analyses were reevaluated after welding procedures. The results were submitted to one-way ANOVA, followed by Tukey HSD test (α=.05). Both welding procedures reduce misfit values (two-dimensional analysis: p<.0001; and three dimensional p<0.0054) and strain induced on abutments (p<0.025). There was no difference between two and three-dimensional marginal misfit evaluation techniques (two-dimensional: p=0.7676; and three-dimensional: p=0.5580) for both welding procedures. **Conclusion(s):** We conclude that both misfit evaluation techniques were effective and welding techniques were effective in reducing marginal misfit and strain, may improve the longevity of implant-supported prostheses.

161 CONVENTIONAL AND BOILING WATER POLYMERIZATION: THE EFFECT ON PHYSICAL PROPERTIES OF ACRYLIC RESINS FOR DENTURE BASES

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Aim: The aim of this study was to evaluate the effect of conventional polymerization and boiling water polymerization on the physical properties of acrylic resins: roughness, knoop hardness, surface gloss and impact resistance. **Methods:** Twenty samples were made for resins Classico and VIPI (n=10) in gypsium molds from rectangular aluminum casts and included in metal flasks. The liquid-powder ratio followed the manufacturers instructions and the resulting mass pressed in metallic flasks by the conventional method. After polymerization in cycles: 1- heated water 74°C for 9 hours (Classico); 2- boiling water for 20 minutes (VIPI), the samples were deflasked and cooled at room temperature and subjected to conventional finish and polishing. The physical properties were measured after the samples were stored in water at 37°C for 24 hours. The surface gloss was measured with Multi Gloss 268 (Konica Minolta), with averages 67.7 and 62.2 GU for Classico and VIPI respectively. The surface roughness, measured in Surfcorder SE 1700 (Kosaka) rugosimeter, presented averages 0.8742 Ra-µm for Classico e 1.4694 Ra-µm for VIPI samples. Knoop hardness was evaluated in a Shimadzu HMV-2000 microdurometer, calibrated with 50g for 5 seconds load, with three penetrations, in the middle and at each end of the samples, presenting averages results for 27.4 Classico and 26.9 for VIPI. The impact resistance were measured in Otto Wolpert Werke device by Charpy system, 40 kpcm impact calibration, with averages 37.6 and 33.6 kgf / cm2 for Classico and VIPI resins respectively. **Conclusion(s):** There was no statistical differences between the evaluated resins.

162 EFFECT OF POLYMERIZATION METHODS ON KNOOP HARDNESS AND SURFACE GLOSS OF THERMOACTIVATED ACRYLIC RESINS

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Aim: The aim of the study was to evaluate the effect of polymerization methods on knoop hardness and surface gloss of thermoactivated acrylic resins. **Methods:** Samples were made with resins Classico and Vipi (conventional) and Onda-Cryl and VipiWave (microwave) from rectangular casts of aluminum (65 x 10 x 3 mm) included in flasks with gypsum. Powder-liquid ratio and resin manipulation were made according to the manufacturer's instructions, and the resulting mass pressed in metallic (conventional) and plastic (microwave) flasks. After polymerization cycle in heated water 74°C for 9 hours (Classico and Vipi) and microwave polymerization according manufacturer's instruction (Onda-Cryl and VipiWave), the samples were cooled at room temperature, deflasked and subjected to conventional finishing and polishing procedures. Knoop hardness and surface gloss were measured after samples were storage in water at 37°C for 24 hours. Knoop hardness was observed in microdurometer Shimadzu HMV-2000 calibrated with 25 kgf load for 10 seconds. Three identations were made on each sample, in the middle and at each end. The surface gloss was measured with Multi Gloss 268 (Konica Minolta). Knoop hardness averages were 22.8 for Classico; 23.0 for Vipi; 25.6 Onda-Cryl and 25.4 for Vipi Wave. The average brightness were 74.6GU for Classico; 61.3GU for Vipi; 86.5GU for Onda-Cryl and 77.5GU for Vipi Wave. **Conclusion(s):** The results showed that there was statistical differences between the methods (conventional and microwave polymerization) for knoop hardness and surface gloss; surface gloss showed distinct results from each sample, not only between the polymerization methods.

163 INFLUENCE OF IMPLANT NUMBER ON THE BIOMECHANICAL BEHAVIOR OF MANDIBULAR OVERDENTURES: PHOTOELASTIC STRESS ANALYSIS

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Aim: The aim of this in vitro study was to evaluate through photoelastic analysis the behavior of induced stress in different Overdentures. **Methods:** The experimental groups were: I- Overdenture retained by an implant placed in the middle of the jaw line; II Overdenture retained by two implants 20 mm distant from each other; III Overdenture retained for three implants, one average line of the jaw and the remaining 18 mm distant from this; IV Overdenture retained for four implants, distant 12 mm from each other. It was made one overdenture prosthesis for each group and a conventional maxillary denture, enabling the analysis with related aids in maximum intercuspation. Axial loads were made 10, 20 and 30 kgf in each mandibular photoelastic model. Qualitative analysis was done by taking snapshots of groups placed in circular polariscope plan. RESULTS : The results showed a different stress distributions in group I of groups II III and IV, since it showed higher stress concentration in the posterior region of mandíbula.O IV group showed better stress distribution when compared to groups I, II and III. **Conclusion(s):** In all overdentures, with the exception of group I, the stress focused predominantly around the implants; increased loading promoted increased tension induced around the implants; and stress concentration in overdenture supported by a larger amount of implantation showed more homogeneous distribution of the induced stress.

164 INFLUENCE OF ONE- OR TWO-STAGE METHODS FOR POLYMERIZING COMPLETE DENTURES ON ADAPTATION AND TEETH MOVEMENTS.

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Aim: The aim of the study was to evaluate teeth movements and adaptation of the denture bases in two methods for denture fabrication. **Methods:** Denture confection was assigned in two groups (n=10) for upper and lower arches according to polymerization method: 1) conventional one-stage - a wax trial base was made, teeth were arranged and polymerized; 2) two-stage method - the base was waxed and first polymerized. With the denture base polymerized, the teeth were arranged and then, performed the final polymerization. Teeth movements were evaluated in the distances between incisive (I-I), pre-molars (P-P), molars (M-M), left incisor to left molar (LI-LM) and right incisor to right molar (RI-RM). For the adaptation analysis, dentures were cut in three different positions: (A) distal face of canines, (B) mesial face of the first molars, and (C) distal face of second molars. Denture bases have shown a significant better adaptation when polymerized in the one-stage procedure for both the upper ($p<0.05$) and the lower ($p<0.05$) arches, with region A presenting significant better adaptation than region C. In the upper arch, significant reduction in the distance between I-I was observed in the one-stage technique, while the two-stage technique promoted significant reduction in the RI-RM distance. In the lower arch, one-stage technique promoted significant reduction in the distance for RI-RM and two-stage promoted significant reduction in the LI-LM distance. **Conclusion(s):** Conventional one-stage method presented the better results for denture adaptation. Both fabrication methods presented some alteration in teeth movements.

165 INFLUENCE OF TIGHTENING AND THE TYPE OF THE SCREW IN THE MAINTENANCE OF PROSTHETIC SCREWS PRELOAD.

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Aim: To evaluate the torque loosening of universal trunnion mounting screws according to the tightening technique and screw type. **Methods:** Forty external hexagonal implants (Titamax Ti, Cortical, Neodent) were submerged in polymethyl methacrylate and techniques for securing universal posts were tested: G1: 32 Ncm torque to achieve; G2: torque 32 Ncm for 20 seconds; G3: 32 Ncm torque up to and repeat after 10 minutes; G4: torque 32 Ncm for 20 seconds and repeated after 10 minutes. The samples were divided into subgroups according to the type of screw: Conventional titanium screws or covered by carbon (DLC). Metal crowns were cemented on the sleeves and the samples subjected to mechanical cycling (106 cycles, 130 N, 4 Hz frequency to 30° of inclination). Digital torque wrench precision was used for the study. The results were obtained in Ncm and evaluated by ANOVA and Tukey test (5%). **Results:** There was no statistical interaction between the tightening torque factors and type of screw ($p = 0.516$). The clenching technique showed no significance in loosening torque of the screws ($p = 0.509$), and the means of each group G1: 24.4 ± 2.5; G2: 24.2 ± 1.3; G3: 25.5 ± 3.5; G4: 23.5 ± 3.9. Conventional titanium screws promote statistical values in excess of DLC ($p = 0.000$): Titanium: 26.4 ± 1.1; DLC: 22.4 ± 1.1. **Conclusion(s):** Conventional screw titanium promotes higher loosening torque values in setting universal posts, regardless of the applied technique.

166 NONTHERMAL PLASMA TREATMENT INCREASES THE SHEAR BOND STRENGTH BETWEEN ACRYLIC RESIN AND COMMERCIALLY PURE TITANIUM

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Acrylic resins exhibit poor bonding to metal alloys. Nonthermal plasma (NTP) treatment may be suitable for improving the bonding. However, the effect of NTP treatment on the bond strength of both materials is unknown. **Aim:** The aim of this study was to characterize the surface of commercially pure titanium (cp-Ti) subjected to NTP and the NTP effect on the shear bond strength between an autopolymerizing acrylic resin (AAR) and cp-Ti. **Methods:** A total of 96 discs of cp-Ti (8 × 2 mm) were distributed into four groups (n = 24): Po (no surface treatment), SB (sandblasting), Po + NTP and SB + NTP (methane plasma). Three discs were used for surface energy and roughness analysis. One disc was analyzed using scanning microscopy (SEM), energy dispersive spectroscopy (EDS), and X-ray diffraction (XRD) tests. Ten discs were prepared and immediately subjected to a shear bond strength test (1 mm/min), and the others were submitted to thermocycling (at 5°C to 55°C, 2 000 cycles). Data were analyzed with two-way ANOVA, the T-test, and the Tukey HSD test ($\alpha = .05$). Surface treatment affected the surface energy and roughness of cp-Ti discs ($P<.000$). SEM-EDS showed the presence of the carbide thin film. XRD spectra revealed no crystalline phase changes. NTP treatment increased the bond strength between the AAR and the cp-Ti ($P<.05$). The SB + NTP group showed the highest bond strength values (6.76 ± 0.70 MPa). Thermocycling reduced the bond strength of the AAR/cp-Ti interface ($P<.05$), except for the Po group. **Conclusion(s):** NTP is an effective treatment option for improving the shear bond strength between the AAR and the cp-Ti.

167 QUALITY OF LIFE OF COMPLETE DENTURES WEARERS CORRELATED TO DIFFERENT FACTORS

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Aim: The objective of this study was to evaluate the factors that have influence on the quality of life of patients with complete denture conventional. **Methods:** This study evaluated and correlated the quality of prostheses, patient satisfaction with the chewing efficiency, overall satisfaction with the prosthesis, time of use and the quality of life of individuals, the latter being the dependent variable. We evaluated 28 patients edentulous rehabilitated with dentures complete in the city of Passo Fundo. The inference was performed with two-tailed tests, using a 5% significance level. Multiple linear regression analysis and Pearson correlation coefficient were used to analyze the relationship between the independent variables and the dependent variable. The results showed that the use time and overall satisfaction had mean values of 17.8 ± 2.4 years and 73.5 ± 5.2%, respectively. The quality of life was level 82.0 ± 12.8% and masticatory efficiency 61.2 ± 14.8%. The quality of the dentures complete was ranking in 36.6 ± 19.9%. The quality of life showed a strong correlation with chewing efficiency ($r = 0.8$ / $P <0.001$) and overall satisfaction ($r = 0.7$ / $P <0.001$). **Conclusion(s):** Thus it was concluded that chewing efficiency and overall satisfaction were the factors that have demonstrated influence on the quality of life of patients with complete dentures.

168 STRESS DISTRIBUTION IN OVERDENTURE-RETAINING BAR SYSTEMS: INFLUENCE OF IMPLANT ANGULATION AND BAR CROSS-SECTION.

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The most common treatment for edentulous patients is conventional denture. However, implant-retained prosthodontics is actually the first option for treatment of these patients. **Aim:** The aim of this study was to evaluate by 3-D finite element analysis the biomechanics involved in the bar clip retention system for overdentures. **Methods:** The study factors were latero-lateral angulation in the right implant (-10, -5, 0, 5 and 10 degrees); horizontal misfit on the left implant (50 e 150 µm), and bar cross-section (round, Hader and oval). Positive angulation (5 and 10 degrees) means inclination of the implant to mesial position, negative values (-5 and -10 degrees) for distal position and zero degress for parallel implants. The von Mises stresses evaluated the prosthetic components; maximum principal stresses evaluated the peri-implantar bone. The positive angulation (10 degrees) showed the higher stress concentration for bar and implant. The parallel position showed the lowest stress values for the peri-implantar bone. The amplitude of horizontal misfit was directly proportional to stress concentration. Bar Cross-sections did not affect the stress distribution in the peri-implantar bone. **Conclusion(s):** It was possible to conclude that: the mesial implant angulation produced more stresses in the prosthetic components; parallel implantes showed better biomechanical behavior; and bar cross-section had no influence on stress distribution in peri-implantar bone.

169 TEETH DISPLACEMENT OF LOWER IMPLANT-RETAINED COMPLETE DENTURES UNDER INFLUENCE OF MICROWAVE FLASK TYPES

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Aim: To evaluate the movement of artificial teeth in the maxillary and mandibular implant-retained complete dentures (IRCD) processed microwave flasks. **Methods:** 20 pairs of waxed prosthesis were maded and metal pins were placed in the teeth: incisal edge of the maxillary central incisors and lower (I), buccal cusp of the upper first premolars and vestibular lower (PM), cusps mesiobucal upper second molar and mesiobuccal lower (M). The transverse horizontal distances II (incisor to incisor); PM- PM (premolar to premolar) and MM (molar to molar) anteroposterior and IEME (left incisor to left molar) and IDMD (right incisor to right molar) were measured. Under the same conditions, the vertical misfit between connection and the implant platform was evaluated in the mandibular prosthesis protocol in regions A (left distal implant); B (left medial implant); C (medial implant); D (medial implant right) and E (medial implant right). G1 - conventional oven and G2 - flask experimental HH. Horizontal movement was considered the differences in the distances between teeth, and vertical misfit between the connection and the implant platform occurred pre and post processing of the prosthesis. **Results:** showed a difference only in the transverse horizontal distance MM when we considered the prosthesis factors or flask type. There was no significant statistical difference between the misfit values vertical between both flask type. **Conclusion(s):** the teeth movement in both arcades and the vertical misfit between connection and implant prosthesis mandibular IRCD were not affected by the flask type, except in horizontal distance MM.

170 ADOLESCENT'S DENTAL ANXIETY ASSOCIATED WITH ORAL HEALTH BEHAVIOR, SOCIECONOMIC FACTORS AND MATERNAL'S DENTAL ANXIETY

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Aim: The study aims to assess dental anxiety prevalence and to evaluate factors that may influence it. **Methods:** The study was conducted on 200 random students aged 14-15 years old from 5 schools in Piracicaba, São Paulo State, and their parents. The students answered a questionnaire form containing the Dental Anxiety Scale (DAS), which was used to assess the level of dental anxiety, and related factors such as time since last dental visit and the most prevalent cause of referring to dentist. Using background characteristics, the adolecents' parents were classified as a matter of education, family income and dental anxiety. In this regard, subjects were divided in three groups according anxiety level. The results were analyzed using Chi-square test. **Results:** About 78% of adolescents (n = 157) had low dental anxiety, 15% had moderate dental anxiety (n=31) and 6% had high dental anxiety (n=12). After analysis, high adolescents' dental anxiety was associated with a high maternal's dental anxiety (p <0,0001) and low maternal education (p=0,01). There were no association between adolescents' dental anxiety, family income and time since last dental visit. **Conclusion(s):** Since adolescent's dental anxiety was associated with maternal's dental anxiety and maternal education, the results indicate the need for greater attention and appropriate approach for anxious patients, contemplating the relationship with adolescents' health indicators and maternal behaviours.

171 ANALYSIS OF PERIODONTAL LIGAMENT RESISTENCE AND COLLAGEN ORGANIZATION IN INCISORS OF IRRADIATED RATS

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Radiotherapy causes adverse effects in most tissues in which it is used. In the oral cavity, it has been shown that the periodontium is sensitive to high doses of radiation. Besides causing histophysiological changes, ionizing radiation can promote the development of structural changes in the supporting tissues, including bone and periodontal ligament. **Aim:** Thus, this study aimed to evaluate effect of ionizing radiation on periodontal ligament of rat incisor, by strength test and polarizing microscopy, establishing correlations among these tests. **Methods:** The sample consisted of 42 male Wistar rats (Rattus norvegicus albinus) divided into 3 groups: control group, the only group that wasn't irradiated (n=14); a group of animals killed 14 days after irradiation (n=14) and a group of animals killed 28 days after irradiation (n=14). Irradiated groups were submitted to a single session of radiotherapy with 15 Gy dose. Analysis of variance showed that the strength test and the polarization microscopy had a statistically significant difference between groups (p<0.001). Pearson correlation coefficients (R) detected strong direct correlation between the strength test and polarization (R= 0.808). **Conclusion(s):** Thereby, we concluded that radiotherapy can decrease resistance of intrusion strength and disorganize periodontal's ligament collagen. Collagen organization had correlation with periodontal ligament fibers strength.

172 ANALYSIS OF THE ACCURACY AND RELIABILITY OF SKULL MEASURES IN 3D IMAGES OF CONE-BEAM COMPUTED TOMOGRAPHY

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Aim: This study aimed to evaluate the reliability of the measures obtained from the 3D reconstructions of images from cone-beam computed tomography . For this, 10 measurements were obtained in the dry skull and then compared with the same measurements obtained in multiplanar and 3D view. **Methods:** There were used 18 dry skulls of the Department of Morphology of Piracicaba Dental School (FOP -Unicamp) in which 10 measurements were made on each. The measurements were obtained from three different ways: in the dry skull, in images obtained by Cone-Beam Computed Tomography and in the multiplanar reconstruction obtained through OnDemand3D software tools. The statistical analysis was performed by ANOVA test, which used the data obtained to compare the measurements between different analyzes . **Results:** It was observed that of all the measurements , in only 2 (Aon , and AFS) there was not any statistically significant difference reported between any of the three analyzes . For the other measures, in some there was observed statistically significant difference between three of the analyzes (LAP , LAD and BOD) and for the others measures, there was observed statistically significant difference in only two analyzes (AAP , ODA , AOE , LOE and CN) . **Conclusion(s):** There are statistically significant differences among the multiplanar and measures in the skull and among the 3D reconstructions and measurements in the skull.

173 COMPARATIVE STUDY BETWEEN VOLUMETRIC TOMOGRAPHY RADIOGRAPHS TO ASSESS SYMPHYSIS AS A DONOR SITE FOR BONE GRAFTING

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There are several uses of autogenous bone grafts in Oral and Maxillofacial Surgery, among which are included: treatment of tumor resection, correction of traumatic sequelae, correction of facial deformities, both congenital and acquired, and to reconstruct atrophic alveolar ridges for implant placement. Autogenous grafts may have two origins, extra or intraoral, and the choice depends on the required amount of bone area to be grafted. There are several imaging exams that can be used for evaluation of bone grafts available in intraoral areas. **Aim:** The objective of this study was to compare measurements in bone graft assessments available in symphysis region through panoramic radiographs, lateral radiographs and cone beam computed tomography scans (CBCT). The measurements did not differ between panoramic radiography and CBCT when the first was increased by 30%. Bone thickness at 3 mm from the dental apex and 5 mm from the base of the mandible showed no differences between lateral cephalometric radiographs and CBCT to left central incisor region (3 mm and 5 mm), left lateral incisor (3 mm) and left canine (5 mm). **Conclusion(s):** Therefore, from the results presented in this study it is possible to conclude that when acquiring a CBCT exam to mental graft assessment is not possible, the association between panoramic and lateral radiograph can be used for such purposes.

174 COMPLEX ODONTOMA: A CASE REPORT WITH MICRO-COMPUTED TOMOGRAPHY FINDINGS

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Aim: An odontoma with cone beam computed tomography (CBCT) and microtomography images is presented. This lesion in a 26-year-old man was first observed on panoramic radiographs and then by CBCT. **Methods:** After removal, it was evaluated by histopathology and microtomography to confirm the diagnosis and determine whether the odontoma was the compound or complex type. Macroscopically, the surface of the lesion was slightly lobular and solid. On microtomography, dentine was seen in large amounts in the tumor. Enamel and cementum were present in small quantities. Histopathologically, the lesion was composed mainly of dental tissues, corresponding to the microtomography results. **Conclusion(s):** The results confirmed that the lesion was a complex odontoma.

175 CONTRIBUTIONS OF PANORAMIC RADIOGRAPHY IN THE ASSESSMENT OF THE RELATIONSHIP BETWEEN POSTERIOR TEETH AND MAXILLARY SINUS

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The intimate relationship root-maxillary sinus (SM) can lead to bucosinusal communications and hence the propagation of dental infections. **Aim:** The purpose of this was to seek signs in the panoramic radiograph to indicate the intimate relation of the roots of posterior maxillary teeth with the maxillary sinus. The gold standard was Cone Beam Computed Tomography (CBCT). **Methods:** The sample included 46 PRs and CBCTs of the same patients in the database of the Piracicaba Dental School (FOP-Unicamp), totaling 330 teeth.Examinations were evaluated together by two calibrated radiologists.The relationship of the roots of each tooth with the SM (0 - distant , 1- close contact , 2- lateral projection, 3- projection) and the search for signs such as presence / absence of the SM floor , alveolar cortical apical dimming and dome were observed in PR .Subsequently , confirmation of intimate relationship with the roots of MS was determined in CBCT (gold standard).The McNemar test Bowker was used to correlate the relationship of the roots observed in RP and CBCT ; the multiple logistic regression analysis to indicate which signal in the RP was the best predictor of intimate relation with the roots and the MS.The assessment carried out in the different imaging modalities demonstrated difference in the positioning of the roots and the sinus.The radiographic sign with the highest prediction of intimate relation of the roots with the MS was the projection of the root (OR = 45) in the PR .The MS cortical indefinition was also statistically significant ($p < 0.05$). **Conclusion(s):** It was concluded that the evaluation of the relationship is unreliable in RP.

176 DENTAL ANOMALIES IN CLEFT LIP AND PALATE INDIVIDUALS: INCIDENTAL FINDINGS IN CBCT

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Cleft lip and palate are the most frequent congenital anomaly found with a relation of 1:700 live births individuals. Usually dental anomalies can be found especially in teeth close to the alveolar cleft area and may be featured as hyperplastic, hypoplastic or heterotopic, where its expression appears to be correlated with the cleft severity and the permanent denture is the most affected with a higher incidence for the maxilla. **Aim:**The aim of this study is to describe dental anomalies as incidental findings found in cone beam computed tomography (CBCT) images in cleft lip and palate individuals. **Methods:** Two individuals presenting 23 years old with complete bilateral cleft lip and palate were referred to the Oral Diagnosis Section at the Hospital for Rehabilitation of Craniofacial Anomalies-USP for CBCT scanning for orthognathic surgery purpose. In the first case, when evaluating teeth close to the alveolar cleft area it was observed the presence of dens invaginatus on both lateral incisors, where one of them was associated with a periapical lesion. The second case showed a supernumerary root of a mandibular canine that may present clinical significance when performing an endodontic therapy. **Conclusion(s):** Three-dimensional exams are very important for diagnosis and planning treatment, however a whole assessment of the entire acquired volume is of utmost importance. Keywords: Cone-Beam Computed Tomography, Cleft lip, Cleft palate, Tooth abnormalities, Incidental Findings.

177 DOSIMETRY IN CONE BEAM COMPUTED TOMOGRAPHY

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Due to linear-non-threshold model which relates the stochastic risks to low doses of radiation, amount of exposure is often of concern in the maxillofacial imaging, especially in patients undergoing to Cone Beam Computed Tomography (CBCT) exams. Thus, several dosimetry methods have been developed for comparison between different units and protocols in terms of relative risk. **Aim:** The aim of this study was to review the literature on the main dosimetry methods used in CBCT currently and which devices are being used in these approaches. **Methods:** For this, a bibliographic survey was performed in PUBMED database, and the methodology and results of the articles included in the study was evaluated in detail. Among the most commonly used devices for dose measuring, they are ionization chambers, thermoluminescent dosimeters (TLD), optically stimulated luminescent dosimeters (OLSD) and metal-oxide semiconductor field-effect transistors (MOSFET). As different approaches, it can be cited dosimetric studies associated to real anthropomorphic phantoms, the Monte Carlo simulation and effective dose estimative using conversion coefficients derived from dose-area product (DAP) or dose-height product (DHP). **Conclusion(s):** Although all methods providing advantages and inherent limitations of each technique, it was observed that the use of anthropomorphic phantoms associated with dosimeters is currently considered the most accurate method for the estimation of the effective dose, highlighting the sectional phantoms and the TLD or OSL dosimeters.

178 EVALUATION OF CHRONOLOGICAL AGE IN ADOLESCENTS AND YOUNG ADULTS BY TOOTH OPENING APEX.

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Some ages are important in assisting justice. Determine whether the individual is more or less 14 years, or has reached the legal age (more than 18 years old) are the most relevant matters within the forensic sciences. **Aim:** Therefore, this paper used the third molar mineralization process to determine if an individual has more or less than 14 years or has more or less than 18 years old. **Methods:** The methodology proposed by Cameriere et al. was applied, in which the third molar maturity index is used to the 14 and 18 years. It was also applied Demirjian's method for 18 years. For this, 420 orthopantomographs of individuals with ages between 12 and 22 years were analyzed. In relation to Cameriere's method there was obtained for the age of 14: 79% of sensitivity, 88% of specificity and 91% of post-test probability. For the age of 18 years: sensitivity was 82%, specificity was 91% and post-test probability was 90%. For the Demirjian's method there was obtained: 53% of sensibility, 96% of specificity and 93% of post-test probability. **Conclusion(s):** These results indicate that Cameriere's method can be used to determine whether an individual has reached or not the age threshold of 14 and 18 years.

179 EVALUATION OF CONCENTRIC POSITION, DIMENSIONAL AND POSITION SYMMETRIES BETWEEN THE CONDYLES IN CLASS II PATIENTS.

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There are factors related to the temporomandibular joint (TMJ), which affect the relationship of the structures that make up the stomatognathic system. **Aim:** Evaluate the concentric position of the condyles, dimensional and position symmetries between the condyles in Class II patients by Cone Beam Computed Tomography (CBCT). Materials and **Methods:** Eighty two dental records of subjects selected from the digital archive of Oral Radiology (UNICAMP) were evaluated in the OnDemand 3D® software. The evaluation was done randomly in 41 groups of two images each, by two radiologists with minimum experience of 2 years. The evaluators will locate the points, and reference planes from which all values are obtained for the evaluation of the TMJ, in the axial and parasagittal view of the CBCT of the region corresponding to the geometric center of the condylar process. Once carried out the evaluations, the results were tabulated and submitted to statistical analysis. **Results:** The values found in our study for the intra- and inter-observer assessment were excellent for the intraclass correlation coefficient (ICC). The paired Student's t test found significantly different when comparing the average of the angle between the long axis of the mandibular condylar process and the midsagittal plane and the anteroposterior difference between the geometric center of the right and left condylar processes as reflected on the midsagittal plane of the right side to the left side. **Conclusion(s):** Patients show no difference in concentric position and size of the condyles, but it was observed asymmetries position. Key words: Malocclusion, Tooth.

180 EVALUATION OF CRANIOCERVICAL MORPHOLOGY AND CERVICAL SPINE IN RELATION WITH MALOCCLUSION BY CBCT

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Aim: According to the relation between the morphology of the craniofacial complex and the vertebral spine with Angle's Class II, the objective of this study was be evaluate the relation of the craniofacial complex and the vertebral spine measures through Cone Beam Computed Tomography (CBCT). **Methods:** 93 images of CBCT were evaluated from FOP-UNICAMP Radiologic clinic, from individuals from both genders, in ages between 18 and 35 years old. For craniofacial evaluation, reference points, lines and angles were used to define the posture of the head according to Solow and Tallgren (1976). After the evaluation, the data was tabulated and was conducted the Intraclass Correlation Coefficient (ICC) with a confidence interval of 95% and, to the association of the data normally distributed, were tested through the Pearson Correlation Coefficient. **Conclusion(s):** It was concluded that there is a relation between the cervical skull and the facial development. More studies should be done to patients with Obstructive Sleep Apnea, Angle's Class I and III.

181 EVALUATION OF LEAD DEVICE IN SURVIVAL OF RATS EXPOSED TO X RADIATION ON HEAD AND NECK REGION

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Aim: To evaluate the efficiency of a lead device in survival of animals exposed to high doses of X radiation on head and neck region. Additionally, to compare the number of osteocytes in the mandible of the survivor animals. **Methods:** Twenty five male Wistar rats were divided into 5 groups (n=5), according to the X radiation single dose: control (without irradiation), 15 Gy, 20 Gy, 25 Gy and 30 Gy. For the irradiation, the animals were positioned with the body inside a lead device to irradiate only the head and neck region. During 40 days, the animals were weighed and those who survived were killed to remove the mandibles, which were submitted to histological processing. Photos from the central bone region between the roots of the first and second molars were done in the histological cuts. An area adjacent to the periodontal ligament was delimited in the histological images to count the number of osteocytes. **Results:** Only animals of the control, 15 Gy and 20 Gy groups survived for 40 days after irradiation. The higher the radiation dose, the greater the decrease in the animals weight. The t test demonstrated that the number of osteocytes was statistically higher in the control group than in the 15 Gy and 20 Gy groups, which did not differ from each other. **Conclusion(s):** The lead device was not efficient in survival of animals exposed to doses greater than 20 Gy of X radiation in head and neck region. In addition, the number of osteocytes in the mandible of the survivor animals decreased regardless the radiation dose they were exposed.

182 EVALUATION OF PREVALENCE OF IMPACTED THIRD MOLARS IN PANORAMIC RADIOGRAPH ACCORDING TO PELL & GREGORY'S CLASSIFICATION

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Tooth that fails to erupt into the dental arch within the expected time are called impacted tooth. The most common impacted teeth are mandibular third molars, followed by the maxillary third molars. Panoramic radiography is the most commonly used radiographic examination in the evaluation of third molars, being the first choice exam for the assessment of the case. It allows complete evaluation of all teeth and adjacent structures in a single take. The protocol for the removal of third molars is well known, based on the dental position classification systems already established. The Pell & Gregory classification called Pell and Gregory A, B and C describes the depth of the third molars comparing to the occlusal height of the adjacent second molar. As for the Classes 1, 2 and 3 of Pell and Gregory, they describe how the third molars are related to the mandibular ramus. **Aim:** The purpose of this study was to evaluate the prevalence of impacted third molars in a sample of patients of Piracicaba Dental School, categorizing them in relation to the Pell & Gregory classification (1933) and relating to the patient's gender and belonging arch. **Methods:** of the total number of charts that were evaluated, 249 were included in the study, and it was observed a total of 904 third molars. **Results:** The most common position for the upper teeth was "A", followed by "B". While in the lower teeth, there was a higher frequency of teeth in 2B position, followed by 2C. **Conclusion(s):** The classification according to the position of third molars through radiographic exams greatly helps in surgical planning and, in a sense, determines the complexity of the case.

183 EVALUATION OF ROOT CANAL MORPHOLOGY OF ANTERIOR TEETH USING CONE BEAM COMPUTED TOMOGRAPHY.

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Several studies demonstrated variability on root canal morphology of anterior teeth. **Aim:** This in vivo study was designed to analyze and characterize root canal morphology of anterior teeth using 3D imaging. **Methods:** Patients who required CBCT radiographic examinations as part of their routine examination were enrolled on the study. A total of 1200 healthy, untreated, fully developed maxillary and mandibular incisors and canines were included. The following observations were recorded: (i) number of roots and their morphology; (ii) number of canals per root; and (iii) primary variations in the morphology of the root canal systems. Root canal morphology of maxillary teeth was consistent with a single canal extending from the pulp chamber to the apex in 98% of the cases. Contrarily, in mandibular central and lateral incisors, the presence of a single canal represented 64.5% and 60.5% respectively. The second most common morphology was the presence of one canal leaving the pulp chamber, divides into two within the root, and then merges to exit as one canal in 18% and 25.5% respectively. The presence of one canal leaving the pulp chamber and dividing short of the apex into two separate and distinct canals with separate apical foramina was recorded in 14.5% and 12% respectively. It found a low incidence of anatomical variation in maxillary anterior teeth. In contrary, mandibular anterior teeth presented with a high prevalence of two canals. The reported data may help clinicians understand the variations in root canal morphology of anterior teeth in order to overcome problems associated with shaping and cleaning procedures.

184 EVALUATION OF SEXUAL DIMORPHISM BY MEANS OF CRANIAL MEASUREMENTS ON CONE BEAM COMPUTED TOMOGRAPHY

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Aim: The aim of this study was to evaluate the reliability of cranial measurements on sexual dimorphism by means of Cone Beam Computed Tomography (CBCT). **Methods:** CBCT images were selected from an archive of patients aged between 18 and 60 years, and were divided into two groups based on gender: 45 male and 50 female. An experienced examiner on CBCT images performed 16 linear measurements on multiplanar reconstructions of the hyoid bone, sphenoid sinus, nasal bone, piriform aperture and orbits by using OnDemand3D software. After 15 days, 25% of the sample had the measurements repeated. Intra-examiner reproducibility was assessed by Intraclass Correlation test and Student's t-test evaluated independent samples between measurements. High intra-examiner reliability was observed. Measurements between both genders were statistically significant different ($p<0.05$) on the hyoid bone (one sagittal and five axial), nasal bone (one sagittal), piriform aperture (one sagittal) and orbits (two coronal). In conclusion, some cranial measurements allow for sexual dimorphism in humans.

185 EVALUATION OF THREE RADIOGRAPHIC SYSTEMS IN THE DIAGNOSIS OF SIMULATED PERIAPICAL LESIONS

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Aim: To evaluate the efficiency of three different radiographic systems (conventional, semi-direct digital and direct digital) in the diagnosis of periapical lesions with various sizes. **Methods:** Bovine ribs were used to make 10 alveolar sockets in order to insert the apical third of the root of a bovine tooth. In the center of the lower portion of the alveolar sockets, periapical lesions with progressive sizes were produced (n= 10): Group 0, absent; Group 1, with 1.6 mm; Group 2, with 1.8 mm; Group 3, with 2.1 mm. Periapical radiographies were performed with the bovine tooth inside the alveolar socket using three different systems of image receptors: conventional Kodak film; storage phosphor plates of the VistaScan system; solid CMOS sensor of the SNAPSHOT system. All images were evaluated by three examiners, which used a 5-point scale related to the absence/presence of the periapical lesion. After 30 days, 30% of the images were reviewed. The diagnostic tests were calculated. **Results:** The weighted kappa values for intra- and interobserver reproducibility were substantial. The radiographic systems did not differ statistically concerning the diagnostic tests. Regarding the size of periapical lesions, the area under the ROC Curve and the sensitivity of the group 3 were higher than the others; the accuracy of the group 1 was lower than the group 3, which did not differ from the group 2; and the specificity was not different between the groups. **Conclusion(s):** The three radiographic systems studied had similar efficiency in the diagnosis of periapical lesions with various sizes, and the largest ones were more easily diagnosed.

186 FLORID OSSEOUS DYSPLASIA: CASE REPORT

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Florid osseous dysplasia (FOD) is a fibro-osseous lesion characterized by the replacement of normal bone by a benign fibrous connective tissue matrix. Characteristically affects the jaw bones of the middle-aged, black woman, but the same is not uncommon in Caucasians and Asians. The lesion is usually asymptomatic, except when the disease is complicated by chronic osteomyelitis, and may be found as incidental radiological finding presenting as multiple radiopaque masses within peripheral radiolucent rim located in two or more quadrants usually in tooth-bearing areas. No treatment is need. The diagnosis of FOD is made based on clinical findings - localization of the lesion, patient's age, gender and ethnicity as well as radiological features. Biopsy is usually not recommended due to the risk of postoperative infection or fracture of the jaw and hence will adversely affect the patient's health. **Aim:** This study reports a case of FOD affecting mandible bilaterally in a fifty-two years old melanoderm woman, who presented to our department to carry out a panoramic radiograph requested by her dentist. The image showed multiple well-defined sclerotic masses with radiolucent border in both right and left molar region of the mandible. We have diagnosed the condition as FOD based on typical clinico-radiological features coupled with age and gender predilection and bilateral location in the mandible.

187 GLANDULAR ODONTOGENIC CYST: A CASE REPORT

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Glandular odontogenic cyst (GOC) is an uncommon cyst derived from odontogenic epithelium with salivary gland features such as mucus-producing cells. There is predilection for women around 50 years old and the anterior mandible region. GOC causes the expansion of the outer cortical bone with perforation regions; tooth displacement is a common feature. Radiographically, it shows a well-defined corticalized multilocular or unilocular radiolucency. This cyst has an aggressive behavior and a tendency to relapse after surgery. **Aim:** A 64-year-old female attended the Department of Oral Surgery of UFRJ for routine examination, in order to make a new dental prosthesis. The initial radiograph exam revealed a radiolucency area surrounded by a radiopaque halo involving the tooth 48. The cortical bone was expended and perforated. The first diagnosis hypothesis was ameloblastoma. Extraction of third molar and enucleation were performed. Histopathology refuted the first hypothesis providing the definitive diagnosis as glandular odontogenic cyst.

188 SECOND MOLAR AS PUBERTAL GROWTH SPURT PREDICTOR

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Aim: To investigate the association between dental mineralization stages and the periods of pubertal growth spurt (PGS). **Methods:** The sample included panoramic and hand-wrist radiographs from 491 subjects (222 males and 269 females) aged 7 to 17 years. Dental development was rated according to Demirjian; skeletal maturation was evaluated according to Grave and Brown. The relevant associations were investigated by the analysis of ordinal multinomial logistic regression. The second molar (OR = 4.34) and the first premolar (OR = 2.45) presented the best growth predictors for females. For males, the second molar (OR = 6.80), second premolar (OR = 2.41), and canine (OR = 3.21) proved to be the best predictors. Stages D and E of the second molar, for females, and stages E and F, for males, corresponded to the onset of the accelerated growth spurt. Stage F of the second molar, for females, and stage G, for males, corresponded to the peak of PGS. At the end of PGS, most of the teeth had already attained apical closure. In females, however, most second molars were found at stage G. **Conclusion(s):** An association exists between dental mineralization stages and the periods of PGS, especially for second molars. The panoramic radiographs can be used as a first diagnostic tool to estimate the pubertal growth period.

189 STUDY OF EFFICACY OF LEAD FOIL FOR REDUCING EFFECTIVE DOSES IN CRITICAL ORGANS USING DIGITAL INTRAORAL SYSTEMS.

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Aim: To assess the effective dose in critical organs of head and neck during periapical intraoral examinations performed with digital systems and evaluate the efficacy of lead foils in reducing the radiation dose received. **Methods:** Images were acquired through four different systems: phosphor plate (PSP; VistaScan® system) alone, PSP plus lead foil, complementary metal oxide semiconductor (CMOS; DIGORA® Toto) alone and CMOS plus lead foil. Radiation dose was measured after a full-mouth periapical series (14 radiographs). Lithium fluoride (LiF 100) thermoluminescent dosimeters were placed in an anthropomorphic phantom at points corresponding to the tongue, thyroid, crystalline lenses, parotid glands and maxillary sinuses. **Results:** Dosimeter readings demonstrated the efficacy of the addition of lead foil in the intraoral digital X-ray systems provided in reducing organ doses in the selected structures, approximately 32% in the PSP system and 59% in the CMOS system. **Conclusion(s):** The use of lead foils associated with digital X-ray sensors is an effective alternative for the protection of different anatomical sites of the head and neck during full-mouth periapical series acquisition.

190 STUDY OF FILTERS OF VISTA SCAN INTRAORAL RADIOGRAPHY SYSTEM IN THE DIAGNOSIS OF SIMULATED PERIAPICAL LESIONS

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Aim: To assess the influence of filters of Vista Scan intraoral radiography system in the diagnosis of simulated periapical lesions of varied sizes. **Methods:** Ten cavities adapted for correct insertion of the rectilinear apical third of the bovine tooth root were made in bovine ribs. The bone defects progressive sizes (absent and approximately 1.6, 1.8 and 2.1 mm in diameter), simulating periapical lesions of different dimensions were produced in the center of the lower portion of the cavities. Periapical radiographs of the tooth positioned in each cavity were performed using Vista Scan system. Six different dental filters available in the system were applied to the images. Four graduate students in Dental Radiology were instructed to assign scores 1-5 for each image, as the absence/presence of periapical lesions. Areas under ROC curves, sensitivity, specifity, accuracy, positive predictive and negative predictive values were compared by ANOVA. **Results:** The weighted Kappa values for intra- and inter-examination reproducibility were 0.61-0.67 and 0.69-0.80, respectively. There was no association between the different cavity sizes and the filters (P>0.05). There was no statistically significant difference in the diagnosis for the various filters studied (P>0.05). The size 3 cavity group presented area under ROC curve (P<0.01) higher than groups 1 and 2, which were not statistically different from each other. **Conclusion(s):** Different filters of Vista Scan intraoral radiography system not influence the diagnosis of various sizes simulated periapical lesions. The lesions increase in size provides a better diagnosis.

191 THE PBL METHOD (PROBLEM BASED LEARNING) APPLIED TO DENTAL RADIOLOGY DISCIPLINE.

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Aim: The aim of this study discuss an assessment of PBL method (Problem Based Learning), performed by students of the second year of a degree in dentistry, in dental radiology discipline (n = 71), considering the profile of the students surveyed. **Methods:** On the first day of school students received instruction on the operation of PBL method and after school they answered a questionnaire about the lived experience. Over 70% (n = 50) of the sample had between 16-20 years, and 45% (n = 32) were from public schools. Regarding experience, 71% (n = 51) believed that the teaching-learning method adopted by the teacher could interfere with their learning, 91% (n = 65) did not know the PBL method, 70.4% (n = 50) were not satisfied with the grade given at the end of the experiment, namely and 55% (n = 39) believe they would learn better if the matter were taught in the traditional format. **Conclusion(s):** It can be concluded that students had difficulty with the new method, due to the different ways to approach the content and evaluation criteria involving skills and competencies that go beyond the cognitive knowledge. The education practices suggested changes should consider the main objective, the quality of education that is linked to the integral formation of professional future, following the National Curriculum Guidelines.

192 THE RISK OF RADIATION USED IN IMAGING DENTAL EXAMINATION – WHAT IS THE KNOWLEDGE OF PATIENTS?

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Aim: To evaluate the knowdeldge of patients in relation to the risk of radiation used in imaging dental examination. **Methods:** A questionnaire was applied to 176 patients of Dental Radiology Clinic of a University. **Results:** The average age of the patients was 38 years, 38.06% was male and 61.94% was female. When they asked about which imaging dental examination has higher and lower radiation dose, whereas periapical and panoramic radiographs and cone beam computed tomographic, it was observed that the chance of the hit and/or error is not influenced (OR 1.0 and average p > 0.05) by the individual characteristics (age, education, gender and family income). The absence of previous experience with imaging dental examination influenced negatively the knowledge about the risk of radiation, with chance of error 3 times greater (OR = 3.0 and p = 0.04) for these individuals. In relation to the risk of damage due to the radiation, 38.6% of the patients believe that the risk is high/middle, 44.3% believe that the risk is low/very low and 17.1% believe that there is no risk. Damage to the vision, fetal malformation or infertility were indicated by 40.33% of patients while 16% believe that cancer can be a damage caused by radiation. **Conclusion(s):** The population has no consolidated knowledge on this matter, with super or underestimation of risk. It is necessary a better guidance to patients about the risks of radiation used in imaging dental examination.

193 VALIDATION OF THE SOFTWARE ITK-SNAP® ON THE EVALUATION OF SEGMENTED VOLUMES BY CBCT EXAMS

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Aim: To validate the semi-automatic segmentation software ITK-SNAP® (Cognitica, Philadelphia, PA, USA) for measuring the volume of structures with density ranges compatible to that of the upper airways. **Methods:** Six phantoms were made by molding with alginate different objects that replicate the geometrically complex anatomy of the maxillary sinus. Three of these phantoms were partially filled with known volumes of water, and the other three phantoms were empty but their total volumes were known. These values were used as the gold standard. After that, the six phantoms were scanned using a Cone Beam Computed Tomography machine with the same acquisition parameters. The volumetric images of the phantoms were segmented by three examiners using the tested software. The total and partial volumes were measured. **Results:** Data were analyzed using statistical one-way analysis of variance (α = 5%). No statistically significant differences were observed when the values of total and partial volumes were compared to the gold standard. **Conclusion(s):** The ITK-SNAP® software is accurate for evaluating the volume of structures with density ranges compatible to that of the upper airways.

194 VERTICAL ROOT FRACTURE - DIAGNOSTIC BY SUBTRACTION DIGITAL RADIOGRAPHY

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Aim: To evaluate the accuracy of the subtraction digital radiography technique for the vertical root fracture diagnosis. **Methods:** Twenty roots of uniradicular teeth were placed inside a mandibular alveolus, fixed in a standardizing device and radiographed twice, with and without a gutta percha cone inside of the root canal. The roots were removed from the alveolus and fractured in a universal testing machine. The fractured roots were repositioned on the alveolus and radiographed again, as the initial image whit and without a gutta percha cone. The radiography images were subtracted in three test situations: situation 1 – initial image and fracture image, both without the cone; situation 2 - initial image without the cone and fracture image with the cone; and situation 3 – initial and fracture image, both with the cone. Subtractions were perfomed using the Regeemy software (v. 0.2.43, São José dos Campos, Brazil). The subtracted images were analyzed by three examiners that classified them as the presence and absence of fracture using a 5 points scale. **Results:** The area under the ROC curve for simulation 1 was 0.86, for simulation 2 was 0.73 and for simulation 3 was 0.66. The kappa values for intra and inter examiners was 0.2 to 1 and 0 to 0.73, respectively. **Conclusion(s):** The subtraction digital radiographic is a technique that must be used whenever is possible, when a vertical root fracture is suspected, because it allows satisfactory accuracy of diagnosis.

195 BISPHOSPHONATE-INDUCED OSTEONECROSIS OF THE MANDIBLE SECONDARY TO TOOTH EXTRACTION: A CASE REPORT.

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Aim: To analyze the clinical features of a patient who developed osteonecrosis and alert the dentists about the risks of osteonecrosis in patients who underwent bisphosphonate therapy and tooth extractions. **Methods:** The patient was evaluated through anamnesis, physical examination and panoramic radiograph. **Results:** A 72-year-old man complained of swelling and mild pain on the left side of the mandible. The patient reported that he has undergoing treatment for prostate cancer for 5 years and among the used drugs is the zoledronic acid, a type of bisphosphonate used to prevent or treat bone metastases. Moreover, the patient also reported tooth extraction 3 months ago. Oral examination revealed exposed bone on the left side of mandible, in the molars region, measuring about 2 cm, corresponding to the area of dental extraction, with purulent discharge. The radiographic examination showed the outline of the dental socket of the extracted tooth without evidence of bone formation. The clinical and radiographic features associated with medical and dental history of patient led to the diagnosis of osteonecrosis related to bisphosphonates. The patient was treated with antibiotics to control the clinical condition and remission of symptoms and is in periodic follow-up. **Conclusion(s):** Bisphosphonates are useful for many bone diseases; however, the dentists have to be aware about the risks for developing osteonecrosis after dental extractions.

196 CLINICOPATHOLOGICAL FEATURES OF PATIENTS DIAGNOSED WITH RADIATION-RELATED CARIES – A CASE SERIES

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Aim: Describe the clinicopathological profile of patients with radiation-related caries (RRC). **Methods:** A retrospective study of a series of patients diagnosed with RRC was conducted at São Paulo State Cancer. Data collected included gender, age, tumour location, smoking and drinking habits, disease stage (TNM), treatment plans including radiotherapy (RDT) dose and temporal aspects concerning clinical manifestations of RRC, among others. The data collected was arranged in tables and graphs that were analyzed in order to create the clinicopathological profile of patients enrolled in this study. **Results:** From the 34 analyzed cases, 29 (85.3%) were male patients with a medium age of 52,4 years; 5 (14.7%) patients were female with a medium age of 53,8 years. The main tumour location was the tongue followed by larynx and oropharynx. From the 34 for patients, 32 (94.1%) reported smoking habits and 25 (73.5%) patients reported drinking habits, most of them drinking between 500-2000 ml/day. Information on RDT dose was available for 27 patients from which 19 (70.4%) received 70 Gy and 5 (18.5%) received 66 Gy by the means of 3D conformal RDT. Information on the temporal aspects of the RRC onset was available for 28 patients with lesions appearing from 3 to 53 months after the conclusion of RDT, with an average time of 17 months. **Conclusion(s):** This study originally observed that advanced larynx tumours were linked to the risk of RRC. All the other clinicopathological aspects were compatible with previously published literature regarding the risk of RCC.

197 EFFECTS OF RADIATION THERAPY IN PATIENTS WITH HEAD AND NECK TUMORS: REPORT OF TWO CLINICAL CASES

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The cancer in the head and neck is one of the cancers that most affect people worldwide. Affect lips, soft tissue and bone tissues of the oral cavity, oropharynx, salivary glands, paranasal sinuses and nasal cavity. Radiation therapy together with chemotherapy and surgery are the main treatment modalities. Although providing greater tumor control, there are several side effects associated with cancer treatment. It is therefore essential that a multidisciplinary team to follow up the patient giving all necessary assistance. The dentist has a very important role in the treatment of these patients, and their necessary presence before, during and after radiotherapy, to prevent and treat the sequelae that may occur, enabling improved quality of life for patients. **Aim:** This work aims to present the oral conditions of two patients who received radiotherapy in the head and neck. The first patient is male, 54 years old, had squamous cell carcinoma of oral floor and the second, a woman of 49 years had adenoid cystic carcinoma in the right submandibular gland. Both patients underwent assessment and dental treatment prior to radiotherapy, but showed distinct sequelae of cancer treatment. Key - words: Oral cancer, radiation therapy, dentistry.

198 FLORID OSSEOUS DYSPLASIA INVOLVING AN INJURED TOOTH: DIFFERENTIAL DIAGNOSIS

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A 46-year-old black woman was referred by her orthopaedist. Bone scans taken for other purposes revealed higher uptake of the radioisotope in the jaws. Except for pain in the 36 and 37 teeth during mastication, the patient reported the lesions were asymptomatic. The 36 tooth was endodontically treated and the 37 was not responsive to the pulp vitality test but both were positive for vertical and horizontal percussion tests, suggesting periapical and lateral periodontal injuries. Panoramic radiograph showed well defined and mixed lesions circumscribed by a radiopaque rim spread in 3 quadrants of the jaws. One of them was particularly radiolucent and was related to the apices of the 36 teeth. As this teeth was compromised, the clinical diagnoses for this one were osseous dysplasia and radicular cyst. To confirm the density of the lesion next to the 36 teeth, CBCT was taken. It confirmed the mixed nature of the lesion associated with the 36 teeth and the final diagnosis was florid osseous dysplasia. The patient was advised about the importance of satisfactory dental hygiene, was referred to treat the 36 and 37 teeth, and is under follow-up. The florid osseous dysplasia is a type of fibro-osseous disease in which normal bone is replaced by a mixture of fibrous connective tissue and metaplastic bone. It most often affects middle-aged black women. Regarding its location, there is a greater tendency for the anterior mandible. Early lesions, which present predominantly radiolucent, may mimick radicular cysts and may be a challenging diagnosis. Thus, the detailed clinical examination is essential to reach the final diagnosis.

199 IMPACT OF INTRAVENOUS BISPHOSPHONATES IN THE CEMENTUM AND PERIODONTAL LIGAMENT IN CANCER PATIENTS.

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Aim: Test the null hypothesis that intravenous bisphosphonate would be able to cause changes in the cementum and periodontal ligament of teeth. **Methods:** This study used 32 teeth which were extracted from 24 cancer patients because of advanced periodontal disease. These 32 teeth were separated in study (n=16) and control (n=16) groups. The study group was composed by 16 teeth extracted from 8 patients who undergone intravenous bisphophonate due to the diagnosis of advanced cancer. The control group was composed by patients who did not receive bisphosphonate therapy. Both groups were further divided into 2 subgroups; (1) polarized light microscopy group (POLMI) (n=16) and (2) immunohistochemestry group (n=16). For the POLMI analysis the maximum thickness of the cementum was measured (Leica Microsystems®, Switzerland version 4.5.0) in 3 different areas (apical, medium and cervical thirds) by matching control and study group samples according to teeth anatomic groups. Immunohistochemical analysis of the expression of the Periostin (Novus Biologicals ®) antibody was further performed in the periodontal ligament and compared between groups. **Results:** No differences in the thickness of the cementum were observed when comparing test and control group samples. The immunohistochemical patterns of periostin expression were similar between groups. **Conclusion(s):** The null hypothesis that intravenous bisphosphonate therapy would be able to cause changes in the cementum and periodontal ligament of teeth from cancer patients was rejected.

200 PEUTZ-JEGHERS SYNDROME DIAGNOSED FROM ORAL PIGMENTATIONS IN AN ELDERLY PATIENT.

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We report a rare case of Peutz-Jegher's syndrome (PJS) diagnosed in an elderly patient. **Aim:** CASE REPORT: A 62-year-old female patient sought for treatment of "black spots in the mouth". She reported previous history of an aggressive B-cells non-Hodgkin's lymphoma arising in the pancreas that was successfully treated 8 years ago. She also had controlled hypothyroidism once her thyroid gland was surgically removed due to Hashimoto's thyroiditis. In the physical examination, it was possible to observe about 10 brown macules located in the buccal and inferior labial mucosa, hard palate, and anterosuperior gingiva. The patient reported their onset 1 year ago and slight growth so far. Microscopical examination of an incisional biopsy of one spot showed stratified squamous epithelium with increased amount of melanin in the basal and parabasal layers. Mild inflammatory infiltrated was present and no cellular atypia could be seen. Our clinical diagnosis was Addison's disease, PJS, and Laugier–Hunziker syndrome. Laboratorial exams ruled out Adison's disease (cortisol=15.63mcg/dl and adrenocorticotropic hormone=18.1pg/ml). Inquired again about an intestinal problem, the patient denied but brought a colonoscopy performed 4 years. She had colonic two polyps. The medical pathologist re-examined the slides and confirmed the diagnosis of Peutz-Jegher-type polyps. The final diagnosis was PJS. We advised the patient about the importance of being constantly monitored by a physician due to the high probability of developing malignancies. **Conclusion(s):** This work emphasizes that, although not common, PJS can manifest in latter ages.

201 RECURRENT PERIPHERAL OSSIFYING FIBROMA: CASE REPORT

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Peripheral ossifying fibroma (POF) is a non-neoplastic proliferative lesion that onsets from chronic traumatic injuries. It presents a predilection for the upper anterior maxilla and for females. Our goal is to report a relapse of a POF successfully treated by surgery. **Aim:** CASE REPORT: A 50-year-old woman sought for treatment of a "growth next to the tooth". She reported a previous lesion at the same site excised 4 years ago. At physical examination, we observed a 8mm nodule with fibrous consistency located in the inferior vestibular gum. The lesion had color similar to the adjacent mucosa. Furthermore, we observed her posterior teeth presented bilateral cervical abrasion and gingival recession due to heavy brushing, suggesting a traumatic role in the development of the lesion. Our clinical diagnosis was POF and pyogenic granuloma. The microscopic examination of the surgically excised lesion exhibited fibroblastic proliferation subjacent to the oral squamous epithelium and, above, mineralized material. The final diagnosis was POF. The patient was advised about impact the trauma exerts in the development of the lesion, received dental hygiene orientation and is under follow-up. **Conclusion(s):** This case report reinforces the essential role of a proper surgical management of POF in order to avoid the relapse of the lesion.

202 SCLEROTHERAPY FOR MANAGEMENT OF ORAL HEMANGIOMA

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Oral hemangiomas (OH) are characterized by an abnormal proliferation of blood vessels. When occurring in the face, it may cause esthetical alterations and motivate the patient to seek for treatment. Sclerotherapy is a promising tool for the managemet of OH once it is a non-invasive technique that avoids surgery and risk of excessive bleeding. Here, we report a case successfully treated with this therapeutic modality. **Aim:** CASE REPORT: A white and 76-year-old man complained about a "wart on the lip". The lesion appeared 10 years ago and was asymptomatic. Clinically, a purple nodule was observed in the right superior lip, measuring 1cm of diameter. The clinical diagnosis was OH. Diascopy exam was positive and confirmed our clinical diagnosis. Intralesional injections of 1cc of 0.05g/ml ethanolamine oleate diluted 1:3 in saline were performed at an interval of 15 days between each application. After three sessions, the patient was satisfied with the results and remains under follow-up. **Conclusion(s):** Scherotherapy is an interesting option for the management of OH once it promotes a quick involution of the lesion and has mild side effects.