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001 Application of BTX-A in Salivary Glands as Treatment of Chronic Drooling in Patients with Cerebral Palsy. Case Report.

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INTRODUCTION Sialorrhea characterized by excessive salivation, associated with disability are swallowing disorders observed in patients with neurological disorders such as cerebral palsy (CP). These changes lead to clinical and functional complications, causing perioral irritation, cracking and oral infections, dehydration, halitosis, interference with speech, social isolation and recurrent respiratory infections in severe cases. Botulinum toxin type A (BTX-A) is a neurotoxin produced by the bacterium Clostridium botulinum, which acts by inhibiting the release of acetylcholine in the presynaptic neurosecretory junction of the salivary glands reducing saliva production. CASE REPORT Accompanied by responsible, a boy of 10 years with PC, was at FOP / UNICAMP requesting aid for the reduction of less salivation. Cerebral palsy does not allow adequate saliva swallowing causing disorders as successive costume changes. the application of BTX-A in the parotid salivary glands and submandibular was proposed because the glands are responsible for the major salivary production (serous and mucous). 8U neurotoxin were applied in each parotid gland and 5U each submandibular gland. After 48 hours of application responsible for the lower reported that there was significant clinical improvement and 12 days after application, it reported that the salivation frame showed significant improvement in both quality of life. CONCLUSION The BTX-A can be used to treat drooling, to be a safe procedure, almost painless and with excellent results, providing improved quality of life of patients.

002 Botulinum toxin treatment in a patient with Sjögren's syndrome: a case report.

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INTRODUCTION: The Sjögren's syndrome (SS) is an autoimmune disease that affects the lacrimal and salivary glands, desiccating eye and mouth. Affect the kidneys and lungs, too. It is present in two ways, primary when the patient has the symptoms described above, and secondary, in addition to the primary symptoms also manifest rheumatoid arthritis and lupus. Botulinum toxin type A (BTX-A) is a neurotoxin derived from Clostridium botulinum that inhibiting the release of acetylcholine at the neuromuscular junctions, preventing local muscle contraction. CASE REPORT: Woman 20 years, student, sought treatment in FOP / UNICAMP with intense pain complaint in masticatory muscles and temporomandibular joint (TMJ), with joint crackles and muscle fatigue. Reported to be the bearer of SS secondary for 7 years and have tried other treatments for muscle and joint pain, without success. After broad medical history, patient underwent application of 40U of BTX-A in the masseter and 20U in temporal muscles for the relief of muscle and joint pain. After 12 days, reported improvement of the clinical picture and increased range of mouth opening. The remission of the pain symptoms and joint relief were also reported after 30 days application. CONCLUSION: Clinical injection of BTX-A as pain treatment in the masticatory muscles and temporomandibular joint proved to be a safe and effective alternative, even in cases of rare syndromes like secondary Sjögren.

003 Construction of 3D and plaster models for application in Dental Anatomy classes

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Aim: to construct a three-dimensional (3D) model and plaster model of the human lower incisors teeth to apply in dental anatomy classes. Methods: The teeth plaster were reproduced and customed painting of the main anatomical structures. For construction of the 3D virtual models, the lower incisors modeling activity for learning the shape and dental structures was performed in Mimics v. 18.0 software (Materialise, Belgica). Results: The computational environment associated with the construction and study in plaster models allows students to view dental anatomical structures in 3D dimension and interact with their virtual objects, all in real time. Conclusions: The construction of tridimensional and plaster models contributed to the consolidation of learning by the students and possibility the interaction of both types of models in real time.

004 Hypertrophy treatment of masseter with botulinum toxin type A - a case report

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Introduction: hypertrophy of the masseter muscle is excessive growth, uni bilateral hi, muscle of unknown cause, which most often creates an aesthetic and functional discomfort. It may be related to habits like chewing gums, temporomandibular joint dysfunction, congenital hypertrophy and functional, emotional disorders (stress and anxiety). The diagnosis is primarily clinical, characterized by increasing the lower face.Aim: Botulinum toxin type A (BTX-A) is a neurotoxin derived from the bacterium Clostridium botulinum that inhibits the release of acetylcholine at neuromuscular junctions, preventing local muscle contraction, causing muscle atrophy. Case report: Female (C.R.P.E) 39, attended the clinic FOP / UNICAMP complaining of pain in the side to face, muscle fatigue and lack of facial harmony ("square jaw").Methods: It was proposed to patient application of BTX-A in the masseter muscles to improve facial aesthetics and time to pain relief. 15U of BTX-A were applied to each masseter muscle and 10U in each temporal muscle. Results: After 5 days of application, the patient reported pain relief and complete relief after 15 days. The improvement of facial harmony by reducing the masseter muscle volume was reported after 3 months of application maintained for 6 months. Conclusion: The application of BTX-A is a simple choice, safe and with good clinical results in cases of hypertrophy of the masseter without the surgical risk with long recovery periods.

005 Neuralgia Treatment of the Trigeminal Nerve with Botulinum Toxin Case Report

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INTRODUCTION: Trigeminal neuralgia (TN) is a characteristic pain occurring of one or more branches of the trigeminal nerve. The TN patients quality of life is impaired, causing psychiatric disorders and depression risks. Surgical approaches has been done to alleviate the neuropathic pain and improve the patients quality of life. Oral antiepileptic drugs remain the first treatment option. However, 25–50 % of patients became resistant to the drug therapy. There is an important need for a safer, efficacious and better tolerated treatment for TN. Botulinum toxin type A (BTX-A) is a neurotoxin derived from Clostridium botulinum that acts inhibiting the release of acetylcholine at neuromuscular junctions, causing the muscle relaxation. BTX-A is a promising headache treatment option. CASE REPORT: A 54-year-old woman with TN, whom presented recurrent pain in her right cheek for ten years. Electromyographic exam and magnetic resonance imaging were performed, which resulted inconclusive. That is the reason why she was treated as having fibromyalgia and chronic pain. There were used different medications that eased the pain but had unpleasant side effects. She has also been treated with acupuncture and physiotherapy. Afterward, the patient was treated with 10 U of BTX-A injection on the trigger point and had total remission of pain after fifteen days of application. CONCLUSION: Although evidence suggests that the majority of trigeminal neuralgia cases are due to the nerve compression by the blood vessels, botulinum toxin caused pain relief providing faster relief without side effects.

006 Simulation of mechanical trauma in orthotropic cortical bone with different dental occlusion conditions

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Aim: to evaluate the stress in orthotropic cortical bone by mechanical trauma in angle of the human mandible with different occlusion conditions by finite element analysis. Methods: We reconstructed, in Mimics software v. 17, the three-dimensional stereolitographic (STL) surface from cone beam computadorized tomography of the human mandible. The STL was imported into the software Rhinoceros 5.0 in which the acquisition geometry was performed. The geometry obtained was imported to the software ANSYS v14 to constructed the 3D finite element mesh, applied the mechanical properties and the loads, mathematical solution and analysis of results. The cancellous bone and the teeth were considered isotropic. The cortical bone was considered orthotropic. We simulated two conditions of the dental occlusion: at rest and in maximum intercuspation. In both conditions we applied, in separate simulations, a load with 980N in mandibular angle. Results: The traumatic force located in the mandibular angle with dental occlusion at rest, resulted in a large stress concentration occupying mandibular body, from the level of the first premolar to the mandibular ramus. The cortical bone with orthotropic properties determined specific areas sensitive to mechanical stress only in mandibular neck. The dental occlusion in maximum intercuspidation showed minor intesity of stress in orthotropic cortical bone. Conclusions: Probably, regions stimulated mechanically, in both simulations, were determined by geometry (morphology) of the human mandible and the presence of the maximum intercuspidation showed minor intensity of stress.

007 Bioavailable fluoride release of toothpastes sold in Brazil simulating brushing time

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To have anticaries effect a toothpaste should release most of the fluoride from its formulation during toothbrushing time, but this property of toothpastes sold in Brazil is unknown. Aim: The aim of this study was to verify the release of the total soluble fluoride (FTS) of 6 toothpastes (n = 2), 3 CaCO3/MFP-based (Sorriso Dentes Brancos, Colgate Anti-cáries and Close Up Triple), and 3 SiO2/NaF-based (Colgate Total 12 Clean Mint, Tandy and Close Up Ação Profunda). Methods: Only Tandy presented 1,100 ppm F, the others 1,450 ppm of total fluoride. Four grams of each toothpaste were weighed into plastic vials, and after adding 12 mL water (proportion 1:3), the suspensions were immediately stirred (200 rpm) for 1 minute using a mechanical stirrer. After stirring, the suspensions were collected, centrifuged (3,000 g, 10 min) and the supernatants diluted 1:10. Duplicates of 0.25 mL of each sample was treated with 0.25 ml of 2M HCl for 1h at 45°C. After neutralization with 0.5 mL of 1M NaOH, and buffering with 1 mL of TISAB II buffer, the TSF concentration was determined using ion specific electrode. Data were expressed as percentage of total soluble fluoride (% TSF) released in relation to the total amount of fluoride stated by the manufacturer. Results: The % TSF released ranged from 32.7 to 74.7. The formulations CaCO3/MPF-based have a tendency to have higher values of % TSF released. Conclusion: It can be concluded that the toothpastes can be differentiated by their properties of soluble fluoride release of their formulations.

008 Dissolution of calcium fluoride in calcium or fluoride-rich solutions

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Aim: Calcium fluoride (CaF2) can be formed in dental biofilm and functions as a source of fluoride in the biofilm fluid, to interfere in the caries process. However, the conditions for the formation and dissolution of calcium fluoride in dental biofilms are not clear. Therefore, the aim of this study was to assess the dissolution of CaF2 in solutions with different concentrations of calcium and fluoride. Methods: Samples (~10 mg) of pure CaF2 were treated with solutions undersaturated with respect to this mineral: G1: purified water; G2: 1 mM Ca; G3: 10 mM Ca; G4: 1 mM F and G5: 10 mM F. The concentration of calcium and fluoride dissolved to the solutions was determined after 12 h, using colorimetric analysis and the ion-specific electrode, respectively. Results: F concentration in the groups treated with no F (G1: 0,15 ± 0,02, G2: 0,12 ± 0,02 and G3: 0,07 ± 0,01 mM) was inversely proportional to the Ca concentration in extraction solution (G1 > G2 > G3). On the other hand, Ca concentration in the groups treated with no Ca (G1: 0,06 ± 0,01, G4: 0,02 ± 0,003 and G5: 0,004 ± 0,004 mM) was inversely proportional to the F concentration used in the extraction (G1 > G4 > G5). Conclusions: The results show that CaF2 will dissolve in solutions under a high concentration of calcium or fluoride, however, more time is necessary to dissolve it in solutions with higher Ca or F concentrations.

009 Fluoride release from dental biofilm reservoirs to the fluid during pH droP

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Aim: Fluoride (F) accumulated in the dental biofilm, specially bound to calcium (Ca) ions, could act as a reservoir of this ion to be released to the biofilm fluid during a pH drop, decreasing dental demineralization. However, the release kinetics of F from the biofilm solids to the biofilm fluid, before and shortly after a cariogenic challenge, has not been studied systematically. Methods: In the present study, biofilms were formed in palatal appliances used in situ by 5 volunteers, and treated with a combination of Ca and F rinses in order to generate different F concentrations in dental biofilm: (1) placebo rinse for Ca and F; (2) Ca prerinse (Ca lactate) followed by placebo rinse; (3) placebo rinse followed by 250 ppm F rinse; and (4) Ca prerinse followed by 250 ppm of F rinse. After 14 days, the biofilm was collected and F concentration in the biofilm solids and fluid was evaluated before and 5 minutes after a cariogenic challenge with 20% sucrose. Results: The Ca prerinse was able to significantly increase ($p<0.05$) the F concentration in the biofilm solids (0.09; 0.09; 2.33 and 8.18 µmol F/g for the groups 1, 2, 3 and 4, respectively). However, the F concentration in the biofilm fluid was not different before and 5 min after the cariogenic challenge (3.8; 3.0; 65.0; 45 µM and 3.4; 3.0; 68.1; 61.2 µM before and 5 min after cariogenic challenge for groups 1, 2, 3 and 4, respectively). Conclusion: The pH drop does not seem to increase the F release from biofilm solids to the fluid.

010 Fluoride toothpaste containing nano-sized sodium trimetaphosphate reduces enamel erosion in vitro

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Aim: The aim of study was to evaluate the effect of conventional toothpaste and supplemented with nano-sized sodium trimetaphosphate in dental erosion in vitro. Materials: Bovine enamel blocks (4 mm x 4 mm, n = 60) were selected from the initial surface hardness (SHi) and then divided into 5 groups of experimental dentifrices (n = 12): No F/TMP/TMPnano (Placebo); 1100 ppm F (1100 ppm F); 1100 ppm F associated with 3% TMP micrometric (1100 TMP); 1100 ppm F associated with 3% TMP nano-sized (1100 TMPnano) and 5000 ppm F (5000 ppm F). The erosive challenge was produced by the citric acid, for 5 minutes (4x / day) for 5 days. After the challenges, were determined the final surface hardness (SHF), enamel wear (uM) and toughness in longitudinal section (KHN). Data were subjected to analysis of variance (one option) followed by Student-Newman-Keuls test ($p < 0.001$). Results: SHF values were significantly higher in the groups treated with the toothpaste supplemented with TMP, TMPnano and 5000 ppm F, when compared to placebo and 1100 ppm F ($p < 0.001$); there was no significant difference between 1100 and 5000 ppm TMPnano F ($p = 0.202$) for the three analyzes (SHF; wear and KHN). The toothpastes 1100 TMPnano and 5000 ppm F had a greater protective effect when compared to the conventional toothpastes (1100 ppm F) for wear, SHf and KHN variables ($p < 0.001$). Conclusion: The addition of 3% TMP nano-sized in conventional toothpaste (1100 ppm F) promoted a synergistic protective effect against erosive wear of the enamel when compared to their counterparts, reaching protection levels similar to those observed for toothpaste 5000 ppm F.

011 In vitro release of fluoride of toothpastes simulating brushing time

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A fluoride toothpaste must release most of the fluoride from its formulation during toothbrushing time, but there is no standardized methodology for this estimation. Aim: The aim of this study was to verify the release of the total soluble fluoride (TSF) of the dentifrice formulation for 1 min. The toothpastes (n = 2): Sorriso Dentes Brancos (CaCO3 e MFP - 1,450 ppm F), Colgate Total 12 Clean Mint (SiO2 e NaF - 1,450 ppm F) e Tandy (SiO2 e NaF - 1,100 ppm F) were evaluated. Methods: Four grams of each dentifrice was weighed at the bottom of plastic flasks. Twelve mL of water was carefully added to the flask and the mixture was immediately stirred for 1 min using a mechanical stirrer at 100 rpm,150 rpm or 200 rpm. After stirring, the re-suspended content was immediately collect, centrifuged (3,000 g, 10 min), and the concentration of TSF was determined in the supernatants (diluted 1:10). Duplicates of 0.25 mL of the supernatants were treated with 0.25 mL of 2M HCl for 1h at 45°C. After neutralization with 0.5 mL of 1M NaOH, and buffering with 1 mL of TISAB II, the concentration of soluble fluoride was determined using ion specific electrode. Data were expressed as percentage of TSF (% TSF) released in relation to the total amount of fluoride stated by the manufacturer. Results: The data showed that the % TSF released was different among the toothpastes, and the Sorriso Dentes Brancos showed the highest values. There was a gradual increase in the % TSF released with increasing stirring speed. Conclusion: It was concluded that the three speeds used allowed to verify the difference among % TSF released from toothpastes.

012 Calcifying cystic odontogenic tumor: Case report and literature review.

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The odontogenic calcifying cystic tumor, also called Gorlin Cyst is an epithelial odontogenic lesion , unusual, source not defined , generally peripheral , may be associated with other injuries. Radiographically appears as a radiolucent lesion with defined borders and possible areas of calcification in the center. Histologically the lesion is characterized by well-delineated cystic proliferation of odontogenic epithelium with ghost cells and fibrous connective tissue wall. Shows no predilection for gender or age, but has been most reported in young patients and in the anterior maxilla or mandible. The recommended treatment is cystic enucleation being observed few reports of relapses. The aim of this study is to carry out a case report of a 54 year old male patient with a rare disease of cystic calcifying odontogenic tumor in the posterior region of the mandible , which sought the service of Piracicaba Dental School with pain complaints and increased volume in right mandibular body area there about a year and a half. After evaluation was proposed incisional biopsy and enucleation of the lesion. Patient is currently being assisted by the Maxillofacial Surgery Area FOP -Unicamp showing good progress .

013 Complications associated with use of biomaterials in surgical cavities

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Treatment of patients with intraosseous lesions can be accomplished by a number of procedures, ranging from surgical treatments such as resection, curettage and decompression; to nonsurgical treatments such as the use of sclerosing substance and cryotherapy. In many cases, the degree infiltration of the lesion associated with the applied treatment can result in a large bone defect, however, liable to be reconstructed. Some authors have proposed the use of materials for tissue augmentation (biomaterials / bone substitutes) in surgical cavities resulting from intraosseous lesions. In this respect, there are several factors to consider when a reconstructive technique is indicated, as the chosen material, the defect size to be corrected, the right time for reconstruction and strategies to prevent complications such as infections and recurrent inflammatory reactions. Moreover, unlike the bone reconstruction in healthy regions, areas with lesions may be contaminated or present inflammatory components and remaining pathologic tissue, which may cause additional complications that reduce dramatically successful rate of these materials. This work aims to present the correct indication for these materials and, in the view of the authors, when use can pose risks to good performance of repair.

014 Diagnosis and management of an adenoid cystic carcinoma of the palate

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Adenoid Cystic Carcinoma (ACC) is a slow growing malign neoplasm, usually affects the salivary glands with high propensity for recurrence and metastasis. There are three types of ACC (Cribiform, tubular and solid), and all of them features a high perineural spread of head and malignancy. Resection is the main treatment but early diagnosis is important in survival. We present a case of a 37-years old female patient with a large fibrous swelling in the palate treated in other surgical unit as an odontogenic abscess and was perform an endodontic treatment (root canal) in the posterior tooth adjacent to the lesion. During the first evaluation of our service of Oral Maxillofacial Surgery of Piracicaba Dental School, no exudate or purulent discharge was found; however, we solicited a cone beam computerized tomography and was not observed cystic or infectious characteristics. An incisional biopsy was performed and after an anatomopathology analysis, the lesion was diagnostic as Adenoid Cystic Carcinoma.

015 Extraction of supernumerary by orthodontic indication: a case report

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Supernumerary teeth are dental development changes. It is characterized as any supernumerary tooth that exceeds the normal number, 32 in the permanent dentition and 20 in the primary dentition. These elements can develop in any region of the jaws, with normal anatomy or in a way that does not remember anything in the anatomy of teeth present at that location. Depending on your position may interfere with the eruption of the permanent tooth. Typically they are identified in routine X-ray examinations do not present painful symptoms. The case report aims to report the presence of supernumerary, G.B patient six year old male was referred for extraction of supernumerary to begin orthodontic treatment. In intra oral examination showed the absence of the element 11 and displacement 21 with giroversion. Radiographic examination confirmed supernumerary retained by entrance exam. Extraction was done with osteotomy and suture with isolated spots. The patient returned to the orthodontist to initiate the treatment. supernumerary teeth are common in deciduous and permanent teeth and can cause a number of changes, so the staff should know how to identify the signs that suggest the presence of these and carry out all the necessary examinations and from diagnosis to choose the most appropriate treatment for each patient, aiming reduce complications in the development of the dentition

016 Fibrous hyperplasia caused by Unadapted prosthesis : a case report

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Fibrous hyperplasia also known as denture tumor or epulides fissure, is a lesion easily found on dental clinics. It has inflammatory origin and non neoplastic and happens due physical agents stimulus, generally chronic trauma. The main source of this pathology is the removal prosthesis maladjustment. Clinically its appearance is erythematous and ulcerated in many sizes with firm and fibrotic aspect with rosea or reddish coloral and has irregular formats. It happens on the upper or in the lower jaw and its more common on women. The treatment is a consensus that is the suspension of the use of the removal prosthesis and surgically correction of the irregularities, and better if have the possibility to send a part of the removed tissue to histopathological analysis. Pacient GRF,42, female looked after a dental clinic to have her removal prosthesis changed, because the old one was hurting on the lower jaw. On the oroscopy it was observed on the reddish coloral point a swelling, without bleed, in aoveolar edge on the anterior mandible. It became a fibrous hyperplasia hypothesis. It was indicated lesion exeresis and aoveolar edge adjustment to further rehabilitation routing. It was removed with hemosthasis of the area and forwarding the material to histopathological exam, confirming the fibrous hyperplasia report.

017 Genioplasty: when and how to perform?

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Currently, improved aesthetics and function are goals of the surgeries that treat dentofacial deformities. In this sense, the convexity of the facial profile within normal cephalometric measurements is considered to be more harmonious and attractive; since patients with concave profile combined with maxillary hypoplasia and mandibular prognathism are considered by lay people to be less attractive and intelligent. The supremacy of cases the bimaxillary surgery (involving osteotomy in the maxilla and mandible) is recommended to produce the best characteristics of facial harmony. However, we should not take into consideration only measures cephalometric and maxillary and mandibular profiles, since chin is considered a key anatomical point for harmony and convexity of the face. Hugo Obwegeser introduced bone genioplasty for intraoral access in clinical practice in 1957 and spent a few years later, this relatively simple technique with low morbidity index still appears not understood .The specific objectives of this review article are: (1) review aspects related to the history and development of techniques genioplasty and (2) recognize the state diagnosis and treatment of deformations of the third lower face.

018 Immediate dental implant placement, Is it always necessary to fill vestibular gap using a bone substitute material?

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The aim of this review of literature was to show a surgical technique using in immediate dental implants installation, considering vantages and disadvantages. A female patient 28 years old was attended in our service due to dental trauma in the maxilla anterior region, involved 12, 11 and 12 elements. The surgical planning included atraumatic tooth extraction and immediate dental implants placement without using bone substitute material to fill the gap. This topic is also controversial in the literature. After 06 months of installation, a second surgical phase was performed and during this procedure, bone formation was evidenced. This kind of technique should be considered in order to reduce treatment time, respect the biological process and improve patient's quality of life.

019 In vitro study of the composition and microhardness of the hard tissues from oral cavity submitted to gamma irradiation

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Clinical Radiotherapy is one of the most important techniques for the treatment of malignant lesions of the head and neck, however, exposure to ionizing radiation can lead to systemic complications or sites during and after radiation treatment. Among these immediate local complications in oral cavity, it stands out the xerostomia and consequent oral mucositis. Regarding late complications produced by radiation, decay of radiation and osteoradionecrosis, both dose-dependent lesions, which mostrate a high level of incidence in recent decades (1-30%) and unwieldy, although these are presented after completion of treatment and under the influence of local factors. The methodology proposed in this study aims to examine the direct effect of gamma radiation after irradiation of enamel , root dentin and jawbone samples, using the dose rate used in patients suffering with head and neck cancer. Samples were prepared in advance and standardized and are polished, and then underwent the analysis of the initial surface microhardness of all groups. Subsequently, the samples were irradiated in a dose of Gy rate of two per day, completing a total dose of seventy-two Gy. Finally, the samples were analyzed for Microhardness surface after irradiation, by morphological analysis in scanning electron microscopy (SEM) and fourier transform infrared spectrometry(FTIR).The data were analyzed statistically with a significance level of 95% ($p < 0.05\%$), through the parametric Student's t-test for related averages and ANOVA statistical test, finding a statistically significant result ($p = 0.00$) for the four groups of samples. From the preliminary statistical results, it is concluded that the effect of gamma radiation on hard tissues of the oral cavity was highly significant with regard to the microhardness of the surface, proving in the morphological analysis on the images obtained by SEM.

020 Osseous genioplasty as an outpacient procedure: planning and execution. case report

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AIM: Describe the planning and execution of a Genioplasty done in the dental office, under conscious sedation and local anesthesia. METHODS: The planning was based on careful facial, photographs and radiographic analysis. It was administered, orally, 1 hour before surgery: Midazolam 15mg, Betamethasone 8mg, and Amoxicillin 500mg. Throughout the procedure, there was oxygen support available, and the patient was electronically monitored (HR, BP, and SpO_2). Local anesthesia was done with Mepivacaine 3% and epinephrine 1:100.000 (bilateral block of the IAN and Mental Nerve, infiltration between the canines, mouth floor, and extroral in the submental area). Held conventional genioplasty technique to advance in internal fixation with Paulus plate and 2.0mm screws. RESULTS: Excluding small bleeding from the chin muscles to detachment, which was easily controlled with electrocautery, there were no complications during surgery. An increase of 9mm pogonion was obtained, with tilt axis correction. On a scale of 0 to 10, the patient reported zero trans-surgical discomfort and pain. Postoperative discomfort score was 6, and pain was 7, both present until the third day after surgery. Satisfaction with result was 10. Paresthesia with 2 months of surgery is 3. CONCLUSION: When the patient is in good general condition and has controlled anxiety, genioplasty is a safe and predictable procedure to be done as an outpatient procedure under constant monitoring. Complications are easily controlled, trans and postoperative discomfort are minor, we have little morbidity and reduced cost front of a hospital surgery under general anesthesia.

021 Orthodontic anchorage devices: case report

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Skeletal anchorage devices have aided orthodontic therapy providing better mechanical control on tooth movement. The use of mini-implants and titanium miniplates has increased the capacity of corrective orthodontic treatments. While the mini-implants have greater ease of installation, the miniplates allow the use of greater amount of force to dental traction. In this clinical case presentation, we present a case of orthodontic movement assisted by skeletal anchorage in a female 24 years old patient who was initially referenced to the Oral and Maxillofacial Surgery area of Piracicaba Dental School-UNICAMP by the orthodontist for extraction of the elements 18, 28, 37, 38, 47 and 48. It was proposed to orthodontist the extraction of the elements 18, 28, 37 and 48, and installation of skeletal anchorage devices to attempt to move the elements 38 and 47 as a alternative treatment. With the agreement of the orthodontist the patient was subjected to a first surgical procedure under local anesthesia, for extraction of the elements 18 and 48, and installation of anchorage miniplate in right mandibular ramus, fixed with 2 screws of system 2.0, aiming the verticalization of 47. One month after the first procedure she was subjected to a second procedure for extraction of the elements 28 and 37, and installation of 1 mini-implant 1.6 x 9 mm in the region between the teeth 34 and 35 aiming the mesialization of 38. The patient continued the orthodontic treatment for traction elements 38 and 47. In the follow-up of 1 year and 2 months, is observed clinically and radiographically the successful treatment proposed.

022 Osseointegrated implants on craniofacial prosthesis retention: a Brazilian perspective

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It is known that the use of dental implants overcomes other retention systems to improve the biomechanics of craniofacial prosthesis. In addition, it restores patient's confidence and acceptance, improves hygiene, and allows easy monitoring of the rehabilitated area. However, in Brazil this reality is limited to factors inherent to the costs involved, since the installation of the implants until the post-surgical needs for maintenance and treatment proservation. Aim: Analysing the Brazilian reality regarding the factors involved in the choice and use of dental implants in the retention of craniofacial prostheses. Methods: Literature review of the subject through PUBMED database, with keywords: craniofacial prosthesis; implants; osseointegration; retention; osseointegration. Results: The main cause of craniofacial deformities is neoplastic lesions, and the late diagnosis implies on a severely mutilating treatment. Furthermore, radiotherapy treatments difficult the use of implants for prosthesis' retention, since the ionizing radiation interferes with the process of osseointegration reducing local vascularization. As a result, it can lead to osteoradionecrosis. The use of hyperbaric chamber to minimize the chances of implant loss increases costs to the patient, and it exists in very small numbers in Brazil. Advanced age, size and location of surgical resection are other factors that reduce the choice for implants. Conclusions: Thus, in Brazil, dental implants are not the first choice for retention of craniofacial prostheses due to difficulties related to surgery and especially the limited use of the hyperbaric chamber.

023 Nasal Deformity in Subjects with Class III Facial Deformities

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Nasal Deformity in Subjects with Class III Facial Deformities Aim: Ascertain the nasal characteristics in patients with a Class III dentofacial deformity. Methods: A descriptive study was conducted on 20 patients diagnosed with a Class III facial deformity and a surgical indication; frontal and lateral as well as CT images were taken to analyze variables of nasal morphology and deformities associated with the nasal bridge, tip and septum. Results: the nasal angles are outside normal parameters and that the basal width of the nose is approximately 3 mm smaller than the intercanthal width; 45% of the subjects have lateral deviations, 50% bridge deformity and 80% septum deviation. Conclusions: there are nasal deformities in subjects with a Class III facial deformity and that this component must be carefully evaluated in the preoperative stage.

024 Photoelastic analysis with different mesio-distal width crowns loaded over short dental implants

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Aim: to evaluate the stress transmitted to short implants (6 and 8 mm) loaded with different mesio-distal width crowns, when axial and lateral forces were applied. Methods: two photoelastic resin models were created using Straumann short implants, diameters of 4.1 mm, one with a 6 and other with a 8 mm length, simulating direct bone-implant contact. Two crowns were made using the cad-cam system with mesio-distal width of 10.02 mm and 13.02 mm with the same height. Four models were analyzed: Model A (6 mm implant with a crown 10.02 mm), Model B (6 mm implant with crown 13.02 mm), Model C (8 mm implant with crown 10.02 mm) and Model D (implant 8 mm 13.02 mm with crown). Axial and lateral forces were applied onto the crowns at a maximum load of 10 kgf. The results were obtained by videos and the images captured at the maximum load. They were subsequently interpreted using qualitative analysis of tensions, studying the concentration and intensity of the fringes. Results: in all models, high intensity and concentration fringes around the implants were found, however the models loaded with lateral forces had more tension in the coronal part of the implant. Conclusions: the intensity and concentration of stress were higher in the model with shorter implant. The increased crown width affected in a detrimental way the tension around the implants, especially when in the Model B.

025 Reconstruction of a severely resorbed jaws using iliac crest bone graft

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The use of bone grafts in implantology aims to increase bone volume for the installation of dental implants. In cases of severely reabsorbed jaws, intraoral graft donor sites are unable to provide an adequate amount of bone tissue to reconstruction, then extraoral graft donor have preference. The aim of this study is present a case report showing some reconstruction techniques of the jaws. A caucasian female patient, 54-years-old, with no systemic disease had all her teeth extracted at age 12 by iatrogenic conduct. After clinical and radiographic evaluation a significant atrophy of the alveolar ridges was diagnosed, requiring extensive reconstruction. The surgical procedure was performed in a hospital under general anesthesia. Were removed a fragment of each iliac crest and divided in some blocks. Two corticocancellous blocks were installed in the anterior maxilla and fixed with titanium screws, the other part was completely particulate and the fragments were stabilized in booth maxillary sinus, and in the mandibular ridge with titanium mesh creating a framework for the graft, Additional to this was made the lateralization of the inferior alveolar nerve. Six months after the surgery was performed the installation of 8 implants in the maxilla and 5 in the mandible. Currently the patient is the prosthesis installation phase. We conclude that the iliac crest bone graft is an excellent alternative of atrophic jaws reconstruction providing adequate height and bone thickness for the installation of dental implants.

026 Surgical treatment of eosinophilic granuloma:case report with late follow-up

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Eosinophilic granuloma (EG) is a rare disease characterized by proliferation of reticulum-endothelial cells may affect various organs at the same time. The most affected sites are the skull bones, ribs, jaw, femur and spine. It is more frequent in children and young adults. Differential diagnoses may include odontogenic cysts, periodontal disease and neoplasia. The treatment varies depending on the size, number, location of the lesions and general condition of the patient. The aim of this study is to report a case of a patient who presented EG and was submitted a surgery. Patient 9-year-old female was referred to the Surgery of Oral and Maxillofacial Service at the School of Dentistry of Araraquara-UNESP, complaining of "pain and volume increase in the angle of the jaw region". Panoramic radiograph showed a radiolucent lesion in the right mandibular angle region extending to the first molar on the same side. The clinical and radiographic hypotheses were osteomyelitis and lymphoma. Incisional biopsy was performed in the region and histopathology confirmed EG. Therefore, conduct was the excision of the lesion followed rigid internal fixation with plates and screws placement. Currently, the patient is in follow-up 14 years after surgery and stable prognosis without recurrence

027 The accuracy of three dispositives for assessing dental implants primary stability: An In Vitro study

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Aim: The aim of the present study was to compare the accuracy of three methods for the assessment of dental implants primary stability. Methods: A total of 24 Cone Morse dental implants (Neodent®) with three different types of macrogeometry were divided in three group and were inserted in polyurethane foam block. For assessing primary stability, three measuring devices were used (surgical motor IChiropro®, manual toquimeter Neodent® and digital torquimeter µTorx Sparta®) Results: The intraclass correlation revealed that the replicability between the three devices was little influenced by the type of implant, it was bad in the majority of the cases. Conclusions: there was no correlation between final insertion torque values obtained by the three measuring devices

028 The influence of osteoporosis in implant bone loss dental - case report

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INTRODUCTION: Osteoporosis is a disease defined as the accelerated loss of bone mass, affects more women than men in post-menopausal women. In dentistry, the identification of the disease is essential when the patient undergoes dental implants. The Surgeon Dentist can be the first to detect the disease due to oral bone loss. Dental implants are intraosseous pins placed in the mandible and / or maxilla, and these may have bone loss in the presence of the disease. AIM: The aim of this study is to demonstrate through clinical case the influence of osteoporosis on bone loss of dental implants. DISCUSSION: Osteoporosis has no cure, but its progress can be controlled when detected early in the disease. CONCLUSION: It was concluded that early identification of disease associated with the correct treatment of the multidisciplinary team, Medical / Dental Surgeon can control the progression of the disease and minimize risks.

029 Treatment of ameloblastoma in the posterior mandible: a case report

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Ameloblastoma is an aggressive infiltrating odontogenic tumor with high recurrence rates. It represents 11 % of all odontogenic tumors with a metastasis rare ability. Despite their histologically benign nature, certain odontogenic tumors behave more aggressively and possess a high rate of recurrence when treated by other methods than resection. Here we present a clinical case of ameloblastoma in a 30-year-old black female, presented with a large mass in her left posterior mandible. According to hospital records she was a non-smoker, non-alcoholic report and no relevant systemic comorbidities. Panoramic radiography revealed a lesion involving her mandibular left molars with displacement of her mandibular right third molar and frenestration of the mandibular bone base. A incisional biopsy diagnosed ameloblastoma. Inter maxillary fixation was done and performed a segmentary resection surgery under general anesthesia for tumor excision. Then was performed osteosynthesis of the fragments with 2.4 mm non-locking reconstruction plate. After the first year there was no tumor recurrence but the follow-up radiographic revealed a reconstruction plate fracture. So another surgical procedure for plate removal and a secondary reconstruction with nonvascularized bone graft was performed. The patient evolved without functional deficit and no relevant asymmetry neither. Currently she is in the planning phase for implant surgery. Although a segmentary resection surgery is considered a radical method of treatment, it is an effective alternative in ameloblastoma removal, presenting low rates of recurrence

030 Treatment oroantral fistula through retail labial combined with buccal fat pad

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The oroantral fistula is a pathological communication between the oral cavity and the maxillary sinus. Generally, the fistula occurs after extraction of maxillary posterior teeth did not have an immediate diagnosis of accidental communication with the maxillary sinus. Such complications may also be caused by infections, trauma and tumors that region. small fistula may have spontaneous closure, but the larger must be closed by surgical flap. We report the case of a xantoderma patient, 61 years old, who attended our clinic with a oroantral fistula in the tooth region 17, which element had mobility and was removed by the patient, resulting in complication. The same underwent evaluation with ENT, was treated and treated with vestibular fistula retail slip combined with deep plane of the buccal fat pad. The authors discuss the use of buccal flap combined with the buccal fat pad for treatment of oroantral fistula.

031 Virtual planning in orthognathic surgery

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The traditional surgical planning for orthognathic surgery is determined by cephalometric analysis, clinical analysis, aesthetic judgment and cast models. It is difficult to make a precise surgical plan to correct complex maxillofacial deformities. Advances in 3D technology have resulted in some software for use in preoperative planning. The virtual planning for orthognathic surgery needs: acquisition of tomographic image, scanning of cast models and creating a three-dimensional model. The surgeon can make virtual osteotomies in a virtual environment and predict bone and soft tissue changes. It is also possible to make surgical guides for use during surgery. The objective of this study is to evaluate the use of technology for virtual planning of orthognathic surgery highlighting its indications, advantages and disadvantages.

032 Anterior stratification with composite resin: a treatment option

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With evolution of esthetic restorative materials and minimally invasive concept in dentistry, composite resin restorations have proven to be a satisfactory and durable treatment option. Thus the objective of this study was to report a clinical case where format, function and esthetics of the maxillary anterior teeth were restablished with composite resin veneers. After clinical examination of the 21-year-old female patient, a discrepancy in the smile's harmony, with several interdental spaces (diastema), was found. Two treatment options were proposed to the patient: 1) Ceramic veneers and 2) Composite resin veneers. Due to the high cost of ceramic veneers, the patient chose the second option. In sequence, diagnostic wax-up was held for proper planning and a mock-up was performed to preview the esthetic treatment final result. After patient's approval the reanatomization procedure took place with composite resin (Empress Direct, Ivoclar Vivadent Lichetenstein), according to the color previously selected. Composite resin veneers restablished adequate format and color to the patient's smile. The patient was very satisfied with the esthetic and functional results of treatment.

033 Clinical cases of hard resolution with predictable treatment

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The purpose of this study was to describe difficult clinical cases rehabilitator to resolve. The integration of different clinical areas from planning to treatment led to successful procedure. 4 clinical cases conducted in FOP-UNICAMP under the supervision of a dentistry professor. The first case: it was reported difficulty in implementing to preservation molar tooth in a young patient with trepanation and endo perio injury. The second case: tooth extraction indication was preserved through conservative endodontics and dentistry procedures. Case three: patient with considerable tooth destruction without the possibility of maintaining in oral cavity. It was executed an unprecedented treatment with state of art materials and rehabilitation with ceramic crown. Case four: complicated rehabilitation using indirect ceramics restorations and CAD-CAM system to posterior teeth. In conclusion, the integration of odontology areas can bring benefits with integrated treatment producing excellence resolutions to the patient.

034 Closing of diastema with Composed resin

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The Aim of the Present Work and to tell hum In case that Physician of closing of diastema with Composed resin, re-establishing aesthetic Function and, Accomplished IN College INAPÓS - National Institute of Higher education and After-Graduation Priest Gervásio. Patient P C, 21 year, masculine Sort, told great aesthetic dissatisfaction, in respect to the PRESENT Spaces between Lateral the Central incisors/and the Lateral and canine incisors, Both IN Arcaded the Superiors. Without radiographic Examination it was Possible to observe hígidos TEETH, SEM No Problem Par3a Serém restored. The plan of Treatment constituted initially in a complete prophylaxis, and logo after As restorations that were requested. One happened, absolute Isolation, Adhesive System, CHOICE of the Composed resin using a scale of color (resin Llis/A2 Was used) with posterior fotopolimerização. In this story of clinical Case, the buccal Whitewashing Was concluded, using one Direct Restoring Technique For the aesthetic and functional Treatment of closing of diastemas.

035 Color stability and Surface gloss of nanocomposite submitted to mouthrinsing action and aging

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Aim: The purpose of the in vitro study was to evaluate the optical properties of color (ΔE) and brightness (GU) of a nanocomposite submitted or not to effects of different mouthwashes and artificial accelerated aging (AAA). Methods: Eighty cylindrical samples (7.0mm X 2.0mm) were made of composite nanoparticle (Filtek Z350 XT®, 3M / ESPE) and randomly divided in 8 groups (n = 10). Half of the samples were submitted to aging and the applications of the monthrinsing were divided into: Colgate Plax Classic (CPC), Listerine (LI), Colgate Plax Whitenning (CPW) and control (ST – No treatment). The physical properties tested were color (CIE Lab) and gloss (GU). Scanning electron microscopy (SEM) was performed for qualitative analysis. Data were submitted to two-way ANOVA and Tukey's test for multiple comparisons. As for ΔE, multiple comparisons were performed by using Tukey's and Dunnett's tests ($\alpha = 0.05$). Results: The gloss of non-aged nanocomposites was not affected after treatment with mouthwash ($\rho>0,05$). But the AAA changed all studied properties, with reduced surface gloss values and greater variation in color ($\rho\leq0,05$). The color aged nanocomposites treatment with mouthrinse differed from each other ($\rho>0,05$), with higher values of ΔE, in respective (CPC>LI>CPW), and differ from control ($\rho\leq0,05$). Conclusions: All mouthrinses tested did not affect the brightness of the nanocomposite. The artificial accelerated aging negatively change the properties studied. The aged group treated with Colgate Plax Classic showed the greatest variation in color.

036 Diastema closure using composite resin associated with periodontal plastic surgery: Case Report

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The closure of interdental spaces using composite resins is considered an esthetic, practical, and conservative treatment option. However, the combination of two or more types of treatment may be required in order to handle cases in the most complete and suitable way. This case report shows the condition of a patient with complaints about dental esthetics due to the presence of diastema. Aim: The objective was the planning and implementation of a restorative treatment with esthetic purpose. Methods: Treatment was planned by means of photographs, study models and digital planning. Firstly, external tooth whitening was performed, followed by periodontal plastic surgery, replacement of acrylic resin provisional crowns, and restorative test with the purpose of evaluating the form and color of the maxillary central incisors prior to definitive procedures. Then, direct resin composite restorations were carried out for closing diastema and achieving dental harmony. Results and Conclusion: A considerable improvement in dental esthetics, smile harmony and patient satisfaction was obtained by the reported procedures.

037 Effect of hydrogen peroxide-based mouthrinses in morphology and bond strength of dentin

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Aim: To evaluate the effects of the mouthwashes containing hydrogen peroxide (HP), with or without pyrophosphate (PY), in the bond strength and morphology of dentin. Methods: 72 areas of bovine dentin were submitted to treatment protocols (n = 24) per 21 days: distilled water (control); Colgate Plax Whitening® (PW), containing 1.5% HP; and Colgate Luminous White® (LW), containing 2% HP+PY. Then, the blocks were restored with the adhesive systems (n=12): Single Bond 2 (SB) or Clearfil SE Bond (CSEB) and exposed to microshear test (Mpa, fracture pattern). The morphology was evaluated by Scanning Electron Microscopy (SEM). During the experiment the samples were stored in artificial saliva. Data were submitted to ANOVA (two-way) and Tukey's test (α=0.05). Results: PW decrease the bond strength values for SB ($p<0.05$). The CSEB enhance the strength bond values for LW (PY presence). The fracture pattern was predominantly adhesive for all groups; therefore LW use prior to CSEB increased the frequency of mixed failures. The mouthrinses change the surface morphology of the dentin through mineral dissolution (PW) and the precipitate formation in the dentin surface (LW). Conclusion: Mouthrinse containing only HP (PW) negatively affect the morphology of dentin and decreases the bond strength of a conventional adhesive system. The Mouthrinse containing pyrophosphate increases the bond strength of self-etching adhesive system.

038 Effect of hydrogen peroxide-based mouthrinses on morphology and stain susceptibly of enamel

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Aim: To evaluate the effect of hydrogen peroxide (HP) in mouthrinses with or without pyrophosphate (PY) on surface morphology and staining susceptibility of enamel, besides their whiteness effectiveness. Methods: Bovine enamel blocks (72) were randomly submitted to daily treatment (n=24): distilled water (control); Colgate Plax Whitening® (PW),with 1.5% HP; and Colgate Luminous White® (LW), with 2% HP+PY per 21 days (T1).The groups were daily exposed (n=12) or not (n=12) to a staining with coffee (SC) in T1 and all groups were exposed to SC for more 7 days (T2) . The samples were always stored in artificial saliva. Morphology was assessed by roughness (ΔRa) and Scanning Electron Microscopy (SEM). Color was evaluated by spectrophotometry reflectance (CIE L*a*b*ΔE, ΔL, Δa and Δb). Data were analyzed with ANOVA and Tukey's test (α=0.05). Results: PW showed the highest ΔRa regardless the staining presence. LW did not promote roughness change, being similar to control . PW promoted ΔL* alteration, but without clinically perceptible color change (ΔE=2.91). LW did not show whiteness effectiveness, but the stained groups presented the lowest ΔE and ΔL values. PW+SC promoted ΔL* variation, increase of b* and the highest ΔE values. SEM, PW changed the enamel morphology causing interprismatic mineral dissolution. Conclusion: The PW was not effective in whitening, increasing enamel susceptibility to staining due to morphologic changes. However, the LW did not showed alterations by Ra or SEM reducing enamel staining.

039 Effect of toothpaste exposure on enamel prior to dental bleaching and staining with red wine

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Aim: To evaluate the morphologic and chromatic changes of enamel exposed to toothpaste and/or dental bleaching in a protocol of erosion/staining with red wine. Methods: 120 bovine enamel blocks were immersed in a toothpaste slurry (n=24): artificial saliva (controls); Oral B Pro-Health (SnF2-SF); Sensodyne Repair & Protect (Bioactive Glass-NM); Colgate Pro-Relief (Arginine-AR); Chitodent (Chitosan-CHI). After exposure, one-half (n=12) of samples was bleached (35% Hydrogen Peroxide – HP) and the other half was not (n=12). The morphology was evaluated by roughness analysis (Ra) and the color by reflectance spectrophotometry (CIE L*a* b*, ΔE) in the frames: Initial (T1), post-toothpaste and/or bleaching (T2) and after staining with red wine for 6 hours (T3). Data were analyzed with ANOVA for repeated measures (Proc-Mixed) and Tukey test (α=0.05). Results: HP increases Ra, however SF, NM and AR did not enable these alterations. In T3, all groups showed increasing in Ra values, with the exception of SF (unbleached enamel). For color, in T2 and T3, HP (control) showed L*, b* and ΔE different from the unbleached control. In T3, SF and PA promoted decreasing in L*; PA demonstrated the higher ΔE values, differing from controls; CHI was able to decrease the L* variation in unbleached group. Conclusion: Toothpastes promote different effects on enamel acting as protector against the morphologic alteration from the bleaching treatment (NM, SF and AR); and anti-erosive against to wine (SF). Furthermore, the toothpastes could decrease (CHI) or increase (AR and SF) the staining with red wine.

040 Evaluation of physical and chemical properties of veneers after aging

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Aim: The study evaluated physical and chemical properties of resin cements and flowable resin composite (RC) used to lute veneers (FL) by color stability (CS) and bond strength (MBS) after aging and the degree of conversion (GC). Methods: 96 human incisors were divided into 6 groups: RelyX Veneer / Single Bond2, RelyX ARC / Single Bond2, Filtek Z350 XT Flowable / Single Bond2, Variolink Veneer / Tetric N-Bond, Variolink II / Tetric N-Bond and Tetric N-Flow / Tetric N-Bond, used shade A1. For the CS analysis were cemented ceramic IPS Empress Esthetic according to the vestibular tooth groups and 24 h after the measurement was performed with color spectrophotometer (Easyshade-Vita). After the accelerated aging by UV-B light for 300 h (AAA), new measurement was performed. MBS was made on the vestibular incisor 48 by cementing 2 ceramic cylinders and 24 h after the first cylinder was subjected to the test MBS and the other was subjected to aging and new MBS performed. Results: The failure pattern was observed under an optical microscope. GC (n = 10) was made in spectrometer. ANOVA and Tukey's test results: CS-all materials showed color change. As for the MBS, the Single Bond RelyX ARCE Tetric N-Bond / Variolink II systems showed the best values. The dual cements had higher percentage of cohesive failure in ceramic and photoactive cements and RC adhesive failures. As for the GC, RelyX ARC was the best. fixing systems showed great color change after AAA, for MBS, and the dual GC materials performed better. Conclusion: Dual cements is the better system fixing.

041 In vitro evaluation of the effectiveness of internal dental whitening in pigmented bovine teeth

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Aim: evaluate the color change in pigmented bovine teeth with blood and whitened with various techniques of internal bleaching. Methods: Initially was performed a pre-selection of 140 teeth from the values of L*, and the 70 teeth selected were divided into 7 groups (n=10): G1 – control, G2 - sodium perborate (SP) 37%; G3 - acid attack (AAc) previously to bleaching treatment with (SP); G4 - irrigation with sodium hypochlorite (SH) 2,5% + SP 37%; G5 – Aac only at the fist session + SH + SP; G6 - hydrogen peroxide (HP) 35%; G7 - carbamide peroxide (CP) 37%. In all groups the bleaching product was renewed every 7 days. The analysis of the color change was performed by a spectrophotometer (VITA Easyshade® compact), being evaluated before the beginning of whitening treatment, immediately before the exchange of bleaching products and at the end of the bleaching treatment. Results: The data were subjected to statistical tests ANOVA and Tukey, and it was observed that there was no statistical difference between the groups using SP as bleaching agent. The group 6 had lower clarifying efficacy if compared to other groups. Conclusion: There is no need of acid attack, as well of irrigation with sodium hypochlorite to promote an increased bleaching efficacy.

042 Influence of proanthocyanidin-rich extract on bond strength to enamel and dentin after dental bleaching

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Aim: Evaluate the effect of a grape seed extract (GSE) proanthocyanidin-rich on the microshear bond strength to enamel and dentin after dental bleaching. Methods: 50 blocks enamel/dentin bovine were used to assess bond strength in enamel and 50 in dentin. The blocks were subdivided into 5 groups (n=10): without bleaching and without GSE, without whitening and GSE, bleaching and pretreatment with 5% GSE solution, bleaching and addition of 1 or 2% GSE into primer of adhesive system. Bleaching was performed with 35% hydrogen peroxide (Whiteness HP,FGM) . After 24 h, only for dentin adhesion, enamel was removed with abrasive paper and standardized the smear layer. For the realization of bonding procedure was used a system three-step etch-and-rinse adhesive system (Adper Scotchbond Multipurpose, 3M ESPE). According the group was applied with different concentrations of GSE (0, 1 or 2%) with or without pretreatment. With resin flowable composite (Filtek Z350XT Flow, 3M ESPE), 2 cylinders were carried out. The microshear test was performed at 0.5mm/min using a universal testing machine (DL500, EMIC). Data were subjected to one-way ANOVA and Tukey's test. Results: For enamel, dental bleaching decreases significantly bond strength, unbleached and PA pretreated groups showed higher microshear bond strength, but adding GSE(1 and 2%) into primer resulted in intermediary bond strength values ($p=0.0031$). For dentin substrate, no showed statistical difference among treatment protocols ($p=0.2422$). Conclusion: Pretreatment with GSE solution may be used to reverse the deleterious effects of bleaching on the tooth enamel.

043 Internal and external bleaching of teeth with endodontic treatment and discoloration after trauma: case report

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With the increasing value of a white smile, the color harmony of teeth is a factor with high importance in dental esthetics, where the discoloration of a single dental element can negatively influence the esthetics of a smile. The color change of a single tooth is often associated with dental trauma, because of intracoronary hemorrhage. The iron contained in red blood cells is capable of pigmenting the dentinal tubules. In order to harmonize teeth color, dental whitening is often seen as the procedure of choice, once it is considered a biologically safe and conservative treatment. This case report describes an internal bleaching procedure conducted by the area of esthetics in the School of Dentistry in Piracicaba –FOP/ UNICAMP. A 30 year old male patient, presented the case of the 21 tooth darkened due to trauma. After radiographic analysis and the analysis on the effectiveness of the endodontic treatment, six sessions of internal bleaching were performed using the technique of "walking bleach". For this, a mixture of sodium perborate and distilled water was used. Then, three sessions of external bleaching of all teeth were performed using a gel based on Hydrogen Peroxide 35% (Whiteness HP, FGM). The tooth was restored after 14 days using an three-step etch-and-rinse adhesive system (Single Bond 2, 3M ESPE) and a composite resin nanoparticle (Empress Direct, Ivoclar Vicadent).In this case, the association of techniques of internal and external bleaching has reached its goal to restore the esthetics of a traumatized tooth through the harmonization of color.

044 Laminate Veneers for esthetic rehabilitation of anterior conoid teeth: a case report

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An anterior conoid tooth is an anomaly that involves the size and shape of the teeth, and is classified as isolated microdontia and could be unilateral or bilateral. Aim: The aim of this clinical case report was reestablishing harmonically the shape, size and color of a lateral incisor conoid with unsatisfactory direct restoration through ceramic laminate venners. Case Report: A 22-year-old female patient attended for treatment at Piracicaba Dental School (University of Campinas, Piracicaba, SP, Brazil), relating unsatisfactory smile. The waxed-up and cosmetic mock-up was performed to check patient acceptance for proposed treatment for element 12. Following approval by patient, the tooth wear was performed using silicone guide obtained by waxed-up. Molding was carried out using the double impression technique and provisory veneers was made with composite resin. The veneer proof was performed with a try-in cement for color evaluation and shape adjustment. After approval by patient, the veneer had the inner surface treated with hydrofluoric acid 10% (20s – E- Max), cleaned (20s) with phosphoric acid 37% and silanated. Dental structure was etched (30s) with phosphoric acid 37% and adhesive system (Single Bond) was applied according manufacturer's instructions. In final step, the veneer was cemented with Variolink light-curing cement. Conclusion: The use of laminate veneer for treatment the correction size and shape anterior conoid teeth is indicated.

045 Luting protocol on the bond strength of fiber posts luted with an experimental resin cement containing onium salt

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Aim: This study evaluated the influence of different curing protocols on the bond strength of glass fiber posts fixed with experimental resin cements (CRE) containing different concentrations of the salt hexafluorophosphate diphenyliodonium (DFI). Methods: The CRE were manipulated from a blend based monomer Bis-GMA and TEGDMA in a 1: 1 by weight, 2 mol% of tertiary amine EDAB, with addition of 0.5 mol%, 1 mol% or no addition of DFI . Sixty roots of bovine incisors were prepared endodontically and divided randomly into 6 groups, varying the cement, and curing protocol: P1-acid etching for 15 seconds, application of primer, followed by bond, light curing for 20 seconds, introduction CRE, positioning post into the channel and curing for 60 seconds. P2-etching for 15 seconds, followed by application of primer and bond, then introduction of the CRE, positioning post into the channel and after that, curing all agents, for 60 seconds. The roots containing the cemented posts, has been subjected to bond strength push-out (RU) at a speed of 1mm/min. The fracture pattern was performed using a stereomicroscope (Leica MZ75 50X) and SEM. Data was subjected to statistical analysis Anova 3 factors in a split plot, and Tukey test ($p \leq 0.05$). Results: There was no statistical difference between the P1 and P2 curing protocols. The CRE with add of 0.5 mol% DFI presented the highest results of RU. The major failure pattern analyzed was AD for all groups. Conclusion: Different curing protocols have no influence on the bond strength of glass fiber posts. The add of DFI salt improved the bond strength values.

046 Physico-chemical and antimicrobial evaluation of a composite resin with different concentrations of quaternary ammonium

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Aim: To develop an organosilane (ORMOSIL) with Iodide quaternary ammonium salt (SiQAI), assess physico-chemical properties of Transbond XT Light Cure after ORMOSIL-SiQAI incorporation and evaluate antimicrobial effect of ORMOSIL-SiQAI incorporated into the composite resin or used as a coating material. Methods: A sol-gel reaction was employed to develop ORMOSIL-SiQAI. Degree of conversion (DC); water sorption (Wsp); solubility (Wsl); ultimate tensile strength (UTS) and shear bond strength (SBS) tests were done for groups: Transbond XT; Transbond XT containing 10 wt% ORMOSIL-SiQAI and Transbond XT containing 15 wt% ORMOSIL-SiQAI. For antibacterial test one group was added: Transbond XT covered by 2 layers of ORMOSIL-SiQAI. Streptococcus mutans UA159 were grown for 24 h in Brain-Heart-Infusion with 1% sucrose at 5% CO2. Physico-chemical properties data were subjected to ANOVA and Tukey's test and antibacterial data to Kruskal-Wallis and Student-Newman-Keuls test. Results: The DC did not differ between groups. Wsp and Wsl decreased as the percentage of ORMOSIL-SiQAI increased. UTS decreased for both concentrations and SBS diminished for concentration 15%. For antimicrobial test, there was no difference between control group and groups containing ORMOSIL-SiQAI. Only the coating application resulted in less S. mutans biofilm formation. Conclusion: incorporating ORMOSIL-SiQAI adversely affected SBS and UTS properties. Additionally, ORMOSIL-SiQAI presented antimicrobial activity when applied as coating, diminishing S. mutans biofilm formation considerably.

047 Restorative dentistry with maxim predictability through diagnostic wax-up and mock-up

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Background: The diagnostic wax-up along with the construction of a mock-up (aesthetic pre-evaluative temporary) allows the clinician to understand his patient, and beside him to decide the most appropriate treatment. Aim: To report two clinical cases in which the diagnostic wax-up and mock-up were crucial to the predictability of restorative treatments. Case report: In both cases, after clinical and radiographic examination and initial sequence of photographs, the impression was performed with a polyvinyl-siloxane material for the reproduction of plaster model. Thereafter, dental aesthetic planning was realized, which was used as reference for the realization of diagnostic wax-up by the progressive technique with wax type II. A silicone guide was obtained from the wax model with the new predefined dental anatomy. From this silicone guide, was possible to make the mock-up, by filling the guide with a Bis-acrylic resin and adapted in the mouth of patients. With mock-up finished, aesthetic and functional tests were performed. Following approval of the patient and clinical, the cases were finalized with direct restorative treatment. Results and Conclusion: It was concluded that the diagnostic wax-up and the mock-up are extremely relevant for maxim predictability of direct restorative treatment, in addition allowing to patient prior knowledge of the offered treatment. Keywords: Smile; dental esthetics; resin composite.

048 Veneers Porcelain: a literature review

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With the advancement of dentistry, materials and used techniques, the professional conducts indirect restorations with nonexistent or with a minimally invasive preparation, through the ceramic veneers with an average thickness of only 0.3mm, popularly called dental contact lenses. This practice is highly conservative and reversible, adopted by dental surgeons to restore the tooth shape, however presents complex handling and preparation. Successful treatment depends on knowledge of the properties and limitations of the material, as well as technical field. The aim of this job is a literature review with operating books, papers, magazines and websites in order to report the practice of cementing and handling of the ceramic laminate. To conduct the study were selected original articles on that subject listed in the sources of Pubmed and Scielo. Some stages are critical to the success and durability of a porcelain veneer restoration. It was concluded that the choice of the ideal case, the most appropriate ceramic material, the use of dental detrition technique, proper insulation, good cementation are essential conditions for an ideal porcelain veneer. However, it cannot dismiss, the effective follow-up of the case so the work has really, the quality wanted.

049 uTBS And CLSM: Micro-Specimens Prepare For Bond Effectiveness Analyse

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Aim: To test the use of a modified method of microtensile test (uTBS) through the performing of mini-specimens (cross section 0.09 mm2) and to evaluate the interfacial integrity by confocal laser microscopy (CLSM). Methods. Two bond agents, Clearfil SE Bond and Scotchbond Multipuporse were applied to flat dentin substrate of 32 human premolars and composite crowns were built up with Charisma Opal. The restored teeth were sectioned to produce beam-shaped by diamond saw. For display in CLSM 0.16 mg/ml of Rodamine B was incorporated into adhesives thus forming two groups for each adhesive (n=8) groups of teeth restored with adhesives stained and unstained. The presence of microporosities was recorded in CLSM before testing μTBS. The failure patterns were analyzed using SEM. Data of bond strength was submitted to two-way ANOVA. Results: No significant differences were observed between the micro-specimens mean values of labeled and non-labeled adhesives ($p > 0.05$). The results showed bond strength data with low rate of premature failure, high percentage of failures at the actual interface (90%) and low coefficient of variation. The CLSM revealed detailed information of the adhesive interface, showing low percentage of microporosities for both bonding agents. Conclusions: These test parameters contributed to confirm the accuracy of the modified μTBS and the preparation of micro-specimens did not compromise the μTBS. Confocal microscopic provided detailed information as a nondestructively resin-dentin interface technique.

050 Smile transformation with ceramic veneers and crowns: a one-year follow-up case report

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In order to fullfill today's high esthetic demands, biomimetic materials such as ceramic emerged, with similar optical and mechanical properties to natural teeth, with great laboratory and clinical longevity results. The aim of this study was to report a one-year follow-up case of ceramic crown and veneer restorations. A 61-year-old female patient searched for dental treatment complaining about old resin restorations' color and format in upper incisors, canines and premolars. Photographic protocol was taken and treatment planning performed using digital smile design and clinical examination. Treatment with ceramic restorations was dentist's and patient's choice. Upper and lower arch impressions with polyvinyl siloxane (Empress/3M ESPE) were performed to obtain models for a diagnostic wax-up. Old restorations were completely removed from teeth #14-25 and crown and veneer preparations were executed on teeth #14, 24-25, and on teeth #13-23, respectively. Impression of the preparations was done using polyether (Impregum/3M ESPE) and provisionals using bis-acrylic resin (Structur 2/VOCO). Six veneers and three crowns of lithium dissilicate ceramic (IPS e.max/Ivoclar Vivadent) were fabricated. The restorations were tested in position for small corrections. Veneers were cemented with preheated composite resin (Z100/3M ESPE), and crowns with conventional dual-cure resin cement (RelyX ARC/3M ESPE). After one-year clinical follow-up, restorations showed no marginal disadaptation or discoloration and no hypersensitivity on the vital-tooth treated. The patient was very satisfied with the esthetic and funtional results obtained.

051 Analysis of the bacterial content of asymptomatic endodontic infections with apical periodontites by Checkerboard

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Bacteria are the main etiological factor for the development and perpetuation of pulp and periapical lesions. The aim of this study was to investigate the bacterial composition of root canals (RC) of teeth with asymptomatic endodontic infections and apical periodontitis (AP) by Checkerboard and to correlate it with clinical signs and symptoms. Ten patients with asymptomatic endodontic infections and AP were selected. Microbiological samples were collected from RC and processed by Checkerboard. Associations between bacteria and clinical signs and symptoms; and associations between bacterial species were investigated. Bacteria were detected in 100% of the samples, being predominantly rods, Gram-negatives and strict anaerobes. There was no statistically significant difference in the associations between bacterial species and clinical signs and symptoms ($p > 0.05$). Regarding the associations between bacterial species, significant positive associations ($p < 0.05$) were found in 13 pairs of species as follows: P. endodontalis/T. denticola; P. endodontalis/G. morbillorum; P.endodontalis/S. gordonii; P. endodontalis/T. forsythia; P. endodontalis/S. epidermidis; E. faecalis/S. intermedius, /F.n. (sp. polymorphum); E. saburreum/P. micra; E. saburreum/S. intermedius; S. gordonii/F.n. (sp. polymorphum); T. denticola/F.n. (sp. polymorphum); F. n. (sp. nucleatum /P. melaninogenica; F. n. (sp. nucleatum)/S. mitis; all with ODDS values > 2. It is concluded that the microbiota of asymptomatic infected RC with AP is heterogeneous, composed mainly by anaerobic Gram-negative bacteria (FAPESP: 2014/27366-8; CNPq 308162/2014-5; CAPES).

052 Evaluation of factors associated with dental traumatic injuries in são leopoldo mandic dental trauma center

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Dental trauma produces a substantial impact on quality of life of children and adolescents, and may cause physical and psychological discomfort, affecting social relationships. These injuries should be treated in a short period of time, to avoid become irreversible, leading to tooth loss. Aim: The objective of this study was to evaluate the incidence of factors associated with dental traumatic injuries, in São Leopoldo Mandic Dental Trauma Center, from March 2013 to June 2015. Methods: Data were collected from clinical records, and the following aspects were observed: gender, age, classification of the tooth, classification of traumatic dental injury, trauma etiology and treatment provided. The collected data were analyzed using the chi-square test and ANOVA ($p < 0.05$). Results: Records of 85 patient were included, in a total of 215 traumatized teeth. The age group most affected was between 8 and 11 years old (34.4%), affecting boys more frequently (2: 1). Endodontic treatment was the procedure most perfomed (38.3%). The main etiological factor were falls (36.6%) and the upper central incisors were the most affected teeth (84.8%). An association between gender and etiology pointed higher prevalence of dental trauma due to sports practices and physical aggression for males ($P < 0.001$ Chi-square test). Falls represented 50% of the causes of injuries in children between 5 and 11 years old. Physical violence represented 44.5% of traumatic injuries in individuals between 15 and 25 years old ($P < 0.001$ Test ANOVA). Conclusion: This study concluded that more attention should be directed to preventive measures, since the prevalence of traumatic dental injuries still high among children and adolescents.

053 Care provided at the Dental Trauma Service of Piracicaba Dental School over three years

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Aim: To verify the frequency of care provided at the Dental Trauma Service of Piracicaba Dental School of State University of Campinas, SP, Brazil (FOP-UNICAMP), from February 2013 to February 2016. Methods: Data were collected from clinical records used in the service, and the following aspects were assessed: gender, age group, teeth classification, time between trauma and the first care visit, etiology, classification of traumatic dental injury, and procedure performed. Data were analyzed aided by the SAS software and the chi-square test used to verify the presence or absence of significance at level of 5%. Results: Clinical records from 96 patients with 285 traumatized teeth were analyzed; there was higher prevalence of the male gender and age group under 14 years. Central incisors (59.6%) were the most affected teeth. Most patients (60.4%) sought care from 0 to 30 days after trauma. Falls (30.2%) were the most common etiology. The most frequent traumatic dental injuries were crown fractures of enamel and dentin (36.1%) and subluxation (25%). Clinical and radiographic examinations (48.4%) were the most performed procedures. Conclusions: It was concluded the importance and the need to create dental trauma services, to conduct a ready emergency care in these patients in order to offer adequate treatment and follow-up.

054 Identification and antimicrobial susceptibility of Enterococcus faecalis isolated from endodontically-treated teeth

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Endodontic infections are mainly caused by the presence of microorganisms and their byproducts. Secondary and / or persistent infection is characterized by the reinfection of endodontically treated tooth, with an increased prevalence of Enterococcus faecalis. Aim This study aimed to isolate, identify and verify the susceptibility of E. faecalis strains isolated from endodontically treated teeth against 14 antimicrobial agents. Methods Twenty root canal samples were collected from teeth indicated to retreatment. E faecalis was firstly presumpted identified based on phenotypic features and then by PCR. The antimicrobial susceptibility was determined using the disk diffusion method. Results: Positive cultures were achieved in 7 out of 20 samples, providing 43 bacteria. These, 41 were confirmed as E. faecalis by PCR. The strains were susceptible to amoxicillin with clavulanic acid (38/41), ampicillin (38/41), doxycycline (33/41) fosfomycin (33/41) and tetracycline (30/41). Resistance was showed against clindamycin (38/41), gentamicin (35/41) and rifampicin (20/41). Conclusion It was concluded E. faecalis was isolated from 35% of the cases investigated. The isolates showed varied degrees of resistance to several antimicrobial agents, being amoxicillin + clavulanic acid, and ampicillin the most effective agents. (Supported by CAPES, CNPq (process no. 308162/2014-5) and PIBIC-CNPq).

055 Influence of concentration of bleaching agents on the inflammatory markers in pulp tissue of rats

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Aim: To evaluate recruitment of leukocyte (CD5 positive cells), and behavior of the pro-inflammatory cytokines IL-17 and IL-6 in pulp tissue after tooth bleaching with two concentrations of hydrogen peroxide (H2O2). Methods: Molars of 40 Wistar rats were treated with 20% H2O2 (BLUE group), 35% H2O2 (MAXX), or placebo gel (Control). At 2 and 30 days, the rats were killed and the jaws removed for histological and immunohistochemical analysis to IL-17, IL-6 and CD5. The data were subjected to the Mann-Whitney, Two Way ANOVA, Kruskal-Wallis and Dunn statistical test (P<.05). Results: At 2 days, the BLUE group showed moderate inflammation in the pulp horns regions, and the MAXX, necrosis (P<.05). At 30 days, there was no inflammation, but there was great formation of tertiary dentin. Low immunolabeling standard to IL-17 was present in BLUE and Control, and moderate in MAXX at 2 days (P<.05), reducing in all groups at 30 days, but without statistical difference inter-groups (P>.05). The bleached groups had moderate immunolabeling standard to IL-6 at 2 days, and significant difference as compared to the control (P<.05); there was no significant difference between the groups at 30 days (P>.05). CD5 positive cells was present at 2 and 30 days in greater amounts in bleached groups (P<.05), without significant difference to each group between the experimental periods (P>.05). Conclusions: IL-17 and IL-6 participates in the inflammation in the pulp of rats after dental bleaching, and the immunolabeling is greater with increasing H2O2 concentration. This process is accompanied by the prolonged recruitment of CD positive cells.

056 Isolation and identification of Enterococcus faecalis in teeth indicated for endodontic retreatment

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Microorganisms and their by-products are the main causative agents of the pulpal and periapical diseases and also of the endodotic failure. Therefore the main goal of endodontic treatment is to remove them. Enterococcus faecalis, a facultative Gram-positive microorganism, is one of the most frequently bacterial species found in cases of endodontic failure. Aim This study aimed to isolate and identify E. faecalis from root canals of teeth indicated to endodontic retreatment due to prosthetic reasons, using a selective medium (m-Enterococcus) and PCR. Methods. Clinical samples were collected from root canals of 20 endodontically-treated teeth. All samples were collected with paper points, which were kept inside the root canal for 60 seconds, and then transferred to tubes containing VMGA III transport medium. After growth on m-Enterococcus agar, the colonies were isolated, characterized as Gram-positive catalase negative cocci. DNA was also extracted from the isolated colonies for PCR processing. Results Seven out of 20 cases showed microbial growth. All bacteria that grew on selective medium were Gram-positive, and catalase negative. For PCR technique, 35 out of 37 bacterial isolates were confirmed as E. faecalis, with 95% of agreement with the culture. Conclusion It was concluded that E. faecalis is often isolated from cases of endodontic retreatment, and the selective medium m-Enterococcus showed high specificity for the selection of this species. (Supported by CAPES, CNPq (process no. 308162/2014-5) and PIBIC-CNPq.

057 The use of an antioxidant agent for recovery of bond strength of a multi-mode adhesive to pulp chamber dentin

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Aim: The presente study aimed to evaluate the effect of sodium ascorbate (SA) on the bond strength of a multi-mode adhesive system to pulp chamber dentin treated with sodium hypochlorite (NaOCl). Methods: Crowns of bovine incisors were cut to expose the pulp chamber dentin and treated as follows: G1 (control), 0.9% NaCl for 30 minutes; G2, 5.25% NaOCl for 30 minutes; G3, 5.25% NaOCl for 30 minutes+ 17% EDTA for 3 minutes + 5.25% NaOCl for 1 minute; G4 and G5: similar to G3 followed by 10% SA for 1 or 10 minutes, respectively. Next, Scotchbond Universal (3M ESPE, St Paul, MN, USA) was applied to the pulp chamber dentin, followed by Filtek Z250 composite (3M ESPE). Rectangular sticks were obtained and the dentin/resin interface was subjected to micro-tensile test. The mean bond strength was analyzed by using ANOVA/Shapiro-Wilk test ($\alpha = 0.05$). Results: The results demonstrated that treatments with NaOCl and NaOCl/EDTA produced significant reductions in resin–dentin bond strengths ($P < 0.05$), whereas only 10% SA applied for 1 minute reestablished the bond strength. Conclusions: The use of 10% SA for 1 minute restores the bond strength of composite resin to NaOCl/EDTA-treated dentin, allowing adhesive restorations to be immediately applied ater endodontic treatment.

058 Odontogenic differentiation of stem cells of the apical papilla promoted by a natural phenolic compound

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Aim: The present study aimed to investigate the effect of quercetin on viability and odontogenic differentiation of stem cells of the apical papilla (Scap). Methods: Cell proliferation and viability were assessed using MTT assay. Scaps were treated by quercetin for 4, 7, 14 and 21 days in a concentration at four-fold serial dilutions, starting at 6,25 µg/mL. Finally, the effect of quercetin on odontogenic differentiation of Scaps at 4 and 7-day periods was analysed by real-time PCR. Results: Data of MTT assay showed that quercetin is able to sustain Scap viabilitlty. Gene expression of alkaline phosphatase, dentin-matrix protein and osteocalcin was enhanced in the presence of quercetin in an osteo/odontogenic medium, with the concentraton of 1.56 µg/mL at 7-day exposure featuring a statistically significant stimulatory effect. Conclusions: Quercetin is well tolerated by Scap cells and can favor their odontogenic differentiation.

059 Pulp revascularization in non vital immature teeth: Two cases report

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Pulp revascularization has been indicated as a promising treatment for immature teeth with pulp necrosis, to allow continuity of root formation. It is based on the decontamination of the root canal, application of an intracanal dressing and bleeding induction containing undifferentiated cells originated from the periapical tissues. The blood clot acts as a scaffold and supports the growth of a new tissue similar to cement. Case Report: Patient I - male, 7 years old, suffered dental trauma in the element 21. The pulp necrosis and incomplete root formation was diagnosed. Patient II - male, 13 years old, dental trauma was reported in element 11. Radiographic examination showed incomplete root formation and presence of apical periodontitis. The treatment proposed for both cases was the pulp revascularization. The decontamination of the root canal and consecutive insertion of intracanal dressing with calcium hydroxide and 2% chlorhexidine gel for 21 days, were performed. In the next visit, the blood clot was stimulated and CollaCote collagen matrix (Zimmer Dental, Carlsbad, CA) was placed above it. A cervical barrier was placed with a paste composed of (calcium hydroxide, zinc oxide and chlorhexidine 2% gel, 2: 1: 2). Subsequently, the teeth were sealed with Coltosol and composite resin. During the follow up both canals showed increased thickness of the dentinal wall, apical closure and periapical repair.

060 Salivary, pulp chamber and root canal microbiota and endotoxins in cases of endodontic failure

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Coronal microleakage can be considered one of the etiological agents of endodontic failure, providing a constant source of saliva contamination to the root canal. The aim of this work was to study: a) the salivary, pulp chamber and root canal microbiota composition; b) the levels of root canal lipopolysaccharide (LPS) from teeth with endodontic failure; c) the relationship between the microbiota at these three sites, endotoxins in root canal and clinical signs and symptoms. We selected 20 patients with apical periodontitis and need for endodontic retreatment. Samples were collected from saliva, pulp chamber and root canal. The DNA was extracted and subjected to checkerboard analysis. For LPS quantitation, LAL test was used. Bacteria and LPS were detected in 100% of the samples, with an average number of 35, 20 and 29 species for saliva, pulp chamber and root canal, respectively, and 14.84 EU/mL for root canal. There was no statistically significant association between specific bacteria at the 3 different sites ($p>0.05$). One significant positive- and 4 negative- associations were found between species from all sites and clinical signs/symptoms. Significant positive and negative associations were found between species from each site. There was also no significant association between the number of species and the LPS concentration. It was concluded that the root canals microbiota in endodontic failure is heterogeneous, with positive- and negative- associations between microorganisms and between them and the clinical signs/symptoms. (FAPESP 15/19215; CNPq 308162/2014-5; CAPES)

061 Monitoring the infectious contents of the root canals in the different phases of the endodontic retreatment

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The pro-inflammatory components present in root canals are activated by microbial, exotoxin and endotoxin content, with predisposing factors to the development of an endodontic post-treatment apical periodontitis. Aim The objectives of this study are: 1) To quantify endotoxin(LPS), exotoxins(LTA) and pro-inflammatory cytokines(PIC) by enzyme-linked immunosorbent assay; 2) To evaluate the effect of chemical-mechanical preparation(CMP) with 6% NaOCl or 2% chlorhexidine gel(CHX) and of the intracanal medication(ICM) on the cultivable bacteria (CFU/ml), LPS (EU/mL), LTA (pg/ml) and PIC (IL1-α and TNF-β) (pg/ml). Methods Microbiological samplings of 20 root canals of single-rooted teeth were taken before and after CMP and after ICM. Data were statistically analyzed. Results All initial samples had cultivable bacteria(101.2±79.2), LPS(1.73±2.64), LTA(574±94.7), IL1-β(1.25±0.36) and TNF-α(8.77±4.70). CMP reduced these levels to 99.4%, 67.1%, 24.8%, 89.33% and 89.85%, respectively ($p<0.5$). After ICM there was reduction of 99.5% in the bacterial levels, 20.2% in LPS levels and 38.6% in LTA. The levels of PIC increased after ICM (IL1-β: 0.72±0:22, and TNF-α: 3.26±4.09) when compared to the levels after CMP ($p<0.05$). Regarding the test substances, 2% CHX gel was more effective in reducing LPS and LTA levels than 6% NaOCl ($p<0.05$). Conclusions It is concluded that all endodontic phases reduced the bacterial levels, and CMP is effective in reducing the antigenic content with endodontic post-treatment apical periodontitis, whereas the ICM showed additive effect in reducing LPS and LTA levels. Support: FAPESP, CNPq 308162/2014-5, CAPES.

062 Antibiofilm and antifungal effects of nitrochalcone, and its toxicity on Galleria mellonella

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Introduction: Oral candidiasis is one of the most common opportunistic infections afflicting humans, with Candida albicans as the major causative agent of this disease. It has been well documented that systemic diseases -such as diabetes, AIDS- , treatment with broad-spectrum antibiotics, age, xerostomia, and use of dentures, may predispose the individual to develop candidiasis. Thus, the search for effective low toxicity alternatives to control these infections is necessary. Aim: To investigate the antifungal activity of nitrochalcone (NC-E8) against C. albicans ATCC MYA 2876 biofilm formation and structure, and further determine its toxicity in vivo using Galleria mellonella model. Material and methods: NC-E8 was synthesized and diluted in DMSO. The Minimum Inhibitory and Fungicide Concentrations (MIC/MFC) were determined. The effects of NC-E8 on Candida biofilms grown in the presence of artificial saliva were assessed by CFU quantification and visualized using Scanning Electron Microscopy (SEM). Results: NC-E8 showed excellent antifungal activity, with MIC of 54,3mM (15.6 µg/mL) and MFC of 217,58 mM (62.5 µg/mL) on C. albicans. NC-E8 reduced C. albicans biofilm formation by approximately 50% (10xMIC) as compared to 42% (10xMIC) by nystatin. These findings support the view that the inhibitory effects of NC-E8 on biofilm formation are comparable with drug nystatin. Finally, toxicity tests performed in G. mellonella revealed a very low toxicity profile of NC-E8 at antibiofilm concentrations. Conclusion: Nitrochalcone showed promising antibiofilm activity against C. albicans and low toxicity in vivo.

063 Antimicrobial activity of pentyl caffeate, a caffeic acid derivative, on clinically relevant pathogens

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Introduction: Studies have shown that the oral cavity shelters high proportions of various clinically important pathogens, particularly in immune deficient or hospitalized individuals. The main concern with drug resistance shows the need for active search for novel alternatives and compounds with antimicrobial potential. Aim: To evaluate the antifungal and antibacterial activity of pentyl caffeate (C5) – a derivative ester of caffeic acid – on different pathogens and further establish its cytotoxicity on human keratinocytes. Material and Methods: Pentyl caffeate was synthesized and diluted in DMSO. The compound was then tested for its Minimum Inhibitory and Bactericidal/Fungicidal Concentrations (MIC,MBC/MFC) against Candida spp., Staphylococcus aureus, methicillin-resistant S. aureus, Staphylococcus epidermidis, Streptococcus sanguinis, Pseudomonas aeruginosa and Escherichia coli. Cytotoxicity was assessed in keratinocytes cells (NOK) by the MTT assay. Results: Pentyl caffeate showed MIC and MFC values ranging from 3.9 to 31.25 µg/mL and 15.6 to 62.5 µg/mL, respectively, against Candida spp. Against the selected bacteria, pentyl caffeate showed MIC and MBC values ranging from 7.8 to 62.5 µg/mL and 15.6 to > 62.5 µg/mL, respectively. The compound did not show toxicity on NOK cells at effective antimicrobial concentrations. Conclusion: Pentyl caffeate, showed promising antifungal and antibacterial activity against different pathogens and low toxicity in vitro.

064 In vitro evaluation of mucoadhesive films for topical dental anesthesia

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Aim: The development of an effective topical anesthetic is still a challenge in dentistry. Pectin and chitosan are biocompatible polymers, abundant in nature with mucoadhesive properties. The use of mucoadhesive films can ensure close and sustained contact between the formulation and the mucosa surface and can improve anesthetic efficacy. The aim of this study was to evaluate the in vitro mucoadhesion and permeation ability of films based on chitosan and pectin, containing local anesthetics (LA) for future use in dental topical anesthesia. Methods: Films of chitosan and/or pectin containing or not lidocaine and prilocaine (both at 2.5%) were evaluated regarding in vitro mucoadhesive properties (detachment force and mucoadhesion work) in a texture analyzer. In vitro mucoadhesion time was monitored until complete detachment or dissolution of the films. In vitro permeation (flux and lag time) of LA was evaluated in Franz-type vertical diffusion cells. All experiments were performed using porcine fresh buccal mucosa (n = 5). Data was analyzed by ANOVA and Tukey-Kramer test. Results: The films based on pectin with or without LA had higher detachment force and longer mucoadhesion time when compared with films based on chitosan ($p<0.05$). The lidocaine flux was higher in the chitosan film than the pectin film ($p<0.05$). However, prilocaine flux was similar among all films. The lag time of lidocaine and prilocaine was similar among all films ($p>0.05$). Conclusions: The pectin films with LA presented improved in vitro mucoadhesive characteristics and ability to cross the oral mucosa. Therefore, this film is a strong candidate for future in vivo studies to evaluate its efficacy in dental topical anesthesia.

065 Comparison of flexural strength between acrylic resin and bis-acrylic resin

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Aim: The aim of this study is to compare the flexural strength between acrylic resin and bis-acrylic resin. Methods: 45 specimens were made (25 x 2 x 2 mm), 15 for each restorer material (02 marks for bis-acrylic resin and 01 for acrylic resin). The specimens were immersed in deionized water and remained in an incubator at a temperature of 37 degrees Celsius for 72 hours before undergoing the flexural strength test. The mechanical flexural strength test was done on a machine of universal testing (EMIC DI 2000, INSTRON/EMIC) with a speed of 0,75 mm/min and the resistance at the moment of the fracture of the specimen recorded and tabulated. Results: To obtain the results the data was statistically analyzed using the ANOVA test to detect differences between groups. The bis-acrylic resins presented the highest flexural strength compared with acrylic resin. Conclusions: In conclusion, the bis-acrylic resin Protemp showed more flexural strength compared with other resins, followed by bis-acrylic Systemp resin and acrylic Refine Bright, respectively.

066 Inhibition of SP and CGRP on hypernociceptive rats using intra-articular injections of Botulinum toxin type A

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Botulinum toxin type A (BoNT-A) is a potent neurotoxin produced by the Clostridium botulinum, with the capacity of inhibiting acetylcholine release from cholinergic nerve terminals. On the other hand, an antinociceptive effect have been reported in clinical studies, suggesting an action of BoNT-A on neurotransmitters involved in pain and inflammation processes. AIM: This study investigated the peripheral effect of BoNT-A on the release of Substance P (SP), Calcitonin gene related peptide (CGRP) and Glutamate (Glu). METHODS: Wistar rats were induced to persistent hypernociception in the left Temporomandibular joint, and then were treated with an intra-articular injection of BoNT-A (7U/kg). Saline was used as control. Animals were sacrificed and periarticular tissue was collected to perform ELISA test for SP, CGRP and Glu. Statistical analyses were applied. RESULTS: Intra-articular injections of BoNT-A significantly reduced the peripheral release of SP and CGRP. On the other hand, BoNT-A applications did not affect Glu release in the periarticular tissue. CONCLUSIONS: These results demonstrated that BoNT-A has an antinociceptive effect independent from the neuromuscular one and, it is mediated by the inhibition of peripheral release of SP and CGRP.

067 Assesment of physical properties of bovine teeth bleached with agents doped with calcium phosphates

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Aim. To assess the physical properties of bovine teeth bleached with bleaching agents doped with calcium phosphates. Forty bovine teeth were evaluated in four groups (n = 10): Control-hydrogen peroxide (35% Whitening HP, FGM); HAP-10% of hydroxyapatite; ACP-10% of Amorphous Calcium Phosphate; MCPM-ßTCP-5% monocalcium phosphate, and 5% ßtricalcium phosphate. It was evaluated the microhardness KNOOP, superficial roughness and a color alteration (DE). After 24 hr and 7 days of storage under artificial saliva. Results. No Color alteration between the bleached teeth was found. However, the percentage of reduction of the microhardness KNOOP of the bleached teeth was lower for the groups with calcium phosphates, it was an increase of the roughness of the groups treated with the experimental material. The same groups had less enamel permeability after the bleaching treatment. Conclusion. Bleaching agents doped with calcium not inferred phosphates in color and roughness of enamel after bleaching, but allowed smaller reduction caused by bleaching.

068 Assessment of the dentin bonding potential of a new two-step rinse-and-etch adhesive

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Aim: The aim of the project was to assess the dentin bonding potential of a new commercial two-step rinse-and-etch adhesive. Methods: Fifty teeth (n=10) were used to assess the microtensile bond strength (μTBS), the groups were divided for each adhesive: Clearfill SE Bond, Ambar, Magic Bond, Single bond 2 and Ybond Mono. One central stick per tooth was used to assess the nanoinfiltration using a silver nitrate ammoniac technique observed with a backscattered mode Scanning Electronic Microscope. The degree of conversion (DC) was assessed with and Fourier Transformed Infrared Spectrometer with an Attenuated Total Reflectance crystal. Results: The DC were similar between the groups. However, the μTBS showed a similar behavior for groups Clearfill SE, Magic Bond and Ybond mono, but different from Ambar and Singlebond, the latter was similar with Magic Bond. The nanoinfiltration assessment showed a higher immediate infiltration of Singlebond and Magic Bond group. Conclusion: The new adhesive has similar properties than the actual adhesives than are available, and obtain a lower immediate infiltration within the hybrid layer.

069 Bovine vs Human Dentin: Proteolytic Activity and Collagen Degradation

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Introduction: Bovine teeth have been often used as a substitute for human teeth in studies about enamel and dentin adhesion. However, it has not yet been described if the degradation of collagen of both substrates occurs at the same intensity and speed. Aim: This study compared the total activity of matrix metalloproteinases (MMPs) and loss of dry mass of dentin matrix from bovine and human teeth. Methods: Coronal dentin specimens (1.0x0.5x4.0 mm) were obtained from bovine (n=30) and human teeth (n=30). All specimens were completely demineralized in phosphoric acid, dehydrated and weighed to obtain the initial dry mass. After rehydration, the total activity of MMPs was assessed using Sensolyte. The specimens were then stored in saliva-like solution and both analyzes, dry mass and MMPs activity, were repeated after 7, 14 and 21 days. MMP activity was transformed into rhMMP-9 and expressed as μg/mg of dentin. The data were submitted to Kruskal-Wallis and Mann-Whitney tests ($p<0.05$). Results: Dry mass loss increased over time for both substrates. However, higher values were seen for human dentin. The initial activity of MMPs was not statistically different for both substrates and there was a significant reduction over time. Within the same period of aging, there was a statistically higher MMPs activity for bovine dentin. After storage for 21 days, human dentin lost statistically more mass than bovine dentine. Conclusion: The proteolytic activity of human dentin occurred with greater speed than that of bovine dentin, resulting in increased degradation of collagen for human dentine when considering the same aging period.

070 In vitro mucoadhesiveevaluation of thermosensitivegels for buccal release of ibuprofen

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Aim: Ibuprofen (IBU) is anon-steroidal anti-inflammatory agent. Its topical use can increase availability in the site of action andavoid adverse effects of systemic use.Poloxamer407 (PL407), a thermosensitivegel,has attracted interest as a drug delivery system, however it has a poor mucoadhesiveness. Inthis context, the objective of the present study was to evaluate the influence of different polymersin the mechanical andmucoadhesion properties of poloxamergels containingIBU aiming at topical application on the oral mucosa. • Methods: The 0.02% IBUgels were composed of 20% PL407 alone or mixed with 0.15%xanthan gum (XG) or with 1% Carbopol (C). Mechanical (hardness, compressibility, elasticity and adhesiveness) and mucoadhesive (detachment force and mucoadhesion work) properties were evaluated in a texture analyzer (n=5). Mucoadhesive properties were evaluated in fresh porcine buccal mucosa. Data was analyzed by ANOVA andTukey-Kramer Test. • Results: PL407 and PL407+XG presented lower values of hardness and compressibility ($p<0.05$), but the formulations were not different in the parameterselasticity and adhesiveness ($p>0.05$).In relation to mucoadhesion, the formulations were not different considering detachment force ($p>0.05$), but PL407+XG and PL407+C presented higher mucoadhesion work when compared with PL407 ($p<0.05$). • Conclusions:The addition of xanthan gum was able to improve mechanical properties and mucoadhesion of poloxamer.PL407+XG formulation is a good candidate for futurestudies focusingon transbuccal delivery of ibuprofen for the treatment of inflammatory conditions that affects oral cavity.

071 Corrosive behavior of Ti-15Zr, cpTi and Ti-6Al-4V alloys under different electrolytes

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Aim: The aim of this study was to investigate the corrosive potential on Ti-15Zr, cpTi and Ti-6Al-4V alloy and cpTi with machined surface or conditioned with double acid-etched, in simulator body fluid or artificial saliva. Methods: For corrosion behavior were obtained 36 discs of (Ti-15Zr, cpTi and 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 electrolytes (SBF and saliva). The corrosion current density (Icorr) and passivation (Ipass), corrosion potential (Ecorr), capacitance (Cdl) and polarization resistance (Rp) of the Ti oxide layer were determined. Quantitative data were submitted to ANOVA and Tukey post-test ($p<0.05$). Results: The electrochemical patterns Icorr, Ipass, Cdl and Rp showed a higher corrosion resistance of the alloy Ti-15Zr test when compared to conventional alloys (Ti-6Al-4V and cpTi) ($P<0.05$). In representation of the electrochemical data and corrosion kinetics, the Ti-15Zr alloy both saliva function as SBF showed acceleration in the passivating oxide film formed on the surface of the disc, such as lower total impedance (values close to -80 °). The surface topography for conventional alloys, acid texturing of the surfaces decreased the corrosion resistance, while the Ti-15Zr alloys in electrochemical patterns were similar regardless of the topography. Conclusion: In conclusion, the Ti-15Zr improved the electrochemical behavior of the Ti on the basis of artificial saliva and SBF and should be considered for medical and dental applications.

072 Cytocompatibility and bioactivity of bioglass incorporated on zirconia surface to fibroblastic cells

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Aim: The aim of this study was to evaluate the cytocompatibility and bioactivity of zirconia discs modified with Biosilicate® bioglass (BS) on L929 fibroblast cell line. Methods: BS solutions in distilled water/isopropyl alcohol were applied onto zirconia discs (20 uL) followed by thermal treatment at 1100°C. The following experimental groups were stablished: polystyrene (negative control - G1), zirconia (positive control - G2), zirconia plus 1 mg/mL BS (G3), zirconia plus 3 mg/ml BS (G4), zirconia plus 6 mg/mL BS (G5). The discs were adapted to metallic devices and placed on 24 well plates. Then, the L929 cells were seeded onto the discs (30,000 cells) and this set was incubated in culture medium at 37° C and 5% CO2 throughout the experiment. Cell viability was assessed by Alamar Blue assay after 1, 3 and 5 days of in vitro cultivation. Numerical data were submitted to ANOVA and Tukey's test ($p<0.05$; $n = 6$). Results: All tested BS concentrations were citocompatible with the cells, since no significant reduction on cell viability related to negative control (G1) was observed. However, significant increase on cell viability was observed for G5 (6 mg/mL BS) related with G1 and G2 at 3 days (90,0% and 117,7%, respectively) and 5 days (174,9% and 210,5%, respectively), demonstrating an increased proliferation capability of L929 cells for this experimental group. Conclusion: The incorporation of 6 mg/mL of Biosilicate® bioglass on zirconia surface is capable to increase the proliferation of L929 cells in vitro.

073 Effect of glass ionomer cement on gene expression of S. mutans in different exposure times

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The aim of this study was to evaluate the effect of glass ionomer cement (GIC) in the expression of genes gtfC, gtfD, covR and vicR of Streptococcus mutans (S. mutans) at different exposure times. Discs (10x2mm) of GIC-KetacTM Molar Easymix (3M ESPE) and ceramic-IPS Empress Esthetic (Ivoclar Vivadent) was made. The GIC disks were fabricated in a laminar flow hood under aseptic conditions according to the manufacturer's instructions. Then stored, for 24 hours, in an environment with 100% RH at 37 °C. The GIC and ceramic discs were left under UV light for 15 minutes and put into wells of a culture plate, immersed in 1ml BHI + 1% sucrose with inoculum of S. mutans. The biofilm growth occurred for 2h, 4h and 24h. After each time, the biofilm was collected and pellets were obtained (n = 5) and stored at -80 °C. For RNA purification was used the RNeasy Mini Kit (Qiagen) protocol and subsequently the purified RNA was converted to cDNA with iScript cDNA Synthesis kit (BioRad). The analysis of gene expression were performed using Step One Real-Time qPCR with specific primers for each gene. Expression analyzes were normalized by the 16S gene. Data were analyzed by t Test (α=0.05). There was no significant difference in gene expression valued at 2h and 4h. There was a significant reduction in the expression of genes gtfC, vicR and covR in 24h for the GIC when compared to ceramics. The glass ionomer cement altered the expression of genes gtfC, vicR and covR after contact for 24h.

074 Effect of implant length stress distribution in overdenture retained by implants - finite element and photoelasticity

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Aim:This study evaluated the effect of different implant lengths (9, 11, 13 and 15 mm) in tensions near the implants and jaw area of the body when the prosthesis type overdenture supported by two implants was submitted to a unilateral load of 170N. Methods:Four photoelastic models contemplating a jaw denture lower overdenture retained by two implants with different lengths and clip-bar system has been made. The tensions near the implants when the device was subjected to a unilateral load were analyzed with the aid of equipment for a photoelastic stress analysis equipped with software for the qualitative and quantitative evaluation of stress. For the finite element analysis, three-dimensional models of a jaw denture lower overdenture type retained by two implants and bar-clip system were made and exported to mechanical simulation software Ansys. In the same way, the load was applied unilaterally and with an intensity of 170 N and all the 3-D model structures were evaluated for stress distribution. The finite element analysis evaluated the maximum principal Stress and von Mises in MPa. Results:Using the photoelastic analysis demonstrated a significant increase in stress concentration in the peri-implant area mainly affected by the side load is applied to the finite element analysis showed similar results. Conclusion: The photoelastic analysis showed that implants with smaller lengths had an average stress greater than the largest implant lengths. The values presented by the finite element analysis showed that the increased stress in the peri-implant region in proportion to the increase of the implant size.

075 Effect of non thermal plasma treatment on different properties of a removable prosthesis reline resin submitted to aging

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Aim: Reline resins have characteristics such as softness and viscoelasticity. However, some properties can be lost and/or extrinsic elements may be incorporated in the resin structure. Therefore, it is ideal to protect the surface of these materials. The aim of this study was to evaluate the effect of non thermal plasma treatment on the sorption, solubility, Shore A hardness, surface energy (SE) and surface characteristics (through scanning electron microscopy and energy dispersive spectroscopy) of a soft reline material (Coe-Soft™) submitted to aging for up to 180 days in artificial saliva. Methods: Forty four samples were prepared and divided into 2 groups: reliner without plasma (Control, G1) and reliner with plasma (G2). Analyses were performed before and after aging in oven with immersion in artificial saliva for 30, 90 and 180 days. Quantitative data were submitted to two-way repeated-measures analysis of variance (ANOVA) and Tukey test (P<0.05). Qualitative data were compared visually. Results: The group without plasma showed lower Shore A hardness values only in the initial period. The SE increased with aging up to 90 days, for both groups. Higher percentages of sorption values were found in the group with plasma at 90 and 180 days. Higher solubility values were found in the group without plasma at all periods. Conclusions: The plasma treatment is a viable option for the protection of the material studied, since the deposited film remained applied to the surface of the reliner after aging.

076 Effect of ph cycling on the mechanical properties of dentin restored with glass ionomer cements

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Aim: The aim of this study was to evaluate the effect of erosive pH cycling with solutions that simulate dental erosion in the Martens hardness and elastic modulus of dentin restored with fluoride-releasing restorative materials. Methods: Twenty seven bovine dentine slabs (6,0 mm x 6,0 mm) were restored with 3 restorative materials: Adper Single Bond 2 total-etch adhesive system + Filtek Z250 composite resin; Riva Self Cure conventional glass ionomer cement and Riva Light Cure light-cured glass ionomer cement. The values of Martens hardness and elastic modulus were evaluated in digital ultramicrohardner tester before and after immersion in deionized water, citric acid and hydrochloric acid. Results: After cycling, the Martens hardness of dentin decreased for all materials. For the dentin restored with Adper Single Bond 2, the lowest values were found near the adhesive interface (10 um). For dentin restored with Riva Self Cure and Riva Light Cure only in the initial measurements (before erosive cycling), the distance of 10 um showed lower values compared with the other distances. For the dentin restored with Adper Single Bond 2, no significant difference in the elastic modulus values was found when distances were analyzed. The dentin restored with glass ionomer cements (Riva Self Cure and Riva Light Cure) showed a decrease in the elastic modulus values from the bonding interface, but after 30 um, this difference was no longer significant. Conclusion: The fluoride present in the materials interfered without completely prevent dentin demineralization adjacent to restorations.

077 Effectiveness of sandblasting, plasma application and their combination on the bond strength of resin cement to zirconia

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The aim of this study was to evaluate the effect of aluminum oxide sandblasting (AOS), argon plasma treatment (APT) and their combination on bond strength of a resin cement (Panavia V5, Kuraray) to two zirconia ceramics (Lava, 3M ESPE and Katana, Noritake). Materials and Methods: Sixty Lava zirconia and 60 Katana zirconia plates (dimensions: 13mm long, 5mm wide, 1mm thick) were prepared and randomly divided into 8 groups (n=15). The surfaces of the plates were treated according to the groups and cylinder molds were used to prepare the specimens, which were resin cement cylinders (1.5mm diameter and 1.0mm high) fixed on zirconia surfaces. The shear bond test was performed in a testing machine (EZ-Test, Shimadzu) and bond strength values are recorded in MPa. Data were analyzed by three-way ANOVA and Tukey's tet (5%). Results: No significant difference in bond strength was observed between zirconias. When APT was not used, the results showed that AOS yielded higher bond strength. Only the APT application and the combination between APT and AOS did not increase the bond strength. Conclusion: In conclusion, AOS was the best method to prepare zirconia for bonding.

078 Toothbrush abrasion resistance of the experimental resin composite containing antimicrobial monomer

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Aim: to evaluate the influence of the toothbrush abrasion on surface roughness (Ra) and hardness (KHN) of a triclosan methacrylate monomer (TM) added to experimental composite resin. Methodology: TM was synthesized by esterification and after characterized by FTIR, it was added to an experimental composite. Specimens were divided in two groups according to accomplished TM presence, C1 (control) and C2 (C1+14,4% TM). 10 discs of each material were stored at 37°C/24 h and 100% humidity, polished and initially analyzed of Ra and KHN were taken. Next, they were fixed to the toothbrushing device and abrasion was carried out by the toothbrushes, using dentifrice slurry, performed at 250 cycles/ min with a 200g load. The specimens were washed, dried and were reevaluated for Ra and KHN. Data were submitted to analysis of variance with 2 factors with repeated measures and Tukey test (5 %). Results: Analysis of variance showed the difference between the specimes was significant (p<0.001). When analyzing each material initially, we observe that C1 (0.1967) and C2 (0.1931) showed similar values of Ra. However, after toothbrush C2 showed higher values. Abrasion promoted increase of Ra to C1 and C2 . When comparing the materials, similar values to KHN were showed for C1 and C2 before and after abrasion . However, abrasion promoted increased KHN for both materials. Conclusion: The incorporation of methacrylate triclosan in resin composite influenced negatively on the surface roughness, however, the hardness of the material was increased after toothbrush abrasion.

079 Influence of acid concentration, thermomechanical and adhesive on bond strength to ceramic

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Aim: The objective of this study was to evaluate the effect of surface treatments with 5% and 10% hydrofluoric acid (HFA), adhesive and thermomechanical test on the microtensile bond strength (μTBS) of ceramic IPS Empress Esthetic/resin cement/composite. Methods: Forty ceramic blocks (Ivoclar) measuring 8 mm □ 8 mm □ 3 mm thickness, were made and divided into 8 groups (n=5): Groups 1, 2, 5 and 6 - acid etching with 5% HFA for 60 s; Groups 3, 4, 7 and 8 – acid etching with 10% HFA for 60 s. After, all blocks were treated with a silane coupling agent. A thin layer of adhesive was applied in groups 1, 4, 5 and 8. Ceramic blocks were bonded to a block of composite Filtek Z250 (3M ESPE) with RelyX U200 (3M ESPE). All specimens were stored in distilled water at 37oC for 24 hours, and specimens of the groups 5 to 8 were submitted to a thermomechanical test of 250,000 cycles at 2 Hz and 80N. Specimens were sectioned to the bonding area to obtain sticks with a cross-sectional area of 1mm2 and submitted to a μTBS at a crosshead speed of 1.0mm/min. Data were submitted to three-way ANOVA and Tukey's post-hoc test (α=0.05). Results: The μTBS (MPa; mean±standard deviation) showed that etching with 10% HFA (26.2±1.2) was significantly higher than 5% HFA (24.3±2.3). The use of silane + adhesive (27.6±1.7) was significantly higher to the use only of silane (23.1±1.8). The groups without thermomechanical test (27.4±1.5) were significantly higher than the groups submitted to thermomechanical test (23.1±2.1). Conclusions: The HFA concentration, adhesive and thermomechanical test influenced significantly on the bond strength.

080 Influence of doxycycline in the interface dentin-composite tested by microtensile bond strength test

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Aim: The aim of this in vitro study was to investigate the effect of hydrochloride doxycycline (dox) in the concentrations of 3% and 10% applied in the interface dentin/composite tested by microtensile bond strength test (μTBS) after 24 hours (24h) and 6 months storage (6m). Methods: Sixty molars were sectioned to expose middle dentin and randomly distributed into 6 groups (n=10 per group): G1 and G4 - Control group (C, without dox); G2 and G5 - dox 3%; G3 and G6 - dox 10%. G1, G2, G3 were stored for 24h and G4, G5, G6 for 6m. Dox was applied for 5 minutes on dentin surface prior adhesive procedure (Scotchbond Multipurpose, 3M ESPE) followed by composite restoration (Z250) in incremental technique and light cured for 20s each layer (Valo, Ultradent). Samples were sectioned (Isomet 100) in beam shape of ±1mm^2 adhesive area and tested by μTBS in EZ-Test machine (Shimadzu) at 0.5mm/min until fracture occurred. Failure mode was classified with a stereoscope and extra samples were observed in a scanning electron microscopy (LEO 435 VP). Data was submitted to ANOVA and Tukey´s test (α=0.05). Results: Dox 10% (46.7±0.8 MPa) pointed μTBS values statistically higher than C (38.3±1.6 MPa), no statistical difference were observed between dox 10% (46.7±0.8 MPa) and dox 3% (42,4±0,7 MPa) or between dox 3% and C (p>0.05). 24h (44.5±2.6 MPa) presented μTBS values statistically higher than 6m (40.5±3.3MPa) for all groups. Conclusion: In conclusion, dox 10% presented μTBS values higher than C and with no statistical difference compared to dox 3%. 6m storage significantly reduced μTBS values. There was a predominance of mixed type of failure in all groups.

081 Influence of electric current in the diffusion of adhesive systems on different subtrates

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Aim: The aim of this study was to evaluate the influence of electric current in the diffusion of adhesive systems in different substrates by contact angle test and infiltration and formation of the hybrid layer. Methods: The Adper Single Bond 2 (3M ESPE - Single Bond), Clearfil SE Bond (Kuraray Noritake - CF) e Single Bond Universal Adhesive (3M ESPE - Universal) adhesive systems were used. For the contact angle test, glass and enamel and dentin of 60 human teeth substrates were used in two conditions of application of adhesive systems (conventional and under electric current – 35mA) in a goniometer (n=10). For analysis of the penetration in dentin and formation of the hybrid layer, the chemical markers Fluorescein and Rhodamine B were incorporated in the adhesives and the teeth were restored with composite Filtek Z250 XT (3M ESPE) and photoactived with Bluephase G2 (Ivoclar Vivadent, Amherst, NY, USA) with irradiance of 1200 mW/cm2. The tooth-restoration group was evaluated in scanning electronic microscopy and laser scanning confocal microscopy. The data were evaluated by ANOVA three factors and Tukey's test at 5% significance level. Results: The contact angle results showed no statistically significant difference when the electric current was applied or not. Clearfil, regardless of the application only the Primer or Primer + adhesive, had the lowest values. Dentin has the lowest contact angles for Single Bond, Primer CF and Universal, while the Primer CF + Adhesive no difference between substrates with application of electric current. In conventional application, Single Bond and Universal have the lowest values, while the Primer and Primer CF CF + Adhesive were no differences between the substrates. Confocal microscopy imaging laser scanning and scanning electron microscopy show better formation of the hybrid layer when the adhesive systems were applied with electric current. Conclusion: The electric current did not promote different contact angles on different substrates and promoted different configurations of hybrid layer.

082 Impact of head and neck radiotherapy on mechanical properties of composite resin and adhesive systems: systematic review

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Aim. To study scientific evidence regarding the impact of head and neck radiotherapy on mechanical properties of composite resins and adhesive systems. Methods Electronic searches were conducted in May 2016 in PubMed, Embase, Scopus and ISI Web of Science databases, using "radiotherapy", "composite resins" and "adhesive systems" as keywords. Articles published in English language were included if maximum radiation dose between 50-80 Gy was applied. In addition, they had to evaluate mechanical properties of composite resins and adhesive systems before or/and after radiotherapy, independently if it was applied in in vitro or in vivo conditions. Results. In total, 124 articles were found but only 15 meet all the inclusion criteria. Radiotherapy did not affect mechanical properties such as microhardness, diametral tensile strength; wear resistance and flexural strength from composite resins. In addition, ionizing radiation did not affect bond strength (BS) of different adhesive systems when restoration was done before radiotherapy. However, some studies showed that BS diminished if restoration was performed after radiotherapy. Results from studies that applied in vivo radiotherapy are controversial among them and with those that used simulated radiotherapy. Conclusions. Mechanical properties of composite resins and adhesive systems were not affected when simulated radiotherapy was applied after restorative procedure. Conversely, BS of adhesive systems decreased when simulated radiotherapy was applied before restoration. In addition, studies that applied in vivo radiotherapy are very scare and showed controversial results.

083 Antimicrobial activity of plant essential oils against Streptococcus spp

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Primary colonizers (Pc) adhere to tooth surfaces and allow attachment to other bacteria 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, Lemon Grass, Cascia, Oregano, Eucalyptus, and Cinnamon 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, Oregano, Cassia, Lemon Grass and Cinnamon showed MIC equal to equal to 0.18 mg/mL, 0.36 mg/mL, 0.41 mg/mL, 0.7 mg/mL and 1.6 mg/ml respectively, inhibiting all species equally. Cardamom and Eucalyptus EOs showed no inhibitory effect. MBC showed that Cinnamon OE has a bacteriostatic effect, while the others with activity have bactericidal effects. CONCLUSIONS: Some EOs have bactericidal activity even at low concentrations and thus might be considered as a potential bacterial growth inhibitor for Pc. SAE/UNICAMP.

084 Antimicrobial effect in vitro of Melaleuca alternifolia

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Aim: the aim of this study was to evaluate the essential oil of Melaleuca alternifolia antibacterial activity in search of the minimum inhibitory concentration (MIC). Material and Methods: The microorganisms were tested for antimicrobial susceptibility using the essential oil of Melaleuca alternifolia by the microdilution broth method (CSLI) against Staphylococcus aureus, methicillin-resistant, Staphylococcus aureus, Escherichia coli, Staphylococcus epidermidis and Pseudomonas aeruginosa. Growth inhibition was found for S. aureus (4 mg/ml), S. aureus MRSA (2 mg/mL), S. epidermidis (4 mg/ml) and Escherichia coli (2 mg/ml). Conclusion: The essential oil of Melaleuca alternifolia show to be effective against the microorganisms tested but Pseudomonas aeruginosa. More effectiveness can be detected against S. aureus MRSA and E. coli.

085 Antimicrobial activity of essential oils from Eucalyptus spp

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Introduction: The application of herbal medicine in dentistry has grown in recent years, in order to obtain products with greater therapeutic activity and lower toxicity. Aim: Evaluate the antimicrobial activity of essential oil from Eucalyptus spp. (E. citriodora and E. globulus) against strains of bacteria and Candida spp. Methods: The minimum inhibitory concentration (MIC) of essential oils were determined by antimicrobial susceptibility using of broth microdilution in standard strains of S. aureus (ATCC 25923), S. epidermidis (ATCC 12228), P. aeruginosa (ATCC 27853), E. coli (ATCC43895), methicillin-resistant S. aureus (MRSA), C. albicans (ATCC MYA 2873, CBS 562, ATCC 90028), C. rugosa (IZ 12), C. guilliermondii (CBS 566) and C. krusei (CBS 573). Results: The essential oil of E. citriodora showed MIC of 0.5 mg/ml for S. aureus, MRSA, E. coli, C. albicans (2873, 562, 90028), C. guilliermondii and C. krusei; 0.25 mg/ml for C. rugosa and 0.125 mg/ml against P. aeruginosa and S. epidermidis. The E. globulus oil showed an MIC of 4 mg/ml C. albicans (2873, 562, 90028), C. guilliermondii and C. rugosa and 1 mg/ml for C. krusei; 8 mg/ml in MRSA and S. epidermidis; 16 mg/ml for S. aureus and E. coli and 64 mg/ml for P. aeruginosa. Conclusion: The essential oils of Eucalyptus spp. are biologically active against the species tested, showing inhibition at different concentrations, being the essential oil of E. citriodora more effective when compared with E. globulus.

086 Antimicrobial activity of essential oils of Citrus spp. on Candida albicans biofilm

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Introduction: Numerous researches have been developed in the expectation of obtaining new antifungal products with greater effectiveness and less toxicity. Thus, research on biologically active natural products as essential oils is becoming an option. Aim: The goal of this study was to evaluate the antimicrobial effects of the Citrus spp essential oils on the biofilm in formation and mature biofilm of Candida albicans (ATCC MYA 2876). Methods: Early and mature C. albicans biofilms were teste in 96-well plates, incubated for 24 h at 37°C with the concentrations of tested oils and stained with XTT [2,3-bis(2-metoxi-4-nitro-5-sulfo-fenil)-2H-tetrazolium-5-carboxanilida] and were measured in spectrophotometer to determinate the disrupt biofilm concentration. Results: The oils of C. reticulata, C. nobilis, C. aurantifolia and C. limon in the concentration of 16mg/mL disrupted the mature biofilm compared to control group in 50%, 82%, 77% and 69%, respectively. At the same concentration, the oils showed activity and a significant decrease of the in biofilm formation progress compared to the control in 86%, 92%, 92% and 89%, respectively. Conclusions: The essential oils C. reticulata, C. nobilis, C. aurantifolia and C. limon had promising anti-biofilm activity against Candida albicans.

087 Biofilm formation capacity of an acrylic denture base resin after immersion in disinfectant liquid soaps

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Objective: The aim of this study was to evaluate the biofilm formation capacity of an acrylic denture base resin after complete immersion in disinfectant liquid soaps during different periods of time. Methods: 48 circular acrylic denture base resin specimens were made and divided into groups according to the type of disinfectant soap solution: Distilled water, Dettol, Protex and Lifebuoy. Specimens were maintained on soap solutions 8 hours per day and 16 hours in distilled water simulating prosthesis night disinfection. A 24 hours C. albicans (ATCC 90028) biofilm was formed on discs after immersion periods 0, 7, 14, 21 and 28 days. Colony forming units test (UFC) and Alamar Blue® assay were performed to evaluate biofilm formation. The results were submitted to ANOVA test and 5% significance level was selected. Results: MIC concentrations of Dettol, Protex and Lifebuoy disinfectant soaps 3.12%, 0.39% and 1.56% respectively, indicated that soap type had a statistically significant effect on C. albicans biofilm formation after 24 hours, independent of storage time. Conclusions: Disinfectant liquid soaps were not able to inhibit C. albicans biofilm growth.

088 Calcium induces Porphyromonas gingivalis biofilm formation

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Background: chronic periodontitis is multifatorial disease that associated with loss of the supporting tissues caused by microorganisms such as Porphyromonas gingivalis growing in biofilme. AIM: to evaluate substances including proteins, amino acids, metallic elements and vitamins that may induce or affect the biofilm formation in P. gingivalis. METHODS: Biofilms and planktonic bacteria were grown with and without additives under anaerobic atmosphere at 37 ºC for 24 hours. Total biomass was quantified by colorimetric assay and the biofilm 3D structure was characterized using Confocal Laser Scanning Microscopy. The Arsenazo assay was used to quantify free Ca++ in cultures. RESULTS: among the tested substances, only CaCl2 at > 0.8 mg/cm2 increased biofilm ($p<0.001$ Kruskal Wallis) .The bacterial attachment was lost when a Ca++ chelator was added in the culture medium. In all conditions, culture medium had no calcium depletion and its addition did not affect the planktonic growth. CONCLUSIONS: Calcium induces biofilm formation in P. gingivalis without affect the planktonic growing and it may be related with the initial stages of the biofilm development.

089 Development of a low-cost SYBR Green buffer system for qPCR

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Aim: Develop a low-cost reaction mixture for Quantitative PCR (qPCR) with specificity, efficiency, and sensitivity equivalent to the imported commercial kits. Methods: Mixtures were assembled with varied concentrations of SYBR® Green, MgCl2 and Platinum Taq DNA Polymerase Brazil (core reagents). The additives bovine seric albumin, dimethyl sulfoxide, formamide, polyethylene glycol 400, polyoxyethylene-octyl-phenyl-ether, trehalose and polysorbate-20 were added alone or combined and evaluated as reactions enhancers. During the developing process, reactions were conducted with Porphyromonas gingivalis genomic DNA (300 to 0.0003 ng) and specie-specific primers. To ensure the applicability, the blends with the best performances were assayed against a range of DNA from other species and its corresponding primers. CT (Cycle threshold) values and melting curves were used to compare mixtures to the commercial Power SYBR Green qPCR Master Mix Kit©. Results: One mixture assembled with enhancers reached efficiencies from 94% to 100% of the commercial product, at equivalent specificity and sensitivity, regardless of DNA origin. Conclusions: The current price of a qPCR reaction can be lowered at 10% by using this mixture. The developed blend will be submitted for patenting.

090 Effect of antifungal activity of microparticles Ag3PO4 against Candida albicans

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Aim: To synthesize Ag3PO4 microparticles and evaluate their potential antibacterial effect against planktonic cells of Candida albicans. Method: Ag3PO4 powders were synthesized by the coprecipitation method and processed in a microwave-assisted hydrothermal (MAH) system at 150 °C. Samples were characterized using a Supra 35-VP field-emission scanning electron microscopy instrument (FE-SEM) (Carl Zeiss, Germany) operated at 15 kV. The minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC) to planktonic cells of Candida albicans (ATCC 90028) were evaluate by broth microdilution assay. Microorganisms were incubated in 96-well microtiter plate (24 h at 35 °C) exposed to serial 2-fold dilution of the solutions (from 1,000 µg/mL to 1.95 µg/mL). MIC was the lowest concentration of the solution that completely inhibited the visible growth of Candida albicans. For MFC, aliquots from each well were inoculated on Sabouraud Dextrose Agar and, after incubation (48 h at 37 °C), the MFC value was determined as the lowest concentration in which there was no cell growth. Results: FE-SEM images revealed a high concentration of irregular spherical-like microparticles. The results from the microbiological tests performed with C. albicans revealed that the MIC values were the same as the MFC (3.91 µg/mL). The incubation of the fungal in the presence of one-half the MIC of the microcrystals produced a reduction in growth (Log10), relative to the control. Conclusion: This study reveled the potential antifungal effect of Ag3PO4 against planktonic cells of Candida albicans.

091 Effectiveness of disinfection of anesthetics tubes in oral surgery – an in vitro study

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CONTEXT: Anesthetic tubes are always on the surgical table, for this reason is necessary to perform its disinfection, generally by chemicals. AIM: The aim of the present study was to analyze the effectiveness of tubes decontamination made by disinfectant substances routinely used in a clinical setting and to identify the microorganisms found on their surface. MATERIALS AND METHODS: 14 anesthetic tubes were collected from dental clinic, divided into 5 groups, which were transported to the Microbiology laboratory. 01 plastic and 01 glass tubes that were not submitted to any disinfection process composed the control group and they had been sown in Agar Blood by rolling method. Experimental groups underwent to immersion and fixation with the proposed chemicals (Chlorhexidine 2%, Polivinilpirulidona 10% and ethyl alcohol 70%) for 1 minute, laminar flow hood was used to seed it in Agar Blood and then it was transferred to incubator for 24 hours at 37°C. Gram staining and biochemical tests were used to identify the main Gram positive pathogenic genera. Gram-negative pathogenic colonies isolated were seeded in biochemical means of identification. RESULTS: It was possible to identify the presence of Staphylococcus coagulase negative, Staphylococcus aureus, Streptococcus viridans, Staphylococcus saprophyticus, Escherichia coli and Acinetobacter spp, as well as the effectiveness of chemical solutions proposed in this study. CONCLUSION: All chemical solutions proposed in this study were effective for the surface disinfection process of anesthetic cartridges, both by the fixation and immersion method.

092 Essential oils of Mentha spp. and their effects against Candida yeast growth and biofilm formation

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Introduction: Plants of genus Mentha spp. is worldwide distributed, and knowing because their medicinal properties. Recent studies have demonstrated that EOs from species of Mentha reveal antimicrobial properties, especially against yeasts from genus Candida. Aim: The aim of this study was to evaluate the antifungal activity in planktonic cells, biofilm formation of Candida spp. and cytotoxic activity in presence of essential oils from Mentha spp. Material and Methods: The essential oils of M. aquatica, M. arvensis, and M. piperita were extracted by hydrodistillation and analyzed of gas chromatography. The oils were tested against Candida spp. for obtainment of minimal inhibitory concentration (MIC). The biofilm in formation and mature biofilm were expose at the oils (24h) and measured by spectrophotometer of microplates after insertion of XTT. The cytotoxic activity was determined by the antiproliferative activity test of HaCat cells and analyzed by IC 50%. Results: The Mentha spp. oils showed growth inhibition in planktonic cells of Candida spp. at 2 mg/mL. EOs from the three species of Mentha were able to inhibit the formation of biofilm up to 90% of C. albicans (MYA 2876) and to deconstruct mature biofilm up to 80% in MIC value. All tested concentrations (initial 2mg.mL-1) showed IC 50% below or equal to 50% for HaCat cell lineage. Conclusion: The essential oil of M. aquatica, M. arvensis and M. piperita show antifungal activity in planktonic cells of Candida spp., and are potential biofilm inhibitor for Candida albicans, showing low cytotoxicity in HaCat cells.

093 Evaluation of anti-Candida activity by compounds isolated from different species of Mentha

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Introduction: Medicinal plants has been the subject of many researchs in an attempt to discovery new drugs, as a source of bioactive compounds that may act in maintaining human health. Yeasts of the genus Candida has become a problem of public health in recent decades due to increased infections named candidiasis. Aim: The objective of this study was to evaluate the antifungal activity of compounds carvone, menthone, menthofuran and pulegone isolated from species of Mentha against Candida spp. and the cytotoxic action these compounds on HaCat cells. Methods: The compounds were tested by broth microdilution method of susceptibility to antifungal agents (CSLI, 2008) against Candida spp. The polymorphism was evaluated as the ability of the compounds to inhibit germ tube formation through by exposure of Candida spp. in fetal bovin serum (FBS). The cytotoxic action of the compounds was evaluated in HaCaT cells, grown in RPMI / FBS. Results: All compounds inhibited the growth of Candida spp. and the lower minimum inhibitory concentration (MIC) found was 0,125 mg/mL. The compounds inhibited until 86% the germ tube formation. The cytotoxicity assay showed cell viability above 50% after exposure to compounds. Conclusions: The compounds tested have a antifungal activity, acts on Candida spp. virulence factors, such as polymorphism, exhibit low cytotoxicity and may be potential sources for the production of new antifungal products.

094 Photodynamic effects of nanoparticles of curcumin against biofilm of Candida albicans

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Aim: This study evaluated the susceptibility of Candida albicans (Ca) biofilm to antimicrobial photodynamic therapy (aPDT) mediated by Free curcumin (CUR) and CUR encapsulated in polymeric nanoparticles (NP). Methods: CUR-NP was synthesized by nanoprecipitation using 0.5% of poly-acid lactic, 1% of dextran sulfate and 0.075% of bromide cetyl-trimethyl-ammonium. NP without CUR was synthesized as control. Free CUR was prepared in 10% dimethyl sulfoxide and used for comparison. CUR-NP was characterized by size, polydispersion index (PDI), zeta potential and efficiency of encapsulation (EE). Standard strain of Ca (ATCC 90028) was grown for 48 h at 37°C for biofilm formation. aPDT was performed incubating biofilms with 150µL of free CUR (1200 µM) or CUR-NP (260 µM) for 40 min followed by illumination with a blue LED light source (455 nm) for 20 min (40.3 J/cm2, C+L+ group). Additional samples were treated only with free CUR, CUR-NP (C+L-), NP (N), light (C-L+) or received no treatment (C-L-). Biofilms was analyzed by quantification of colonies in triplicate on three separate occasions. Data were analyzed by ANOVA/Welch and post-hoc of Games-Howell (α=0.05). Results: CUR-NP showed size lower than 200µm, PDI lower than 0.23, positive charge and EE of 64.67%. For free CUR, aPDT promoted a significant reduction ($p<=0.043$) compared with the C-L-, C+L- and C-L+ groups. For CUR-NP, the values of C+L-, N and C+L+ groups showed a significant reduction ($p<=0.041$) compared with C-L- and C-L+ groups. Conclusions: Both NP and CUR-NP, with and without light, reduced the biofilm viability. Free CUR was effective only with light.

095 Silver vanadate: antifungal activity against Candida albicans

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Aim: To evaluate the antifungal activity of microcrystals of silver vanadate (a-AgVO3) synthesized at different temperatures against Candida albicans (C. albicans). Methods: a-AgVO3 was synthesized by coprecipitation method (CP) at different temperatures (10ºC, 20ºC and 30ºC) for 15 minutes. The samples were characterized by X-ray diffraction, Raman spectroscopy, scanning electron microscopy with field emission, photoluminescence and spectroscopy in the visible ultraviolet region (UV- vis). The antifungal activity was evaluated by the microdilution method where the minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC) were determined. Results: The characterization demonstrated that a phase was obtained in synthesis, the morphologies of the compounds are different and affected by temperature. All microcrystals showed antifungal activity against C. albicans. Conclusions: It was concluded that a-AgVO3 has antifungal activity against C. albicans, and its effectiveness doesn't depends on the morphology acquired during the synthesis.

096 Bases essential for success through identification of forensic anthropology

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Cataloging and separating bones are intended to facilitate the subsequent measurement of the same . This measure seeks to establish mathematical formulas in order to create software . In case expert , first reconstructed the skeleton in order to establish the secondary identification (sex, age, ancestry and stature) and then obtains the identity of the body through the primary examination (dental abstracting characters).

097 Characterization of violence cases notified in piracicaba, sao paulo between 2009 and 2015

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Aim: To characterize the cases of violence in the city of Piracicaba (SP) notified by the Information System on Diseases of Compulsory Declaration (SINAN) between 2009 and 2015. Methods: It was a descriptive study based on reports of violence that occurred in Piracicaba / SP from 2009 to 2015. Data were collected from reports of domestic violence, sexual and other types of violence stored and recorded in the SINAN. The following variables in this study were: gender, age by lifecycles, skin color, education, place of occurrence, referral to the health sector, developments in the case, types of violence, kind of aggression and aggressor's profile. Results: There were 274 reported cases of violence in the SINAN of which 26 (9.50%) were male and 248 (90.50%) females. The aged of 56.05% female cases were between 20 and 59 year sold. For38.46% of male violence cases occurred in children under 10 years old. In 38.68% of the victims were more than eight years of study and 64.60% of the victims were white skin color. The predominant occurrence sites were in then residence and public road. In 51 (18.61%) cases there was the need for victims hospitalization and 7 (2.55%) died. Conclusions: During the study period there was an increase in the number of reported cases of violence notified by SINAN in Piracicaba and protection actions for victims should be established as health actions. Keywords: Child Abuse, Elder Abuse, Mandatory Reporting, Information Systems, Domestic Violence.

098 Forensic Entomology and its applicability in estimating the time elapsed after death in different seasons

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Objective: To visually present the types of most important insects to forensic entomology, according to entomological succession (method Mégnin 1894 and Centeno et al., 2002). And explain the usefulness of forensic entomology as a safe and reliable method to estimate the postmortem elapsed time. Methodology: Review the relevant literature to the subject trying to identify the main insects in various stages of cadaverous decomposition and indications to estimate the postmortem elapsed time. Presenting the study of Pierre Mégnin (1894) and Centeno et al. (2002) insects present in different stages of decomposition of a corpse in the four seasons of the year. Results: It was found that the sequence indicated by Mégnin (1894), as well as their appearance insects dates are presented in literature without scientific accuracy (variable onset dates). The method Centeno et al. (2002), it seems to be the best approach the Brazilian cadaverous fauna. Conclusion: The estimated time elapsed after death through forensic entomology is indicated in the literature as safe and reliable method. But, this method is laborious and requires careful methodology. It is believed that the cadaveric fauna found in the summer season in Argentina according to the study Centeno et al. (2002) is the one that is closest to that found in Brazil. Keywords: Forensic Entomology, Forensic Thanatology, forensic science.

099 Forensic Facial Analysis System: Standardized features for metric and morphological parameters

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The facial analysis of images for human identification purposes is an increasing challenge for investigative organs and expert, since the demand for exams from images such as closed-circuit television requires of scientific community the establishment of reliable parameters for indirect tests of facial analysis with a high degree of objectivity, reliability and reproducibility. The photoanthropometry, comprising the analysis, from images, of linear measurements, areas, indexes, proportions and angles between standardized points based on anatomical references, is an important method of facial analysis and can be used to collect anthropological data, studies of growth and aging, and to help in the search of a missing person or comparing facial patterns with human identification purposes. The Forensic Facial Analysis System for two-dimensional images (SAFF-2D) was developed by the National Institute of Criminology of the Federal Police, in partnership with the FACISGroup, composed by researchers from FOP-UNICAMP, FM-USP and UnB, and has features for marking photoanthopometric points in facial images, and has an interface for evaluating facial morphology and wrinkle patterns. The software allows the systematic and ordered analysis of facial parameters and photoanthropometric data, by storing the test results in a database. The record of the coordinates of the points is made on a web platform, so it is possible to perform every conceivable measurement, from existing points, eliminating the limitation of programs whose measurement tools are fixed and obtained only at the time of examination. Therefore, the SAFF-2D brought practicality to metric analysis of points in facial analysis, in addition to increasing your chances and reduce errors when reading data, allowing multi-center studies, and recovery of new data by combining any group of photoanthropometric points.

100 Isotopic signature and human identification: bioarchaeological and forensic applicability of a transdisciplinary method

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Every tissue of living organisms is composed of chemical elements taken from the individual diet, and bring with them the so called isotopic signature. Isotopes are variants of a given chemical element that have the same number of protons and a different number of neutrons, which consequently also changes their atomic mass. These elements are present in nature in different proportions with local variation, which is widely mapped and studied by Physics, Chemistry, Geology, and other areas. Thus, when analyzing isotopic markers – such as carbon, nitrogen, oxygen, and strontium – from organic and mineral material of different structures, one can infer about the diet and geographical location of the subject-source, in a given period. Therefore, relating the isotopic signature with the dynamics of tissue formation, hair and nails bring record of location, diet and water ingested in the last 14 days to 20 months, while the tissues present in teeth and bones allow to track about geographical location, diet and water ingested at different periods, which brings special meaning to the isotopic markers in enamel and primary dentin, since they represent a permanent record of diet and location during childhood and adolescence – information that can be highly relevant for human identification. It is shown, therefore, the significant contribution of these methods for Bioarchaeology, aiming diet reconstruction and migration flow in human remains of archaeological populations, and for Forensic Dentistry, focusing on human identification, based on the same information, which can become a key piece to solve a case.

101 Human identification, Comparative methods Negative identification: Case report

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Objective: expert presentation case report where it was not possible to establish the identity of the victim found in an advanced state of cadaveric decomposition, because of the absence of claimant, since human identification based on comparative methods (details ante-mortem and post-mortem). Methodology: Was requested from IML to the Department of Forensic Dentistry (FOP / UNICAMP), to collaborate the identification of a corpse in an advanced state of cadaveric decomposition found in a thicket near the city of Piracicaba-SP. The corpse was photographed, as had several tattoos, which could help in their identification. the victim's skull was removed to make complementary imaging tests, anthropological profile and dental examinations intended to collaborate in his identification. Results: Through the examinations performed were obtained dental characters: primary methods of human identification, details on the ancestry, age, sex and height: secondary methods of human identification (INTERPOL, 2014), and the cause of death. Conclusion: Despite the numerous abstracting elements found on the corpse, it was not possible to establish the identity of the victim, because they had no relatives claiming about the same, preventing human identification, which is a comparative method, where we analyzed the characteristics ante-mortem and post-mortem.

102 Practicing defensive Implantology in the office / hospital

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Objective: To demonstrate and indicate the practical and legal importance of effective use of Dental Documentation at each stage (diagnosis, presurgical / planning, surgical, post surgical and proservation for 10 years) in cases of oral rehabilitation through features in Implantology. Present two cases of implantation of prosthetic failure, which had the outcome civil judicial proceedings. Results: It was found in two cases of failures to the lack of methodology (logical sequence) and the lack of supporting documents facilitated the judicial action. Conclusion: The lack of evidence based on scientific methodology and the lack of forensic dental documentation prevents the defense of Dental Surgeon in judicial litigations and difficult even where the defendant will receive liability insurance prepaid. Keywords : Safe, Forensic Dentistry, Implantodology.

103 Protocol Interpol 2014: identification for teeth, smile line and dental records

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Objective: To standardize the minimum dental records needed to identify a missing person in the final stage of putrefaction / carbonization. As well as presenting real situations of positive identification by teeth, prosthetic appliance/ orthodontic / implantology and smile line held at FOP / UNICAMP. Methodology: will be presented relevant cases of positive identification made by the FOP / UNICAMP , where dental signaling characters and the smile line allowed to establish the name of the individuals. Results: It was possible to achieve positive identification by the coincidence of dental abstracting characters recorded in the records of life and events found in the body (primary method), however, the dental records should be thoroughly completed and properly illustrated. Already identified by the smile line is an adaptation of the secondary method (skull image overlay and photo smiling in life). It is noteworthy that Interpol has restrictions on this type of identification, but it is feasible method, where identification performed by the Forensic Dentistry FOP / UNICAMP. The line of smile was considered a helper method that should be used with traditional identification by teeth. Conclusion: The identification by the teeth as well as being recommended by Interpol (2014) , it is the same , recognized as the primary method is a rapid, inexpensive, easy to perform, reproduction and insurance, should be increasingly widespread in the dentistry undergraduate teaching, because the surgeon dentist in accordance with Law 5081/66 , it is able to perform odontolegais skills.

104 Questions about the Cronotanatognose death

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Objective: The aim of this study is comparative a literature opinion about a abiotic cadaveric transformative phenomena and its effective relationship with time elapsed after death, through an approximation of the time of death. Methods: It performed a review of national and international literature relevant to the topic. Results: It was found there is no standard regarding the postmortem elapsed time and abiotic transformative phenomena. There is the variation of literature very significant periods, which allows the expert to enter or not a particular suspect at the crime scene, opening room for the lawyers, prosecutors, judges, etc., may question any thanatological expertise, depending on the author only used as a reference. There was no study based on scientific research, most authors only puts your professional experience and / or repeats information contained in books of the last century or international origin. Conclusion: It was possible concluse that there is no consensus among national authors relating to abiotic cadaveric transformative phenomena and its effective relationship with time elapsed after death.Medicine and Forensic Dentistry are based on scientific evidence. Keywords: Chronology of death, forensic medicine, forensic dentistry and Forensic Thanatology

105 Sexual dimorphism in the study of the Atlas vertebra bones of southeastern Brazil

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Objective: Establish the sexual dimorphism in bones of southeastern Brazil through linear measurements of the first atlas vertebra, the first vertebra in 200 existing bones in the bones archival Prof. Dr. Eduardo Daruge. Methodology: Observational and cross-sectional study using 191 vertebras, 81 (42.4%) women and 110 (57.6%) were male, linear measurements were made of anteroposterior diameter of the vertebra, the spinal canal anteroposterior, transverse channel oblongata and maximum transverse. Results: It was found that the measures studied are dimorphic being possible to establish a new logistic regression model. The regression revealed that the model comprises the steps of the anteroposterior diameter of the vertebrae, transverse spinal canal and maximum transverse was better (chi-square = 89.5, p <0.0001) to predict the sex. The anteroposterior diameter of the spinal canal was not important to the model (p = 0:23). A mathematical model was obtained (logit): Sex = - 23.7 + (00:18 × anteroposterior vertebra) - (12:08 × transverse spinal canal) + (12:25 maximum transverse x) wherein values greater than 0.5 (cutoff) they would be considered masculine and feminine as minor. Conclusion: The present mathematical model of logistic regression obtained 86.4% of sensitivity, 76.5% specificity and 82.2% accuracy, showing therefore more effective the prediction of sex than mere hit at random. From this result it is possible if create specific software to determine the sex bones primarily for bones coming from the Southeast region of Brazil. Keywords: anthropometry, cervical Atlas, sex characteristics.

106 Sexual dimorphism in the study of the pelvis, skull and sacrum bones in the southeastern region of Brazil

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Objective: Establish sexual dimorphism through linear measurements of the pelvic bone, sacrum and obtained in the skull, in 200 existing bones in the museum Prof. Dr. Eduardo Daruge. Methodology: Study through bones file, being used 100 female and 100 male. After passing the CEP (138/2014) were made 13 measurements (vertical acetabular diameter, length and width of the obturator foramen, ischial incisura higher-mesure string and measure the depth, anterior superior iliac distance from the pubic tubercle, top width of the sacrum and length and width of the first sacral vertebra. Skull were evaluated the diamond measurements made by the incisive foramen - greater palatine foramen (right and left), measures the greater palatine foramen - basion (right and left) measure. Results: The measurements are dimorphic being possible to make a logistic regression model from the pelvis and skull base. The logit found was: Sex = - 21.1 + (0:45 × vertical acetabular diameter) + (0:19 × foramen length obturator) - (0.04 × rope the greater sciatic notch) - (0:14 average × basion to the greater palatine foramen). Higher values than 0.5 (cutoff) would be considered as male and female minors as. Conclusion: The method results in 84.6% sensitivity, 86.3% specificity and 85.7% accuracy, and therefore more effective in predicting sex than mere hit at random. With this result it is possible to create specific software to determine the sex of bones in Brazil. Keywords: forensic science, anthropometry, sex determination

107 Sexual dimorphism in the study of the second vertebra Axis in bones of southeastern Brazil

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Objective: Establish sexual dimorphism through linear measurements of the second cervical vertebra, axis in existing bones in the museum Prof. Dr. Eduardo Daruge. Methodology: Study through file of bones being used vertebras 181 (103 male and 78 female). After passing the CEP / FOP / UNICAMP (138/2014), it was made seven linear measurements: body length, length dentóide process, vertebral foramen length, the vertebral foramen width, distance of the transverse processes, distance from the left transverse process to the process thorny, distance from the transverse process right up to the spinous process. Results: It was found that the measures studied are dimorphic and it was possible to establish a new logistic regression model: Sex = - 22.7 + (0:16 × body length) + (0:31 × vertebral foramen length) + (0:28 × distance of the transverse processes). This model, can be noted that values greater than 0.5 (cutoff) would be considered as "masculine" and less as "feminine." Conclusion: The method results in 68.4% sensitivity, 75.2% specificity and 72.4% accuracy, showing therefore but effective in predicting sex than mere hit at random. From this result it will be possible to create specific software to determine the sex bones especially for bones coming from the Southeast region of Brazil. Keywords: Anthropometry, axis, cervical vertebra, forensic anthropology, mathematical models.

108 The importance of dental records and the judicial technical assistance for forensic dentistry exam

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The civil expertise is a fundamental tool to help the justice to solve conflicting and peculiar cases. This report presents the outcome of a civil lawsuit which required a forensic dentistry expertise involving dental prosthesis and implant. The contested treatment had been replaced by a new rehabilitation, and another peculiarity of this case is the fact that the patient and the author of the lawsuit is a dentist, what interfered directly in the performed treatment. Besides the forensic exam, the experts need to analyze the documentation made by both dentists, including dental records, photography, radiograph, dental casts and provisory prosthesis. As dental rehabilitation need a multidisciplinary approach in dentistry specialties, to write the forensic technical report, the forensic need the technical assistance to understand the facts, diagnosis, planning and arguments in order to clarify the magistrate in question about techniques clearly and impartially.

109 Use of Scanning Electron Microscopy (SEM) as Auxiliary Method in Carbonized Victim Identification Process

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Aim: Establishing of the identity by the teeth and charred implants in alleged victim found carbonized with leftovers of bone fragments through the auxiliary application of SEM. Method: Upon receipt from IML of cadaveric remains of carbonized victim, there was a separation of objects, car parts, cell phone, bone remains, teeth and implants found at the crime scene (vehicle interior). Thereon, dental remnants were separated and classified for comparison with the data obtained, in life, of the alleged victim. Periapical radiographic images overlapping analyzes were performed comparing treatments carried out ante-mortem with images obtained on the teeth post-mortem and, later on bone fragments of jaw containing dental implants were subjected to the examination of SEM. Results: the data obtained after death were compared with the records delivered by the family and the dentist of the alleged victim (including the periapical radiographs) and it was found being the same alleged person. The SEM was used in the maxilla fragments which contained osseointegrated dental implants, verifying the coincidence of the chemical composition of the implant used at that time (2011) in the alleged victim in surgical procedures in life (titanium alloy - type 2). Conclusion: The SEM examination can be an aid in the process of human identification, especially recognizing tooth structures prepared for receiving restorations (morphology) and chemical composition (amalgam fillings, implants, porcelain, etc.).

110 Validation measures to sex and ancestry and its importance to the Brazilian anthropometry

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a) Objective: To validate linear measurements in six mathematical models (obtained at the master's and doctoral theses defended in Forensic Dentistry FOP / UNICAMP) in 200 existing bones in the museum of Prof. bones Dr. Eduardo Daruge to establish sexual dimorphism. Methodology: observational study, cross through file of bones, 100 male sex and 69 female, aged 18-80 years. After passing the CEP / FOP / UNICAMP 138/2014, there were a series of linear measurements (IF-PEN, ZSFR-ZSFL, B-L, Maximum Length Nose, Basion-Prosthion, Prosthion-Nasion, G-AEN, AEN-AEAM, L-LPMA, Mastoid-Mastoid, Basion-Incisura Mastoid, Bi-Zygomatic, aiming to validate the six anthropometric mathematical models Saliba (1999), Sampaio (1999), Abe (2000), Francesquini (2001), Francesquini Jr. (2001), Costa (2003) results:.. it was found that the measures studied are dimorphic and it was possible to establish a new logistic regression model, from the data obtained from the bones of the Bones Museum was also possible to validate the mathematical models existing. Conclusion: from this result will be possible to create specific software to determine the sex bones especially for bones coming from the Southeast region of Brazil. Keywords: anthropometry, sex determination by skeleton, Forensic Anthropology, mathematical models.

111 Acupuncture as DTM Treatment: case report

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Aim: Report a 38-years-old pacient case with temporomandibular disfunction (TMD), treated with acupuncture. Methods: Palpation of masticatory muscles and specific history of TCM was realized to identify the energy imbalance and develop the selection of acupuncture points for the treatment, in this case: TE17, GB20 (in the face) and GB34, GB39, LR2, KI7 (distal points). Five acupuncture sessions were realized, once a week, with duration of 20 minutes. In the end of sessions, it was done ear therapy using points Shenmen, Anxiety, Kidney, Spleen and Liver. To evaluate the pain intensity was used the Visual Analog Scale (VAS), determined VASi (in the beginning of session) and VASf (in the end of session). Results: The pains has decreased (VASi=8, in first session and VASf=0, in the last one). Conclusion: In the present case, acupuncture has decreased the pain intensity of TMD musle helping the resauration of bucal health.

112 Acupuncture: case of mouth opening limitation

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According to the theory of TCM, the body must be in balance of yin (-) and yang (+) energies so that the individual is in harmony and healthy. Moreover, the imbalance of these energies generates the disease. Acupuncture aims to stimulate the points related to the meridians of each organ to restore the balance of the body to achieve therapeutic satisfactory results. The aim of this work is to show that acupuncture can assist the treatment of mouth opening limitation. The main complaint of a Caucasian patient, 38 years old, 1.50m tall, 58 kg, was the limited mouth opening for a long time with constant headaches, bilateral TMJ pain that got worse when chewing, radiating to masseter and temporal muscles. According to the TCM the patient had weak, slow, thin, sliding pulse, and weak voice and shyness, absent Shen. There were 8 sessions of acupuncture at the points, SP6, SP4, KI3, LG4, GB34, CV12, TE3, TE21 to strengthen the kidney Yin and Tin Ye (body fluids), dispersing the accumulation of dampness-turbidity Spleen and auriculotherapy using mustard seeds. In the first session we measured the mouth opening of the patient and it was 10 mm and after treatment it showed an opening of 13mm. The patient also have reported wellness, regression of headaches and orofacial pain, improved bowel function, reduced anxiety and more motivation for daily activities. Acupuncture helped in mouth opening limitation, among other benefits reported by the patient.

113 Analysis of the behavior consumption of acidic drinks in young adults under risk for dental erosion development

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Objective: Analyze the behavior of consumption of acidic drinks in young adults and their risk for the dental erosion development. Methods: A questionnaire was developed by researchers to determine the current characteristics of the usual acidic beverage consumption in young adults, asking them preferences, perceptions and knowledge. The elaborate the questionnaire was approved by the Humans Ethics Research Committee of the FOA-UNESP (CAAE: 50719615.5.0000.5420) and applied in 493 dentistry students of the Araçatuba Dental School, Univ. Estadual Paulista (FOA-UNESP). The results were tabulated and submitted to analysis descriptive statistic, the correlation between variables was analyzed with the chi-square test ($\chi 2$), with 5% significance level. Results: 41.58% of the students have knowledge of what is dental erosion, 62.88% refers consuming acidic drinks, but 91.68% believe not suffer from dental erosion, and only 6.69% say that they suffer some kind of discomfort when consuming acidic drinks, also, 47.46% of the determined frequency responses of acidic drinks consumption indicated by students was less than 1 per week. Conclusion: Young adults do not exclude the consumption of acidic drinks in your diet, but rather reduce consumption habits, decreasing the erosion risks. Keywords: Dental erosion, prevalence, consumption. acidic drinks.

114 Association of self-efficiency general and specific to breastfeeding maintenance maternal exclusive to the 30 day life

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Aim of this study was to investigate the level of general and specific self-efficacy for breastfeeding, even during pregnancy, and the association with the maintenance of exclusive breastfeeding (EBF) on the 30th day of the child's life. Methods: Quantitative study, a prospective observational cohort study with 210 women participants from groups of pregnant women in municipal health units. the instruments of Self-efficacy Perceived General were used (EAEGP) and Breastfeeding (BSES-VB), and a questionnaire on socioeconomic, demographic and obstetric data. Women were addressed during pregnancy to answer the questionnaire and instruments, and again via phone, one month after the birth of the child, to check the type of feeding. Results: gilts ($p = 0.0225$), whose partner accepted the pregnancy ($p = 0.0138$), who delivered at term ($p = 0.0020$), showed no health complications during pregnancy ($p <0, 0001$), voiced the will of breastfeeding ($p <0.0001$), not offered pacifiers ($p = 0.0290$), were exclusively breastfed at hospital discharge ($p <0.0001$) and those with a high level of general self-efficacy ($p = 0.0183$) were the mothers of children who were more likely to be exclusively breastfed on the 30th day of life. Conclusion: The high level of general self-efficacy was associated with the maintenance of exclusive breastfeeding until the 30th day of the child's life. However, there was no association between maintenance of EBF and the specific self-efficacy for breastfeeding.

115 Chi Kung for promoting health and quality of life

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This training (Kung) energy (Chi) has several levels, from the practitioner to the medicinal. The purpose of this paper is to present the types of Chi Kung, Chi Kung goals and the ways to achieve these goals. Qigong is divided into three modes: Medical, Martial and Spiritual. Energy therapy will always be related to posture (Jing), mind (Shen) and breathing (Chi) to a control the own energy flow or the others. The benefits, especially Qigong Medical, are emotional and energetic organs detoxification; strengthening the mind; smooth and regulate the Qi meridians, facilitate the proper flow of Qi. There are exercises to purge (used in conditions of excess, with sounds), to tonify (use in conditions of weakness, color) and harmonize (for equilibrium situations Yin Yang, with colors and sounds). To purge the qi, the movements will be out and away from the body and to tonify the Qi, the movements are in and near the body. To regulate the Qi, the movement will be in a balanced way. For young people the indicated exercises are dynamic, almost no static; for healthy adults and elderly the exercises could be those one which increase and maintain Yin Yang Qi; for people with poor health are indicated static exercises to harmonize. If excess syndromes and heat: static exercises. If deficiency syndromes and cold: dynamic exercises. Qigong is part of Traditional Chinese Medicine, and as such, assists in the promotion of health and increased quality of life. It emphasizes the importance of the orientation of these practices by a Master of Chi Kung.

116 Dental caries in Indigenous children do Xingu: association with sociodemographic variables and breastfeeding

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Summary Goal. To investigate the experience of dental caries and its association with sociodemographic variables and breastfeeding among children 6-71 months of age, the Xingu Indigenous Park , Mato Grosso , Brazil . Methods . This cross-sectional study used secondary data of 402 indigenous children who participated in the epidemiological survey on oral health in the regions of Lower , Middle and East Xingu , in 2013. The dependent variable was tooth decay (DMFT) . The data of the independent variables were obtained through instruments Local Health Information of the Special Indigenous Sanitary District Xingu System. We carried out a simple analysis to test the association of the independent variables and the dependent variable. Variables that showed p≤0,20 in simple analysis were tested in the regression model. Results. The average DMFT was 2.60 (SD = 3.60) and the prevalence of dental caries was 51 % . In simple analysis , the chance of children present DMFT > 1 was higher among children living in the average population size of the villages , who were older than 36 months and who were breastfed for more than 26 months. In multivariate analysis , only the children of older age (OR: 6.64 ; 95% CI: 4.11 to 10.73) and those who were breastfed for longer (OR: 1.88 ; 95% CI: 1.16 3.02) were significantly associated with ceo-d> 1 . Conclusion. Indigenous children in this study showed high prevalence and severity of dental caries, and the age and breastfeeding variables were associated with ceo-d > 1.

117 Effect of Chi Kung in the regulation of energy flow

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Introduction: Medical Qigong is one of the pillars of traditional Chinese medicine that uses energy to treat disease, promote health and longevity. Aim: To report the results obtained with the Chi Kung in a 21 year-old female white patient, presenting TMJ chronic pain, taking much medicine to induce sleep and antidepressants. Method: The main focus is the empowerment of the individual in the organic unity Mind - Body, stimulating , nourishing , channeling the energy flow and working the abdominal breathing technique . A first energy measure with Ryodoraku was carried out, observing a laterality imbalance between the left and right meridians of the Heart (HT) and also a change between coupled Triple Heater Meridian (TH) and pericardium (PC). A Qigong session with specific protocol was performed for twenty- five minutes, and after a new measurement of energy was taken. Result: There was a change in the energy flow at the second measurement, with the balance of the HT, TH and PC meridians. Conclusion: The performance of Chi kung practice provided the release of energy channels, performed the regulation of the right and left HT meridian and restored energy flow balance between coupled TH and PC meridians , with improving the patient`s quality of life , requiring continuous treatment to keep the results.

118 Epidemiology and associated risk factors of tooth loss in adults: a literature review

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Aim. To study the scientific evidence available about epidemiological studies and associated risk factors of tooth loss in adults. Methods: We conducted an electronic search through Medline, Bireme, Lilacs and Scielo, published from 2005 to 2015. The keywords used were "Perda de dente", "saúde bucal", "tooth loss", "adults". Epidemiological articles published in English and Portuguese about tooth loss in adults were included. Conversely, studies that assessed the prevalence of tooth loss in other age groups and those conducted in dental clinics addressing only extractions were excluded. Results. In total, 35 articles were found but 28 were selected. Tooth loss is still very prevalent in adults and increases progressively with age. In Brazil, the lowest average of missing teeth was by 5 affected teeth. In the world, the lowest average was 4.2 and the highest was 10.7 missing teeth. There was an association between tooth loss and report of impact on chewing in adults. Risk indicators for tooth loss were: age, sex, place of residence (rural and urban), education, income, smoking, caries, periodontal disease and information about oral hygiene. Conclusions. The studies in this review of the literature showed that tooth loss is a prevalent condition among adults and it is associated with socioeconomic, demographic, behavioral and clinical factors that should be addressed for its reduction in public policies aimed at comprehensiveness, equity and intersectionality.

119 Experience report the use of Acupressure to control nausea in children in dental impressions

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Objective: To report the use of acupressure on PC6 acupuncture point for nausea control in three male patients 8 years, who had strong nausea when undergoing dental impressions in the Pediatric Dentistry Clinic of Piracicaba Dental School - FOP/UNICAMP. Methods: After locating the point PC6 (near the wrist) on the right side of the patient with the aid of a dental instrument blunt tip (Presser amalgam), a massage was carried out on point for 5 minutes. After this stimulation was placed an oilseed rape seed set a beige tape PC6 in place of the point, then the patient oriented to fasten the location during impressions of the dental arches. It was also fixed a rapeseed in Yintang point (between the eyebrows). After casting the seeds were removed from the colon (PC6 and Yintang) In the three patients were performed the same maneuver described. Results: The impressions were made in three patients. Conclusion: The acupressure technique on PC6 point was effective in controlling nausea in pediatric patients during dental impressions.

120 Feelings arising out from total tooth loss and expectations of denture replacement in adults and older people

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Aim: This study aimed to assess factors associated with feelings related to tooth loss and the expectations regarding the new prosthesis. Methods: A cross-sectional study with 119 total edentulous patients (age range: 29-87 years) undergoing treatment for making prostheses in a university clinic. Results: The patients who reported having lost their teeth due to fear of undergoing treatment or access difficulties were the ones who suffered most from tooth loss (OR = 2.57). Younger patients (OR = 3.33) and female (OR = 3.89) were those that showed more expectations for the prosthesis that was being made. Conclusions: Women and young people are those who express more anger or sadness by tooth loss and have aesthetic and socialization expectations for the new prosthesis. Keywords: Tooth Loss. Emotions. Dental Prosthesis. Self Concept.

121 Knowledge and attitudes in oral health of teachers and high school students

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Aim: To evaluate the knowledge and attitudes in oral health of teachers and high school students in the city of Piracicaba. Methods: Teachers and students from three public high schools in Piracicaba, answered a questionnaire about: promotion and prevention in oral health, self-perception of oral health, satisfaction with the condition of general and oral health, oral hygiene habits, health knowledge oral; and demographic aspects. Results: The results of 41 teachers and 699 students were that most of them, often look the mouth and teeth daily, has not wound in the mouth, no bad breath, does not have bleeding in the gums, has no pain in the teeth or mouth, considers general health and satisfactory oral, usually not change dentist, has habits and regular knowledge of oral hygiene. Conclusions: This study allowed us to understand the importance and need to reinforce concepts and good health habits in schools, with prevention as the best way to reduce disease.

122 Maternal, neonatal and post-neonatal mortality in São Paulo in 2013

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Aim: This study evaluated the relation between socioeconomic, demographic factors and health care model to child mortality, neonatal, post-neonatal and maternal mortality in the state of São Paulo from 1998 to 2013. Methods: We used data from national official open sources and from the state of São Paulo. For statistical analysis was used the zero-inflated negative binomial model. Gross analysis was performed and then were estimated multiple regression models. For associations was adopted p at 5%. Infant and maternal mortality rates in the state of São Paulo in 2013 were, respectively, 11.66 and 39.28. Results: Factors associated with neonatal mortality rate were: HDI city ($p = 0.0024$); time from the beginning of PSF implantation ($p < 0.0001$); time of the last PSF implantation ($p = 0.0007$); PSF implanted ratio ($p < 0.0001$); birth rate ($p < 0.0001$); cesarean delivery rate ($p = 0.00033$). Related to post-neonatal mortality rate: City HDI ($p < 0001$); time from the beginning of PSF implantation ($p < 0.0001$); time of last PSF implantation ($p = 0.0005$); PSF implanted ratio ($p < 0.0001$) and birth rate ($p < 0.0001$). Related to the maternal mortality rate: HDI city ($p = 0.0004$); PSF implanted ratio ($p = 0.0002$) and birth rate ($p = 0.0002$). Conclusions: The maternal mortality and Infant Mortality were related to various socioeconomic variables and management model, mainly the HDI and PSF coverage.

123 Migraine and Temporomandibular Disorder comorbidity : a clinical case report

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Headache conditions are highly prevalent worldwide. Among the primary headaches, migraine stands out for being considered a disabling neurological disease that causes significant burden on patients and society. Temporomandibular disorders (TMD) and migraine are comorbid conditions according to previous studies. The relationship between migraine and TMD is pathophysiologically complex, which make difficult the differential diagnostic and treatment. Thus, the clinical features reported by patients with this comorbidity may represent an aggregate contribution of both conditions, with enhanced characteristics of each of them and not fully representative of any of the conditions alone. Herein, we report a case of the female patient (S.A.S.), 42 years old, presenting migraine since childhood. The migraine attacks are manifested mainly in the orofacial and cervical region. The patient has been treated pharmacologically for 30 years, using different drugs. During the last years, she has been presenting an increase in frequency and severity of the attacks, which have also become difficult to control. Simultaneously, she also reports a significant worsening of the symptoms related to TMD. After evaluation was initiated concomitant treatment for migraine and TMD. She received Propranolol (dose...) for migraine. For TMD, the therapeutic approach included occlusal splint, TENS and laser sessions, counseling and self-care. The patient improved considerably, with reduction in the frequency and intensity of migraine. This clinical case emphasizes the findings from recent studies provide evidencing that the simultaneous treatment of comorbid pain conditions is crucial to the improvement of both.

124 Orofacial Pain management in patient with Sjögren's syndrome - Case report

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Objective: To present a case of a patient with Sjögren's syndrome and orofacial pain treated with acupuncture. Methods: Female patient, 20 years of age, with Sjögren's syndrome (diagnosed 5 years before), with bilateral orofacial pain when chewing and speaking, dry mouth, headache, generalized pain throughout the body. Palpation of the masticatory muscles and Chinese Medicine routine anamnesis were done to identify the energy imbalance and selection of acupuncture points. The patient was subjected to 7 traditional acupuncture sessions, one session per week, 20 minutes each; the points were: LI4, GB20, LR3, ST44, GB34, PC6, HT7, SP6. Pain intensity was assessed by Visual Analog Scale (VAS), named Vasi (beginning of the session) and VASf (final session). Results: In all sessions of acupuncture, there was a reduction of 50% in pain intensity . Even using a protocol service for Temporomandibular Disorders (TMD) the patient as a whole has improved each session. Conclusion: According to the results, acupuncture has contributed to the overall improvement of the patient and hence the importance of its continuity as an individualized treatment due to multiple symptoms of Sjögren's syndrome.

125 Pilot study on energy measurements in temporomandibular dysfunction

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Introduction: The traditional Chinese Medicine (TCM) has many areas and one of them is acupuncture and in the last years it has been widespread and accepted in occidental society due its positives results especially in chronic diseases. In dentistry, acupuncture has been used in the pain treatment associated to the temporomandibular dysfunctions. Acupuncture is based on the existence of energy flow patterns (Qi) through the body that are essential for health and imbalances in the flow of this energy are responsible for diseases. Aim: The aim of this pilot study was to find the energy patterns of patients with TMD through the analysis of data obtained by Ryodoraku graphics Methods: data provided by Ryodoraku graphics were analysed, from 8 patients, aged between 24-65 years old with Temporomandibular Disorders Results: we observed that the majority of patients presented low energy before acupuncture, and the ideal is that the energy stay between 40 and 60. After acupuncture was also a decrease of energy. In order to identify which energy had higher or lower yin or yang, the meridians were separated according to their energy characteristics. Patients started with lower Yin energy than Yang, however, after acupuncture, they finished the session with less Yang energy than Yin energy. Conclusion: The results suggested that patients had a pattern of deficiency of energy in the meridians and after acupuncture there was a reduction of Yang energy probably in an attempt to promote a balance between the Yin / Yang energy in these patients with TMD.

126 Prevalence and signs of temporomandibular disorders in adolescents

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AIM: The objective of this study was to conduct a literature review on the prevalence and signs of temporomandibular disorders (TMD) in adolescents. RESULTS: The study of the TMD in adolescents is key to early determine the problems that predispose to craniofacial growth abnormalities, pain or muscle dysfunction in adulthood. Care for oral health, considering the comprehensive care to adolescents, is an important component in improving the quality of life. The pain is associated with dysfunction of the masticatory system. Pain is the symptom that often leads individuals to seek the dentist. Measures are recommended in the adolescent patient's diagnostic test, such as clinical examination, physical examination. For investigated signs and symptoms, reported prevalence ranging from 3 (2) 53% (23) sensitive to temporomandibular joint, 0.5 (16) 81% (23) sensitive to muscle, 8 (21) 48% (6) to joint noise, 2 (2) 63% (15) for the mouth opening restriction and 3 (14) 20% (21) for the presence of mandibular deviation. According to data from epidemiological survey of oral health status of the population carried out in 2010 (SB Brazil 2010), in Brazil there is a high prevalence (over 40%) and higher severity of malocclusion, involving adolescents, which can be associated with poor socioeconomic conditions and subjective conditions of oral health. CONCLUSIONS: It was concluded that a proper clinical management could identify and treat manifestations of dysfunction, improving the quality of life of affected adolescent patients.

127 Quality of life influence in mothers of disabled children on their children oral health

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Objective: To investigate if the quality of life of mothers or caregivers is related to the oral health of children with disabilities. Methods: A cross-sectional study based on interviews with mothers or guardians and oral clinical examination of disabled children with 02-06 years old, assisted by Piracicaba Rehabilitation Center. The mothers answered the quality of life WHOQOL-bref, the Multidimensional health locus of control scale, socioeconomic questionnaire and on oral hygiene. Data were analyzed using descriptive statistics, chi-square test, Fisher exact test and multiple logistic regression. Results: From examined children (57.1% boys and 42.9% girls), most aged between 37 and 48 months (40.81%) presented predominantly neurodevelopment delay (ADNPM - 55, 1%) and 75.5% were caries free. Mothers or guardians were aged between 18 and 43 years (87.8%), with less than 8 years of education (51%), family income less than 4 minimum wages (75.5 %), belonging to large families (71.4%) and lived in their own homes (59.2%). Most mothers or guardians (55.1%) assigned at random interference in the health/disease process of their children. The social relationships domain of the WHOQOL-bref showed a statistically significant association (p = 0.0404) with the dmft index. Conclusions: Children whose mothers reported worse social conditions, had 11.28 times more likely to have presence of caries.

128 Quality of life, cohesion and adaptability in Bolsa Família Program´s beneficiary families

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Aim: We evaluated the association between quality of life, family cohesion and sociodemographic factors of beneficiary families of the Bolsa Família Program (PBF). Methods: It´s an analytical and cross-sectional study with exploratory and quantitative methodology. The initial sample was composed by 385 respondents. The dependent variable was the quality of life (WHOQOL-BREF), and the independent variables were sociodemographic characteristics, self-rated health, family cohesion and adaptability (FACES III). Results: The best quality of life was associated with younger age than or equal to 36 years (OR = 2.15), higher educational level (OR = 1.54), good / very good health (OR = 6.39), not having current health problem (OR = 5.68), no treatment (OR = 1.76), moderate (OR = 3.39) and high (OR = 3.66) and moderate family cohesion adaptability (OR = 2.23). Individuals from families with moderate and high family cohesion were more likely to have a better quality of life than those from families with low cohesion. The male volunteers were 3.54 times more likely to have a better quality of life. Conclusions: It was concluded that moderate and high levels of cohesion may impact positively to the quality of life of persons receiving the PBF, indicating that social programs should seek to strengthen this dynamic. Keywords: Quality of Life. Family Relations. Poverty. Adaptation. Income. Public Policy.

129 Regulation of energy by the Ryodoraku method

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Aim: to present a clinical case report of a 36 year-old, white woman who had imbalance of energy at the acupuncture meridians and was diagnosed by Ryodoraku Method and obtained acupuncture treatment to achieve the regulation. METHODS: The electrical conductance of 24 acupuncture points (sources) which represent the 12 acupuncture meridians (right and left) was measured with the device (RDK/NKL- Produtos Eletrônicos Ltda. Brusque – SC – Brasil), which is an acquiring mobile unity that works connected to an USB port of a personal computer. The measurement values are represented at the Ryodoraku Graphics. These values mirror the meridians and analogous organs conditions. After the initial measurements of the energy were taken, some alterations could be observed in the graphics at the coupled meridians of the Kidney (KI), and the Badder (Bl), in excess and deficiency respectively. Subsequently, the patient received 10 minutes of acupuncture at the acupoints Jinggu(BL64-Yuan point) and Dashong (KI4- Luo point), according to Luo-Yuan Technique and at the acupoints ST40 (Fenglong) to remove the block (mucosity), plus GB40 (Quixu) TE3 (Zhongzhu), because the Shao Yang meridian works as a regulator. After the withdrawal of the needles another energy measurement was taken. Results: It was observed there was regulation of the energy in the Kidney and Bladder meridians. Conclusion: The Ryodoraku Method determined to have applicability to diagnose energy alterations in the meridians and the acupuncture points used were effective to obtain the energy regulation.

130 Self-perception in oral health of high school students from Piracicaba

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Aim: To investigate the self-perception of oral health of high school students from state schools in the city of Piracicaba, State of São Paulo. Methods: Data collection was conducted through questionnaires applied to high school students (1st, 2nd, 3rd year) from three secondary schools, randomly selected. Results: 699 students participated in this study, and 359 (n = 51.36%) female and 340 (48.64%) males, aged from 14 to 19 years. Analyzing the variable "self examination of high school students frequency", 561 (80.26%) answered looking her mouth daily, 64 (9.16%), weekly, 43 (6.15%) perform the self examination monthly, 21 (3%) annually, 9 (1.29%) never perform the self examination, and 1 (0.14) did not answer this question. Analyzing the variable "bad breath on high school students" observed: 9 (5.58%) of the students said present bad breath, 654 (93.56%) did not, and 6 (0.86%) did not answer. Analyzing the variable "pain sensation in the teeth or mouth of high school students" observed: 101 (14.45%) of the students said they had pain in the teeth or mouth, 595 (85.12%) did not have, and 3 (0 43%) did not answer. Conclusions: We conclude that most high school students claimed perform the self examination of the mouth, do not have bad breath, nor pain in the teeth.

131 Space analysis of decayed and filled teeth in adults of piracicaba, SP

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Aim:To analyze the spatial distribution of decayed and filled teeth in adults according to the Social Exclusion Index (SEI) and proximity to public dental service. Methods:The cross-sectional study examined in 2011, a random sample of 248 adults aged between 20-64 years representative of adults residents in Piracicaba-SP, Brazil. The oral exams in households followed criteria of the World Health Organization and conducted by a single examiner calibrated. For the spatial analysis was carried out georeferencing of census selected tracts and their neighborhoods, in addition to the proximity of 500m and 1000m radius of health units with dental service. For each district was calculated the mean of decayed and filled teeth, and assigned the SEI and presence of public dental service. The analysis was the Spearman correlation ($p<0.05$). Results:The mean tooth decay was not correlated with the SEI ($p=0.09$) and proximity to public dental service in radius 500m ($p=0.07$) and 1000m ($p=0.58$). The highest average filled teeth showed a strong correlation with the SEI, and $r=0.79$ ($p<0.0001$), but there was no correlation with the proximity of public dental service in 500m ($p=0.26$) and 1000m ($p=0.56$) radius. Conclusion:Although not verified relationship between the experience of tooth decay and SEI, their resoluteness, that is, the presence of restored teeth were related to social inequalities. The presence of public dental service in proximity was not associated with decayed and filled teeth. These results can be considered for access strategies, equity and promotion of oral health, as well as prioritization of primary oral health in adults.

132 Spatial analysis the user profile of the dental pubic service

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Introduction: Spatial analysis of health events is important for the assessment of risks to public health, particularly those related to the socioeconomic profile of the population. Objective: To present a proposal to spatially analyze the profile of users related to the use of the service, socioeconomic evaluation, oral morbidity, self perception of oral health and social capital in relation to family risk Ubirajara / SP so it can be used in municipalities . Methodology: The sample design will be of a baseline study (n = 128), which evaluated the between family risk and individual risk ratings (PERES, 2016) and encodes to have risk or no risk. It will use the questionnaire Oral Health Survey of the State of São Paulo - SB SP2015 (FRIAS, 2016), plus questions regarding the use of services. Spatial analysis is appropriate to analyze the distribution of family risk with the above factors, since the spatial epidemiology tools can help to identify risk factors associated with the distribution in the geographic space of the studied situation (familial risk). Results: The approach to be used, insert variables in the model that capture in fl uences specific factors of the areas, as well as dependence between areas, thus generating more accurate estimates of associations between the studied situation and factors related to the areas under investigation. Conclusion: the variables are associated with familial risk (outcome), indicating its determination in health-disease process and using thematic maps, facilitates decision-making by local management. Keywords: Access; Spatial analysis; Risk

133 The acupuncture plus auriculotherapy effect in pain in temporomandibular joint disorder: a case study

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Aim: To investigate the effect of acupuncture plus auriculotherapy on facial pain in patient with temporomandibular disorder (TMD). Methods: This was a case study of a female patient of 24 years old, who came to the Acupuncture Clinic of the Piracicaba Dental School (State University of Campinas) complaining of facial pain associated with temporomandibular disorder (TMD) muscle related. Severity of facial pain was assessed using the visual analogical scale (VAS) before and after the treatment. Individual sessions of acupuncture combined with auriculotherapy lasted 20 min and took place once a week, for 8 weeks. The acupuncture treatment based in energetic imbalance according principles of Traditional Chinese Medicine (TCM) the syndrome was Spleen yang deficiency and we used the following points, unilaterally inserted: CV 12 (Zhong Wan), TH3 (Zhongzhu), LI4 (Hegu), SP4 (Gongsu) and GV15 (Yamen). The auriculotherapy was perfomed with mustard seed placed with adhesive tape in ear points: Shen Men, Kidney, Sympathetic, Maxillary and Jaw regions, Spleen and Neurasthenia, maintained and stimulated by the patient during 5 days. This study was approved by the Ethics Committee on Research of School of Dentistry, Piracicaba/UNICAMP protocol 099/2008. Results: For pre-post treatment comparisons, the patient had improvement in the orofacial pain of 7 to 2 points in VAS (71% of pain reduction). Conclusions: The data suggest that the acupuncture plus auriculotherapy were effective in improving facial pain in patient with temporomandibular disorder muscle related.

134 The prevalence of oral health literacy in a sample of adult population

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AIM: Around the world, the number of tools developed to measure Oral Health Literacy (OHL) has been increasing in recent years, while in Brazil, until the design of this study, there was only one instrument valid. The aim of this study was to measure the prevalence of OHL in a sample of Brazilian adults through Oral Health Literacy Assessment (OHLA). METHODS: After translation and cross-cultural adaptation, the OHLA-Brazilian version was applied in a sample of 250 adults. In this exploratory study, OHL was categorized in Low, Medium and High. RESULTS: To verify the population characteristics, the tool was applied in a sample of 250 adults, mean age 38,0±12,7 years and 52,4% of them had concluded high school. According with OHL abilities, 61 (24,4%) of the sample had high level, 116 (46,4%) had medium level, while 73 (29,2%) presented low OHL levels. CONCLUSION: This research showed that almost 30% of the sample had Low OHL abilities which could be associated with worse oral health outcomes. This result indicates that actions should be increased to improve OHL in Brazilian population.

135 The tongue as a diagnostic tool for the Tradicional Chinese Medicine

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In the Traditional Chinese Medicine, the tongue is a microsystem, and its examination is used as a diagnostic method because it mirrors an external relation to the internal organs. From its analysis, along with a detailed history, allows verify some patient imbalance conditions, contributing to the therapeutic planning. In the tongue, clinical examination color, morphology and the presence of coating, cracks, among others are observed. The tongue's color may be related to blood (Xue) and Energy (Qi): a pink tongue may indicate a good health; a pale tongue, a deficiency bloodstream. The morphology of the tongue directs us to an evaluation of the clinical states of organs, Qi and Xue, and it is still useful to distinguish conditions of excess and deficiency. An red tongue and dehydrate indicates a heat syndrome; edematous tongue can be related to a deficiency syndrome. The tongue coating must be analyzed in a systematic manner, observing the color, thickness and distribution. The yellow coating color is related to the presence of heat as white color related to cold; the thickness is related to the aggressiveness of the pathogen; and distribution of the points directs to location of pathogenic factor according to the body region. In addition to their importance in the diagnosis, the clinical examination of the tongue also allows us to evaluate the progress of patient treatment.

136 The use of acupuncture and ManaKa Wire technique to manage acute TMD pain: a case report

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Aim: To describe a clinical case of acute temporomandibular disorder (TMD) pain management with one session acupuncture and Manaka Wire technique treatment. Methods: A 51-year-old woman with TMD acute pain sought treatment in Acupuncture Clinic at Piracicaba Dental School (FOP/UNICAMP). After physical examination, symptoms observed were severe pain in facial muscles during function and at rest and headache. Patient received one session of traditional acupuncture in some specific points (LI4, GB1, GB20, GB44, ST36) during 20 minutes, as well as ManaKa Wire technique in SI17 and ST23 points. A visual analogue scale (VAS) was used to assess the pain intensity before (VAS0) and after (VAS1) acupuncture treatment. Results: At the end of the session there was a rapid reduction in pain intensity (VAS0 = 10 and VAS1 = 2), and the patient felt less stressed. This permitted a whole evaluation according to Traditional Chinese Medicine, allowing an accurate diagnosis and continues treatment with more acupuncture sessions. Conclusion: One session of traditional acupuncture combined with Manaka wire technique reduced the intensity of TMD acute pain. However, more acupuncture sessions are necessary for an effective treatment of TMD.

137 Trismus mandibular treated with acupuncture: clinical case

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Objective: Describe the case of a patient, 60 years old, with pain in the temporomandibular joint (TMJ), with mandibular trismus (mouth opening limitation), treated with acupuncture in Acupuncture Clinic of Piracicaba Dental School (FOP/UNICAMP). Methods: it was held a dental conventional anamnesis and the specific of Traditional Chinese Medicine to identify the pattern of energy imbalance and selection of acupuncture points for the treatment. It was conducted palpation of the masticatory muscles and the TMJ region to verify the painful areas, muscle and / or joint. Selected acupuncture points were: LI4, ST44, SP6 and ExHN3. It was treated with six traditional acupuncture sessions, once a week, lasting 20 minutes. For pain intensity evaluation we used the Visual Analog Scale (VAS) at the beginning (inicial) and end (final) of each session, named VASi and VASf respectively. To assess the extent of mouth opening measure (MOM) used a millimeter ruler by noting the initial opening step (MOMi) before the first and final acupuncture session (MOMf) after the session. Results: In the first session of acupuncture was total remission of pain (VASi = 10 and VASf = 0) and increased mouth opening measure (MOMi = 18mm to MOMf> 40mm, remaining until the end of the 6th session. Conclusion: The action of acupuncture contributed to the improvement in pain symptoms and promoted relaxation of the muscles, helping the reestablishment of a normal mouth opening.

138 Use of acupuncture in an anxious patient with temporomandibular joint disorders (TMD)

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Introduction: The American Academy of Orofacial Pain defines the Temporomandibular Joint Disorders (TMD) as a set of disorders involving the masticatory muscles, temporomandibular joint and associated structures, multifactorial etiology and also associated with anxiety, stress and depression. The most common symptoms are pain in the face, joint and / or masticatory muscles. Acupuncture is a therapy of Traditional Chinese Medicine (TCM), which is based on the insertion of needles into specific body points in order to stimulate the central and peripheral nervous system to release neurotransmitters that enhance the process of restoration and maintenance health, controlling the patient's pain. The technique is based on the pursuit of harmony between body and mind through channels through which circulates energy called "Qi". Aim: To present a clinical case of a 24-year-old patient attended the acupuncture clinic FOP-UNICAMP. Methods: The patient underwent a thorough medical history and according to TCM, diagnosis presented was disturbance of shen (emotional imbalance), developing an inadequate chewing, which was treated with the following acupoints: HT7 / PC6 / SI3 / GB20 + TH23. Eight weekly sessions of 20 minutes were carried out. The initial pain was assessed on a visual analog scale (VAS), initially being 10 passing for 3 at the end of treatment. Results: The patient reported improvement in facial pain and reducing anxiety. Conclusion: It was concluded that acupuncture was an alternative and complementary technique effective in relieving the pain symptoms of anxious patients with TMD.

139 Use of Acupuncture in the clinical case of Bell 's palsy

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ABSTRACT . Objective: To report the clinical case of a patient, 53, with Bell's palsy, with facial paralysis of the face right after a herpes episode Simple that affected the right ear, treated with acupuncture in Acupuncture Clinic, School of Dentistry Piracicaba. Methods: After clinical examination and specific history of Traditional Chinese Medicine, diagnosed through pulse and tongue observation, identified the energy imbalance within the eight principles, selecting the following acupuncture points for the treatment: local points (on the face): GB1, SI18, SI19, TE17 and Yintang points and YuYao (Extra points) and distal points: PC6, LI4, GB20, SP6, CV23, KI 3. The points of ST4, ST5 and ST6 were used to surround the area, with the transfixed needles from one point to another. They were held four traditional acupuncture sessions a week lasting 20 minutes. The area affected in the face of the region was also stimulated with the hammer 7 Tips, guiding the patient to perform this procedure at home with a toothbrush to enhance the stimulation effect. Results: From the first session with acupuncture showed improvements in facial symmetry and improved eyelid closure of the right eye and lip lock in the labial region. In the following sessions the improvement of symptoms was further accentuated and other secondary symptoms such as insomnia and dizziness also decreased. Conclusion: Stimulation promoted by acupuncture in the affected area helped the restoration of normal facial on the right.

140 Use of auriculotherapy to treat acute peripheral Facial paralysis in a child - Clinical case

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Objective: To report the case of a child, female, 4 years old, suffering of acute peripheral facial paralysis, treated with auricolotherapy associated to therapeutic exercises to stimulate muscles and senses. Methods: A visual and clinical inspection was performed, where paralysis was found on the right side of the face, impairing the mime, lip and eyelids muscles. Auriculotherapy and therapeutical exercises were used three (3) days after the paralysis. The following auricular points were selected: Shenmen, Spleen-Pancreas and Liver. The parents were instructed to gently stimulate the points three times a day, for 4 days, at the end of which the seeds should be removed. The patient returned every ten (10) days to replace the seeds at the same points. In total, there were five (5) auriculotherapy sessions. The therapeutic exercises were performed with plastic balloons, bloworits and soft toothbrushes in the facial region. The exercises were performed daily. Results: After 48 hours from applying auriculotherapy, there was symptoms improvement. After ten (10) days, the lip and eyelids muscles showed subtle signs. In three weeks, there was only a slight lip and lower eyelid paralysis. After 45 days from the beginning of the symptoms, no paralysis clinical sign was apparent. Conclusion: Auriculotherapy associated to therapeutical exercises appeared to be effective in this case and it can be a treatment alternative for infant patients because it is therapeutical and not invasive, painless and with no contraindications.

141 Using acupuncture to treat temporomandibular dysfunction and idiopathic dentofacial pain. Case report

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Aim: Report a clinical case with temporomandibular dysfunction (TMD) and idiopathic dentofacial pain using the Acupuncture, a millenarian therapy of Traditional Chinese Medicine (TCM). Methods: A 66-years-old woman patient, whose chief complaint of right upper molar pain and TMD, was referred to the Acupuncture Clinic of Piracicaba Dental School – UNICAMP after being ruled out the chances of the pains of odontogenic and periodontal origins. It was held to fill the form in with some data, such as: clinical history, physical evaluation and specific exam of TCM. The initial clinical examination of the tongue exhibited whitish with thin coating and pulse evaluation showed a shallow, thin and tense pulse. Then, the diagnosis and treatment plan was carried out as according to TCM for Jing (Ancestral Energy) Disability. Eight weekly sessions of 20 minutes each one were carried out being the first of auriculotherapy with the points of the energy triangle (Shenmen, Sympathetic and Kidney) and another points: Heart, Anxiety and Jaw. The acupuncture points used were KD3, LI4, CV12 + SP10 + SP6, TH23 followed by auriculotherapy, from second to eighth session of treatment. The pain intensity was evaluated using the Visual Analog Scale (VAS) at the beginning (VASi) and at the end (VASf) of each session. Results: First session, VASi=10 and VASf=0; Second session, VASi=10 and VASf=0; Third session, VASi=7 and VASf=0. From fourth to eighth, VASif=0. Conclusion: Acupuncture treatment promoted regression and remission of the idiopathic dentofacial pain and the symptoms of TMD.

142 Effect of adding hexametaphosphate nanoparticles in fluoride dentifrice on dental remineralization: an in situ study

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Aim: The aim of this study was to evaluate in situ the remineralizing potential of conventional dentifrice (1100 ppm F) supplemented with nanoparticles of sodium hexametaphosphate (HMPnano) in artificial caries lesions. Methods: This blind, crossover study was conducted on 4 experimental phases with each lasting 3 days, and 7 days washout. Volunteers (n = 12) palatal appliances containing 4 enamel blocks with bovine artificial caries lesion. Treatment regimens were: No F/HMP/HMPnano (Placebo); 1100 ppm F (1100F), 1100 ppm F supplemented with 0.5% HMP micrometer and nanoparticulate (1100F/HMP, 1100F/HMPnano). The volunteers were instructed to brush their teeth with natural palatal devices in the oral cavity, the blocks treated with the slurry of dentifrice for 1 minute (3x/ day). After each phase, the percentage of surface hardness recovery (%SHR), integrated mineral loss (ΔKHN) and integrated mineral recovery (IMR) were calculated and fluoride (F) in particular enamel. The results were submitted to analysis of variance test and Student-Newman-Keuls ($p<0.001$). Results: The enamel surface became 65% more remineralized when treated with 1100F/HMPnano in relation to 1100F ($p<0.001$). 1100F/ HMPnano reduced ~ 32% in the body of the lesion relative to 1100F ($p<0.001$). Absorption F enamel was similar among groups, except for placebo ($p<0.001$). Conclusion: It was concluded that the addition of 0.5% HMPnano a conventional dentifrice, promoted significantly higher remineralizing effect compared to 1100 ppm F.

143 Anticaries effect of a gel with low fluoride concentration and supplemented with phosphate: in situ study

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The aim of this study was to evaluate in situ the capability of a neutral gel with low fluoride concentration and supplemented with sodium trimetaphosphate (TMP) in decrease enamel demineralization. This double-blind and cross-over study consisted of 5 phases, 7 days each. Volunteers (n = 12) palatal appliances initially containing 4 enamel blocks selected by the initial surface hardness (SHi). The cariogenic challenge was performed with 30% sucrose (6×/day). Treatment regimens were: 1100 µg F/g toothpaste (DF); no fluoride/TMP gel (Gel Placebo); 4500 µg F/g supplemented with 5%TMP (Gel TMP); 9000 µg F/g gel (Gel 9000) and Acid gel. After topical application of the gel or brushing with DF for 1 minute, 2 blocks were removed for analysis of calcium fluoride concentration formed in the enamel (CaF2 formed) (n=120). Next the experimental period It has been determined the hardness of the final hardness surface (SHf), loss of integrated subsurface hardness (ΔKHN) and the calcium fluoride concentration retained in the enamel (CaF2 retained) (n = 120). Data were analyzed by ANOVA, followed by Student-Newman-Keuls test ($p<0.001$). The Gel TMP group reduced the loss of hardness at 16% (SHf) and 25% (ΔKHN) compared to Acid Gel ($p<0.001$). Gel TMP showed higher CaF2 formed and retained compared to DF ($p<0.001$). It was concluded that it is possible to inhibit the demineralization of enamel fluoride gel with low concentration supplemented with 5%TMP, showing an anticaries effect superior to the conventional gels.

144 Anticaries potential of a fluoride gel containing sodium hexametaphosphate

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The aim of this study was to evaluate the ability of a neutral gel with low fluoride (F) concentration and supplemented with sodium hexametaphosphate (HMP) on remineralization of caries lesions. Bovine enamel blocks (n = 120) were selected and submitted to demineralization for 16 hours. Next, was determined the hardness after demineralization surface (SH1), and the blocks were divided into 5 experimental groups and treated for 1 min with the following gels (n = 24): 1) Gel without F/HMP (Placebo); 2) Gel 4500 µg F/g (4500), 3) Gel 4500 µg F/g plus 9% HMP (4500 9%HMP); 4) Gel 9000 µg F/g (9000) and 5) Gel 12300 ug F/g (Acid gel). Next, were submitted to 6 pH cycling (37 °C) for 6 days. After pH-cycling, the final surface hardness was determined (SH2), subsurface hardness (ΔKHN) and calcium fluoride formed and retained (CaF2) in the enamel. Data SH2 and ΔKHN were subjected to analysis of variance (1-way), and CaF2 data formed and retained on enamel were subjected to analysis of variance (2-way), followed by Student-Newman-Keuls test ($p<0.001$). The 4500 9%HMP group showed higher SH2 in compared to other groups ($p<0.001$). 4500 9%HMP and Acid gel groups showed better results for ΔKHN and similar to each other ($p>0.001$). The Acid gel had the highest concentration of CaF2 formed and retained ($p<0.001$). According to results obtained it was concluded that the addition of HMP at a concentration of 9% to a gel with a reduced concentration of F (4500 ppm) was able to promote remineralization of artificial caries lesions in this in vitro study.

145 Workshops of oral health promotion and experiments for control of dental caries for high school students

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Aim: It proposes a reflection from the information given through workshops of oral health promotion and experiments for control of dental caries for high school students. Methodology: Participative constructivist, part of prior knowledge to go then filling in the gaps of knowledge. Data collection was through workshops that addressed topics: oral health (oral hygiene, diet, tooth decay, fluoride), among others; and practical experiments in the field of biochemistry and microbiology. Results: The project was to articulate the oral health with various areas of knowledge, always linking with the social context of students. Everything is done voluntarily. The areas were: public health, anatomy, biochemistry and microbiology. By lived experience with the students, among the techniques of teaching and learning varied applied in the workshops, it is increasingly evident the need to adopt educational practices dialogical character, able to promote the active participation of students so that they feel protagonists, co-responsible for their health and improve their quality of life. Conclusions: The knowledge acquired, results in the production of new knowledge aimed at protecting and maintaining health.

146 Effect of acid etching on the wettability of pit and fissure sealants

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Aim: To evaluate the effect of bovine enamel acid etching on the wettability of pit and fissure sealants with different compositions. Methods: Forty bovine enamel blocks were obtained and distributed into four groups according to materials (Fluorshield®-FL, Dentisply, Germany and Defense Chroma Angie®-DC, Angelus, Brazil) and surfaces (acid etched with 35% phosphoric acid-AE and non etched-NE). The material wettability was measured by contact angle (sessile drop), using Digidrop goniometer and considering the following groups (n=10): 1. FL/AE; 2. FL/NE; 3. DC/AE; 4. DC/NE. Data were submitted to factorial ANOVA (material x surface) and Tukey's test (alfa=0,05). Results: There was not significant interaction between the materials and surfaces studied ($p>0.05$). However, there was influence of the material and surface in the wettability ($p<0.01$). The Defense Chroma Angie® sealant and the etched enamel surfaces showed a higher wettability. Conclusions: Regardless sealant, the highest wettability is showed on acid etching enamel surface. Defense Chroma Angie® sealant showed the highest wettability.

147 Association among salivary biomarkers, visible biofilm and early childhood caries - a longitudinal study

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Aim to: 1-Investigate the association between ECC and clinically visible biofilm, and salivary biomarkers as α amylase and carbonic anhydrase VI. 2- Investigate if salivary biomarkers such as α amylase and carbonic anhydrase as well as clinically visible biofilm can predict caries development in preschool children. The sample consisted of 100 preschool children 24-48 months, of both genders, who attended kindergartens and municipal preschools in the city of Piracicaba-SP, Brazil. The children underwent clinical examination to determine the decay rate using the Nyvad criteria, adapted for primary teeth by Séllos and Sovieiro (2011) and for verification of the presence of visible biofilm. Then, two groups were formed: caries free group (n=55) and group with caries(n=45). Following, saliva samples were collected and the activity of salivary α amylase and carbonic anhydrase VI were determined using Elisa and zymography methods, respectively. After one year, the children were clinically examined again to determine the decay rate and to verify the presence of visible biofilm. The results were subjected to Mann-Whitney test, chi-square test as well to multiple logistic regression analysis. In addition, the Spearman correlation test was used to assess the relationship between the decay and the studied variables. All analyses were performed using a significance level of 5% and a 95% confidence interval. The activity of AC VI was significantly higher in the saliva of children in the caries group ($p \leq 0.05$). On the other hand, the activity of salivary α amylase was significantly higher in the saliva caries free children ($p < 0.0001$). The presence of visible biofilm increased 3.6 times the risk to develop ECC (OR = 3.6). In addition, children with activity of salivary α amylase lower than 122,8 U/mL had 3.33 times higher risk of developing ECC than children showing higher activity of this protein in their saliva. (OR = 3.33). The results allow us to conclude that the presence of visible biofilm and a lower salivary activity of α amylase may be considered risk predictors for early childhood caries.

148 Assessment of the differences in masticatory behavior between male and female adolescents

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Aim: The present study aimed to compare the masticatory aspects and the prediction of masticatory performance between male and female adolescents. Methods: Ninety-one healthy subjects (47 girls, 44 boys), caries-free and aged 14-17 years, were included. The following aspects were evaluated: quality of masticatory function through a questionnaire, masticatory performance, maximal bite force, total chewing time, frequency of chewing cycles, Orofacial Myofunctional Evaluation with Scores (OMES) and salivary flow. The physical examination involved measurements of facial morphometry, body weight, height, skeletal muscle mass and dental/occlusal evaluations. Results: Boys showed larger facial dimensions, higher bite force and chewing frequency and better masticatory performance than girls. They also showed shorter chewing time, fewer chewing cycles and lower score for OMES. Bite force showed a weak correlation with skeletal muscle mass only in boys ($r=0.3035$; $p=0.0451$). The masticatory performance was dependent on the bite force in boys (Adj $R2=19.2\%$; Power=84.1%); among girls, masticatory performance was dependent on the frequency of chewing cycles and masticatory behavior (subjective aspect) (Adj $R2=34.1\%$; Power=96.1%). Conclusions: Boys probably compensate for the shorter chewing time and orofacial myofunctional alterations using a more powerful bite force and higher chewing frequency. The findings of this present study support the existence of gender differences in many in many functional and behavioral masticatory aspects.

149 Effect of addition of sodium hexametaphosphate in glass ionomer cement in fluoride release and enamel demineralization

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The aim of this study was to evaluate the incorporation of sodium hexametaphosphate (HMP) microparticle (m) and nanoparticle (n) in the glass ionomer cement (GIC) in the fluoride (F) release and on enamel demineralization. Six specimens of each material were prepared: GIC, GIC with 6, 9 and 12% of HMPm, GIC with 6, 9 and 12% of HMPn. The specimens were subjected to pH cycling for 15 days. Solutions cycling were collected daily for analysis of fluoride release. Bovine enamel blocks (n=80) were selected for the initial surface hardness test (SH1), adapted to specimens the different groups of GIC and daily immersed in demineralization solution (6h) and remineralization (18h) for 7 days. Enamel blocks without GIC (placebo) were included as a control group. Next, final surface hardness (SH2) was measured to calculate the percentage of surface hardness loss (%SH). The F release data were submitted to analysis of variance and %SH to Kruskal-Wallis test, followed by test Student-Newman-Keuls ($p<0.05$). To the F release, the highest values occurred on the first day in all groups ($p<0.05$). The mean total F released during 15 days was higher in the group 12% HMPn ($p<0.05$). The %SH was higher in the placebo group compared to other groups ($p<0.05$). Higher percentage of HMP incorporated into GIC led to lower loss %SH ($p<0.05$).It was concluded that the incorporation of HMPn in GIC promotes a greater F release and reduced enamel demineralization.

150 Effects of radiotherapy on microhardness, mineral composition and tooth morphology deciduous teeth

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To evaluate the effects of radiotherapy on the hardness, mineral composition and morphology of primary teeth. Methods: Thirty specimens of deciduous teeth were submitted to radiotherapy fractions of 180 cGy. At baseline and after completion 1080, 2160 and 3060 cGy, the specimens were submitted to microhardness and FT-Raman spectroscopy, which were analyzed phosphate (970 cm-1), carbonate (1070 cm-1), and proteins peaks, primarily collagen (1440 cm-1). At each experimental phase, two specimens were stored and later subjected to scanning electron microscopy. The results were compared between the experimental phases by Kruskal-Wallis test followed by Student-Newman-Keuls test. Results: The enamel surface hardness decreased after 2160 cGy radiation. For dentin, the surface hardness decreased after 1080 cGy, and this reduction was even greater after 2160 cGy. However, after completing 3060 cGy, the surface hardness differed only from baseline. The phosphate concentration in enamel decreased after 2160 cGy and then after 3060 cGy. For carbonate and collagen, decreased only after 3060 cGy radiation. For dentin, phosphate, carbonate and collagen concentration concentration increased after 2160 cGy and a decreased after 3060 cGy radiation. In the SEM images we observed progressive morphological changes such as enamel melting aspect, and degradation of peri-tubular dentine, resulting in progressive obliteration of the tubules. Conclusions: radiotherapy caused a reduction in surface hardness and changes in mineral content and promotes morphological changes on the enamel and dentin of primary teeth.

151 Enamel mineral quantification after treatment with phosphate nanoparticulate: In vitro study

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Aim: This study evaluated the effect of toothpastes containing 1100 ppm F associated with nano-sized sodium hexametaphosphate (HMPnano) on enamel demineralization in vitro, using a pH-cycling model. Methods: Bovine enamel blocks (4 mm x 4 mm, n=72) selected by the initial surface hardness (SHi) were allocated into six groups (n=12), according to the test toothpastes: without fluoride or HMPnano (Placebo), 550 ppm F (550F), 1100 ppm F (1100F), 1100F plus HMPnano at concentrations of 0.25% (1100F/0.25%HMPnano), 0.5% (1100F/0.5%HMPnano), and 1.0% (1100F/1.0%HMPnano). Blocks were treated 2x/day with slurries of toothpastes and submitted to five pH cycles (demineralizing/remineralizing solutions) at 37 °C. Next, integrated loss subsurface hardness (ΔKHN) and integrated mineral loss (gHAp×cm-3) were determined. Data were analyzed by ANOVA and Student-Newman-Keuls' test ($p < 0.001$). Results: Toothpaste with 1100F/0.5%HMPnano led to the lowest mineral loss and the highest mineral concentration among all groups, which were 21% (ΔKHN) lower and ~58% higher (gHAp×cm-3) when compared to 1100F ($p < 0.001$). Conclusion: It is concluded that addition of 0.5% HMPnano the toothpaste 1100F significantly reduces the demineralization of enamel and increases its anticariogenic effects, when compared to its equivalent without HMPnano. (Apoio: FAPESP N° 2014/066769)

152 Free energy evaluation enamel Surface after treatment with fluoride and phosphate : in vitro study

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The aim of this study was to evaluate the adsorption capacity of sodium hexametaphosphate microparticle (HMP) associated with fluoride (F) on the tooth enamel. Bovine enamel blocks (4 mm x 4 mm, n = 96; 12/group) were selected and divided into 8 groups according to the following treatments: 0%; 0.25%; 0.5% and 1% HMP; associated or not to 1100 ppm F. The following were treated with their solutions for 2 minutes under constant agitation. The surface free energy (mN/m) was calculated by measuring the contact angles of liquids three probes: deionized water, diiodomethane and ethylene glycol determining polar and nonpolar components of the enamel surface. They analyzed the concentration of HMP and F in the solutions, before and after treatment. The data showed a normal distribution and homogeneous and then were subjected to ANOVA followed by Student-Newman-Keuls test ($p < 0.05$). The higher % HMP solutions in greater adsorption of HMP and electronegativity the surface of the enamel ($p < 0.05$). F led to a more electronegative surface ($p < 0.05$) compared to 0% HMP group. Since the associations F/0.25%HMP and F/0.5%HMP values were higher compared to F ($p < 0.05$), but similar to the treatment without F ($p < 0.05$). Adsorption of F was higher with 0.5%HMP compared to other groups ($p < 0.05$), and these were similar to each other ($p > 0.05$). The adsorption HMP enamel was lower when treated with F/0.5%HMP and F/1%HMP ($p < 0.05$). The nonpolar component has not changed with the treatments. We conclude that the associated HMP or not to fluoride promotes a more electronegative surface.

153 Indirect evaluation of pit and fissure sealants: CAD-CAM method validation

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Aim: To compare indirect methods to assess the clinical performance of pit and fissure sealants and to validate the evaluation using Computer Aided Design (CAD-CAM). Methods: The sample consisted of 58 plaster model pairs and photographs obtained during 18-month follow-up of first permanent molars sealed with resin sealants. Pre-established criteria were applied to categorize the sealant presence/absence and marginal integrity. The evaluations were performed by two calibrated examiners, independently, using Scanning Electron Microscope (MEV; gold-standard), Photography, CAD-CAM (CEREC) and Stereomicroscope. The intraexaminer Spearman correlations were 94% and 97%, and the interexaminer 96%. The data were submitted to the Kappa test, Spearman correlation and Receiver Operating Characteristic Curve (ROC). Results: CAD-CAM and MEV presented good concordance; Stereo showed regular concordance with MEV and CAD-CAM (p0.001). There was no concordance between Photographic and the others methods. MEV had significant positive correlation with CAD-CAM and Stereo (r=0.76 and 0.71, respectively; p0.01). There was significant positive correlation (r=0.65) betweem CAD-CAM and Stereo (p0.01). There was no correlation with Photography and the other methods. The ROC estimated curve areas for Stereo and CAD-CAM were 0.90 (IC:0.81-0.99) and 1.0 (IC:1.0-1.0), respectively ($p<0.001$). The Photography presented lower sensitivity and specificity (area=0.59). Conclusions: The CAD-CAM showed the best performance, exhibiting high sensitivity and specificity, therefore, it was validated as a reliable method to evaluate pit and fissure sealants.

154 Influence of salivary parameters in the caries development in orthodontic patients - An observational clinical study

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Aim. To evaluate the effect of orthodontic treatment on salivary properties considering caries development. Methods. Twenty two individuals (11-22 years) were assessed regarding caries, oral hygiene, sugar exposure, salivary flow rate (SFR), buffering capacity, pH, carbonic anhydrase VI (CA VI) and amylase activity, at baseline, 1, 3 and 6 months after the orthodontic appliances placement. Caries index was determined by Nyvad criteria. CA VI and amylase activities were performed by zymography and ELISA, respectively. Results. Buffering capacity decreased after 3 months ($p<0.0001$). Amylase activity decreased after 6 months ($p=0.0003$) and presented positive correlation with CA VI ($r=0.73$, $p=0.005$) after 6 months in patients who developed active carious lesions (ACL). SFR increased only after 1 month of orthodontic treatment ($p=0.0283$). After 6 months, 59.09% of participants developed caries ($p<0.0001$). The number of dental surfaces showing active non-cavitated carious lesions increased after 3 and 6 months. Consequently, a significant reduction in the number of sound dental surfaces after 6 months of placement of the orthodontic appliances was observed ($p<0.0001$). Conclusions. The present study demonstrated that saliva of individuals under orthodontic treatment is subjected to changes in properties that have implications on the onset of ACL. The establishment of effective caries preventive measures, even before the orthodontic appliances placement, is strongly suggested.

155 Infraocclusion in Primary Molars: A Case Report

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The infraocclusion is the clinical term used to describe a tooth that is below the occlusal level, tooth ankyloses is therefore is considered the most important etiological factor, which is defined as the anatomical fusion between cement and/ or enamel and the alveolar bone. It can happen at any time of tooth eruption or even after the establishment of occlusal contacts. The objective of this study is to present a clinical case of severe infraocclusion in primary molars. Patient, male, with 6 year and 9 months old, residenst of Aracatuba and attending the clinic of prevention of Dentistry, São Paulo State University-UNESP, campus of Araçatuba. Clinically the first left primary molar (74) presented infraocclusion with location below the proximal contact of the adjacent teeth. Radiographically it can be observed discontinuity of the periodontal ligament in some areas of the root. The final diagnosis was severe dental ankylosis of the tooth 74. The proposed treatment was the extraction of the tooth 74 and the placement of a space maintainer. It was concluded that early diagnosis of ankylosis in deciduous teeth is important to decide the appropriate treatment according to the patient's age and classification of the disease. If indicated, the extraction of ankylosed tooth in ages where the permanent tooth is not at erupting period it is necessary to place a space maintainer and monitoring clinically and radiographicly until the permanent teeth erupts and reach the occlusal plane.

156 Physical and mechanical properties of a glass ionomer cement modified by chlorhexidine diacetate or ZnO nanoparticles

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Aim: Dental materials combined nanoparticles (NP) or chlorhexidine (CHX) has demonstrated favorable effects against microorganisms. But this association may lead to serious physical and/or mechanical damage to the material. The aim of this study was to evaluate the surface roughness, porosity, Vickers hardness and compressive strength of a GIC associated to 1% CHX diacetate or 1% NP ZnO. Methods: The experimental group were: C-control (GIC); D (GIC+CHX); e Z (GIC+NP ZnO). The surface roughness was evaluated by rugosimeter, and arithmetic average of the readings performed. For porosity, the specimens were analyzed in Image J program with the assistance of images obtained by SEM. The Vickers hardness was analyzed by digital microdurometer. For compressive strength, it was used the mechanical test machine EMIC. It was performed unidirectional variance analysis, using the Tukey test for multiple comparisons of means. The homogeneity conditions of variance and normality of the data was verified by Levene and Shapiro-Wilk tests. The significance level adopted for decision-making was 5%. Results: Group D had the lowest hardness values. Among groups C and Z there was no statistically significant difference. The roughness showed a significant increase of D, C and Z. There was no difference in the number of pores, but the occupied area was higher in group C. The compressive strength was statistically similar between groups. Conclusions: In conclusion, given the possibility to obtain antimicrobial activity, the addition of 1% CHX diacetate to GIC is a good option when the maintenance of its physical and mechanical properties is wanted.

157 Remineralizing action of a fluoridated toothpaste with the phosphate nano-sizeds: 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 fluoride (F) in enamel were calculated. 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 ($p<0.001$). It was found that adding 3% TMPnano a conventional dentifrice, promoted significantly higher remineralizing effect when compared to 1100 ppm F.

158 Auxiliary personnel in dentistry in the Workers Union in Health Care establishments

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Aim: To identify the dental clinics associated with the Workers Union Health Service facilities for a survey about their scope and relevance of the applicability of its functions over time. Methods: Data were collected in two stages: 1 - in the Union, the variables: National Registry of Legal Entities of registered dental clinics, city and registration year at the Union. 2 - online Collects: National Classification of Economic Activities in the Ministry of Finance website; amount of labor claims in progress, provided by the Labor Shares of Electronic Certificate, in the portal of the Ministry of Labor Justice, which was issued on the same day, to control a possible variability of results and year of foundation of the company in portal of each Municipality. Results: The results were 62 dental clinics registered in the Union. Indicated that: half of the clinics are in Piracicaba, the average foundation is 11 years, more than 75% perform dental activity and only 32.25% are with labor claims in progress. Conclusions: This study found that the union as a defender of the interests of the working class by driving labor, regardless of territorial location, uptime and time of affiliation to it.

159 Career military and military dentistry: a promising market

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AIM: The aim of this study is to discuss the military career focusing on: what is to be military, joining the main schools connected to the military, military dentistry. RESULTS: Military is an individual belonging to a particular organization that has authority in the armed forces, which are formed by the Army, Navy and Air Force. Together, they work in order to maintain order, security and sovereignty of the country. These organizations are present in virtually all countries and can act in considered situations of war or even on special missions. Joining the military career generally occurs through specific colleges and academies in the training of officers. To enter these schools, you must complete some prerequisites regulated in existing laws in three areas: Aeronautics, Navy and Army. The main schools connected to the armed forces are: Preparatory School of Army Cadets, which is the Army; Preparatory School of Air Cadets, which is the Air Force; and the Naval College, the Navy. Military dentistry grows rapidly in the professional setting. This is a practical and scientific manner, reference was made in the clinical care of all specialties, research, training and training courses, with their officers dentists increasingly prepared and usually master and doctor. A military career is currently seen as a promising area, because of the stability it offers and have considerable good rates of pay, with career plans and enabling career advancement. CONCLUSIONS: We conclude that a military career, as well as military dentistry, is a promising career, which should be analyzed according to the individual's profile.

160 Expertise in dentistry: criminal, civil and occupational areas

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AIM: This literature review study aims to discuss expertise in dentistry, criminal area, civil and occupational. RESULTS: Operations to provide technical and scientific explanations to justice, the skills are performed at the request of competent authorities and contribute to the judges can issue a judgment in a fair and impartial manner. The expertise should be performed by an experienced professional and technically skilled in a particular subject, having the task to see and refer to facts whose clarification is of interest in the process - through which justice is used to resolve conflicts and promote social peace, order to guarantee the right to those who have. The expertise in the civil area in dentistry occur mainly in reimbursements damage, as in cases of professional liability or dental malpractice. The judicial arbitration of professional fees, paternity exclusion, estimated age, especially in cases of adoption and evaluation of dental equipment for contractual purposes and evaluation of insurance can also be realized in the civil context. The expertise in the criminal area that is performed when there is suspicion of a crime, or for medical or forensic dental identification. Occupational expertise in dentistry is an indispensable function in the current context of social relations and between employee and employer. CONCLUSIONS: The expertise is important and necessary in the different areas.

161 General and oral pathology and occupational health surveillance

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AIM: This literature review study aimed to discuss general and oral pathology and occupational health surveillance. RESULTS: Dentistry in recent years have directed their greatest concerns to that huge portion of the poor of all nature resources and, therefore, is subject to the development of various systemic diseases and oral diseases. Health professionals, mostly of an elite class, just live with the poorest people. There are studies reporting potential association between occupational exposures and oral diseases, affecting the health of workers. Among occupational exposures present in the dental literature, there is a predominance of studies of acidic substances and related exposures sugar, as sugar dust. Oral diseases can manifest in both hard tissues (caries, dental erosion, etc.) and soft tissue (oral lesions, periodontal disease, etc.). CONCLUSION: It is important and necessary research in this area, training of human resources and implementing more effective programs, based on the principles of surveillance in workers' health.

162 Oral health of indigenous peoples in brazil

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AIM: This literature review study aims to discuss the oral health of indigenous peoples in Brazil. RESULTS: The oral health of indigenous peoples is marked by a lack of data makes it impossible to design a broad epidemiological picture and robust, which takes into account the heterogeneity that certainly exists in the context of indigenous peoples. Contact with the white, allowed the change of eating habits and hygiene; inserting dietary sugar, and rice cracker, but did not come brush and paste with fluorine. The Satere-Mawe people and Ticuna, both in the Amazon region, have always had a special way to take care of teeth and overall health. The Ticunas took care of hygiene, since before the birth of teeth. They spent jenipapo in child gum to be born strong. In adulthood, after chewing the flesh, they washed his mouth with water and munched wotcha, a plant of the forest. In addition, used tucum wire to clean teeth and brushed with a grass stalk, like a brush, says the dentists. They had no knowledge of today. The federal government launched in 2011, Brazil Indigenous Smiley a Ministry of Health policy, coordinated by the Special Secretariat of Health. CONCLUSIONS: It is important and necessary to expand access to dental care in the villages, structuring and qualifying the oral health services the Special Indigenous Sanitary Districts to address the oral health of these people.

163 Process of preparing and approval of municipal education plan of Piracicaba

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AIM: The aim of this study is to discuss the preparation and approval of the Municipal Education Plan (MEP) in the city of Piracicaba. RESULTS: The MEP began to be drawn in mid-2014 by the Municipal Council of Education (MCE) in Piracicaba. The MCE team developed the proposal based on the national training course completion term of municipal councilors of education, which was presented to the Municipal Secretary of Education of Piracicaba. The Plan provides for disclosure, every three years, the results of monitoring and reviews on the internet and in municipal conferences. Responsibility for transparency is divided between the City Department of Education, the Legislature and the MCE Branch, which should analyze and propose public policies to ensure the implementation of strategies and the achievement of targets. They should also hold at least three conferences until the end of the term of MEP. The MEP was approved on 2016, June 27, in the City Council; and had 16 overall goals to be implemented in the city until 2024. Approved by Law No. 8,501, of 2016, July 7, has 10 guidelines, including the eradication of illiteracy, universal school attendance, overcoming educational inequalities (with emphasis the promotion of citizenship and the eradication of all forms of discrimination), improving the quality of education, training for work and citizenship with emphasis on moral and ethical values on which is based the society. CONCLUSIONS: MEP is important and necessary to the municipalities, and it is the population follow the implementation of this.

164 Association between oral habits, anxiety and malocclusion

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Aim: The aim of this study was to associate the presence of oral habits with anxiety and malocclusion. Methods: A cross-sectional study was realized on a sample of 199 students 6-14 years old. Malocclusion was evaluated using the Index Orthodontic Treatment Need (IOTN) and was conducted by previously trained and calibrated examiners (Kappa=0, 97). Oral Habits Questionnaire and Hospital Anxiety and Depression Scale (HADS) were used to assess oral habits and anxiety. The schoolchildren were divided into two groups: mixed and permanent dentition. The associations between the outcome variable (oral habits) and the independent variables (anxiety and malocclusion) were evaluated using the Exact Fischer test and chi square for association between variables, with 5% significance level. Results: The results showed that individuals in the permanent dentition with malocclusion, 77.4% reported some deleterious habit, and 55% of those with no malocclusion at this stage, had deleterious habits associated. There was a significant difference between the absence or presence of habits in the different groups (p = 0.0596), and the habit of biting his lips was more significant (p = 0.0002). Conclusion: We conclude that in the permanent dentition the majority of patients with malocclusion showed a deleterious habit but no association with anxiety.

165 Cephalometric changes in the skeletal and dentoalveolar growth following the use of the twin block appliance

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The Class II Division 1 malocclusion with mandibular retrognathism in growing children can be effectively treated with Twin block appliance as described initially by William Clark. This appliance is used to correct the maxillomandibular and dentoalveolar morphological alterations as well as to adequately restore facial muscular function. This appliance doesn't only induce sagittal modifications, but also correct transverse and vertical defects in the dento-skeletal structures. The purpose of this study was present the cephalometric changes in the skeletal and dentoalveolar growth following the use of the Twin Block appliance in two 9 year old patients with dentoskeletal Class II treated in the mixed dentition. The patients exhibited an improvement in the maxillomandibular relationship with reduction of the interincisal angle as a result of the increase of upper and lower incisor inclination. There was maintenance of the facial growth pattern and the facial profile showed a favorable esthetic modification caused by the most anterior positioning of the mandible and soft tissues.

166 Dental and skeletal changes induced by the use of Klammt appliance in individuals with Class II division 1 malocclusion

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Aim: the objective of this retrospective cephalometric study was to evaluate dental and skeletal vertical and horizontal changes induced by the use of orthopedic and resulting apparatus of natural growth through cephalometric radiographs in norm of 45° of individuals with Class II division 1 malocclusion with mandibular retrusion. Methods: a sample of 50 individuals aged 7-9 years with malocclusion Class II first division was used, divided into 2 groups: group treated with the Klammt apparatus (n = 31) and control group (n = 19). The control group was matched to the group treated with respect to gender and chronological age. Statistical analysis was performed using the Student t test. Results: the Klammt appliance promoted the correction of malocclusion in the period of one year, through mesialization of the lower first permanent. The Klammt appliance was influential in jaw structure, moving forward. Conclusions: it was concluded that treatment of Class II using the orthopedic device Klammt goníaca influenced the area, which was displaced downwards and forwards to keep the natural growth of the condyle to posterior and chin, and to previous correction of this malocclusion is given, according to the results, for mesial first molar.

167 Dental effects of removable extraoral appliances on the treatment of Class II

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Introduction: Removable extraoral appliances are indicated on the treatment of Angle Class II Division 1 malocclusion with maxilar protrusion and promote skeletal and dentoalveolar changes. The analysed literature related that removable extraoral appliances promoted an increase on intermolar and intercanine distances, upper and lower, an increase of upper arch depth, a decrease of lower arch depth, an increase of upper arch perimeter, decrease of overjet, increase of overbite and also na improvement on molar relationship. Of the reviewed studies, only one used cast models to evaluate the changes on dental arches of pacients treated with removable extraoral appliances. Aim: In this study, a research was conducted with the aim to evaluate shape and dimensions changes on dental arches of patients treated with modified Thurow extraoral appliance. Methods: Cast models of seventeen patients treated with modified Thurow extraoral appliance and with average age of 8.8 years old were obtained on the beggining (T1) and after 1 year of treatment (T2). A paired control group was generated using Moyers et al sample from 1976. Results: The statistical analysis showed that the appliance promoted significative changes on upper and lower arch dimensions and on relationship between arches. Furthermore, after 1 year of treatment the group of treated patients were closer to normality, approaching to the values observated on Control Group, demonstrating the improvement of maxilomandibular relationship with the use of modified Thurow extraoral appliance. Conclusions: The modified Thurow extraoral appliance promoted favorable upper and lower arch dimensional changes and an improvement on the relationship between arches, reducing the Overjet, correcting the overbite and molar relationship.

168 Histomorphometric analysis of dental movement induced in ovariectomized rats

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Aim: This study aims to assess histomorphometry by the process of bone remodeling in induced tooth movement (OTM) in the presence and absence of the estrogen hormone. Methods: Twenty Wistar female rats were used. Control group (OTM): tooth movement and Experimental Group (OTM+OV): tooth movement and ovariectomy. The maxillas were isolated, analyzed macroscopically and stained with hematoxylin and eosin, picrossirius-hematoxylin and toluidine blue techniques. Results: The macroscopic analysis, the OTM+OV group had a greater movement in relation to the OTM group, at a ratio of 1.21: 1. In OTM+OV group at 14 days there was a significant increase in the number of fibroblasts and osteoclasts and significant decrease in granulocytes. But there no difference in the number of blood vessels in 7 and 14 days in OTM+OV groups. The area of birefringent collagen fibers traction side of mesiobuccal root showed significantly higher values at 14 days compared with 7 days in OTM+OV groups. Conclusions: The results suggest that the deprivation of estrogen hormone accelerates the process of bone remodeling and tissue reorganization involved in OTM.

169 Maxillary rapid expansion for the treatment of a mixed dentition posterior crossbite: Case report

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The prevalence of mixed dentition posterior crossbites ranges from 17 and 22%. This malocclusion consists on a developmental dentition disturbance characterized by a deficiency on the maxilla transversal growth. 90% of the cases show differences between mandibular positions of Centric Relation(CR) and Centric Occlusion (CO), as the mandible needs to be displaced laterally and/or forwardly to allow lower teeth to contact the high number of maxillary teeth. So, at CO, posterior crossbite is seen just at one side, and stop existing when the mandible moves to CR position. Usually, the therapeutic procedure points to adjust maxilla and mandible transversally, by means of upper arch expansion. On present case report, the choice was the facial orthopedic fixed appliance with the Hyrax type expander screw, second deciduous upper molars bands and anterior extensions for canine bonding. Patient (GRSL), 6 years and 2 months old, was treated on undergraduateprogram of Piracicaba School of Dentistry, Campinas State University. The expansion activation protocol was half a turn by day, ¼ at morning and another ¼ activation at night. The total activation period was 14 days and promoted almost 6mm of expansion screw opening (0.8mm per completeturn). Clinically, it was observed the correction of right side posterior crossbite. Maxillary occlusal X-ray confirmed the maxillary median suture opening. Expander appliance will continue in position for an addition 3 to 4 months period till the confirmation of suture complete ossification. Then the expander it will be replaced by a removable retainer for more 6 months.

170 Oral health impact on quality of school of life and associated factors

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Aim: This study assesses the impact of oral health related to the quality of life of schoolers and associate it to clinical, behavioral and social aspects of their lives. A cross-sectional study in a sample of 210 schoolchildren aged 8 to 14 years old in two stages of occlusal development (mixed and permanent dentition) was carried out. Methods: For the perception of the impact on quality of life, the schoolers responded to the Child Perceptions Questionnaire (CPQ) and parents / caregivers answered to the Family Impact Scale (FIS), as well as socioeconomic questions. For diagnosis of malocclusion and dental cavities, indexes recommended by the WHO were used. At the beginning, an individual analysis of the impact on quality of life and the variables studied was carried out, estimating gross odds ratios with the respective intervals of 95% of reliability. Variables with p≤0,20 on the individual analysis were tested in a multiple logistic regression model. The ones with p≤0,05 were kept in the model. Results: In mixed dentition, despite the high prevalence of malocclusion (88.6%), the negative perception of the schoolers in relation to oral health (p = 0.0145) leads to a greater chance of having an impact on quality of life (OR = 3,17). In the permanent dentition, the quality of life also suffered the impact of the negative self-perception of oral health (p = 0.0010), however, children with DMFT> 1 are more likely (OR = 2.59) to show an impact on quality of life. Conclusions: Therefore in the mixed and permanent dentition the self-perception of the schoolers about their own oral health caused negative impact on quality of life. The presence of cavities in the permanent dentition can lead to negative impact on quality of life of the schoolers.

171 Quality of life impact on the severity of maloclusion

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Aim: To investigate the quality of life impact on malocclusion severity and associated factors. Methods: A cross-sectional study was conducted with 247 adolescents aged 12 years. Parents/caregivers answered a structured questionnaire on demographic and socioeconomic variables. Schoolchildren answered the Child Perceptions Questionnaire (CPQ11-14) to investigated the impact on quality of life. A trained examiner recorded the presence of malocclusion (Dental Aesthetic Index [DAI]) and dental caries (CPO-d). Initially frequency distribution tables were constructed and descriptive test of the DAI variable. The following test were performed simple logistic regression, estimating crude odds ratio and its 95% confidence interval. In logistic regression analyzes were used two cutoff points for DAI outcome variable (to severe and even very severe). Variables with p≤0,20 were tested in a multiple logistic regression model. Results: The prevalence of very severe and severe malocclusion was 79.8%. There was no significant association between very severe occlusion and variables (gender, race, income, parent education and mother, quality of life and CPO-d) (p>0,05), but the prevalence of impact on quality of life is 73.3%. Conclusion: There were no significant associations between the severity of malocclusions with caries and quality of life. However, individuals with an income lower than a minimum wage and a half were more likely to develop severe malocclusion or very severe malocclusion.

172 Rapid maxillary expander appliance fabrication using a positioning silicon guide: Technique report

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Expansion screws used to fabricate rapid maxillary expanders must be precisely positioned to allow these appliances secure and predictable treatments. Therefore, the expansion screw long axis must be positioned (1) perpendicularly to the median palatal suture, which means free of longitudinal axis rotation; (2) it should also be parallel to the occlusal plane and as closer as possible of the palate, that is, free of transversal or sagittal axis rotations, and (3) palate transversally centered, with the expander screw halves contact line coincident with the median palatal suture. Therefore, the bending and adjustments process of these expansion screws can be considered laborious, especially when taking in account the 1.5mm thickness of the Hyrax type expander screw support stems. This technique report aims to present a fabrication protocol for maxillary rapid expanders appliances with Hyrax screws with a positioning silicon guide for expander screw. This fabrication guide is made with heavy condensation silicon impression material. In this way, it allows for the precise repositioning of the expander screw on the dental cast during bends and adjustments procedures. Support stem bends can be adjusted till the expansion screw shows a passive set on the silicon guide, before further adjustments bends. Therefore, the use of the positioning silicon guide improves the Hyrax type rapid maxillary expansion appliance fabrication by increasing the reliability of screw position.

173 Relationship between orthodontic diagnosis indexes in association with quality of life

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Aim: The aim of this study was to assess the relationship between two orthodontic index containing aesthetic and clinical criteria, and associate with quality of life. Methods: A cross-sectional study of a representative random sample of children aged 12 (n = 248) was carried out in Araras (São Paulo, Brazil). The children were asked to fill out the Child Perception Questionnaire for 11- to 14-year-old children (CPQ11–14) and were then clinically examined to determine the severity of their malocclusion using the Index of Orthodontic Treatment Need (IOTN) and Dental Aesthetic Index (DAI). Data were analyzed using descriptive statistics and bivariate analysis followed by multiple logistic regression (α = 0.05). Initially, individual analyzes of the associations between the IOTN and the DAI and the other variables were carried out. Variables with p≤0.20 in individual analysis were tested in a multiple logistic regression model, remaining in the model variables with p=0.05. The intensity of orthodontic treatment need was associated with malocclusion impact on quality of life (p<0.05). Results: Schoolchildren classified with defined, severe or handicapping malocclusion showed 4.3 times more likely to be classified with moderate or severe orthodontic treatment need by IOTN. Conclusions: Although DAI and IOTN have been expressed differently in relation to orthodontic treatment need, with DAI overestimating malocclusion, both indicated that children with severe malocclusion have a negative impact on quality of life.

174 Stress generated by orthodontic intrusion of supra-erupted maxillary first molar: finite element method study

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This study evaluated the stress on tooth and alveolar bone caused by orthodontic intrusion forces in a supra-erupted upper molar by using a three dimensional Finite Element Analysis (FEA). Methods: A superior maxillary segment was modeled in the software SolidWorks 2010 (SolidWorks Corporation, Waltham, MA, USA) containing: cortical and cancellous bone, overerupted first molar, periodontal tissue and orthodontic components. A finite element model has simulated intrusion forces of 4N in tooth, directed to different mini-implant locations. Three different intrusion mechanics effects were shown: anchoring in a buccal mini-implant; anchoring in a palatal mini-implant or the association of both anchorage systems. All analyses were obtained by minimum principal stress and total deformation. Qualitative analyses exhibited stress distribution by color map. Quantitative analysis were taken from specific software (ANSYS Workbench 14, Ansys, Canonsburg, Pennsylvania, USA) via numerical reading. Results: Intrusion forces applied from both sides (buccal and palatal) resulted in a more homogeneous stress distribution. No high peakof stress was detected and it has allowed a vertical resultant movement. Buccal and palatal forces resulted in concentrated stress zones with higher values and tooth tipping to respective force direction. Conslusion: Unilateral force promoted higher stress in root apex and higher dental tipping. The bilateral force promoted better distribution without evidence of dental tipping. Bilateral intrusion technique suggested lower induction of root apex resorption.

175 The incidence of upper interincisal diastema in mixed dentition

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Aim: The aim of this reprostective study was to verify the incidence of the upper interincisal diastema in children with mixed dentition and the correlation with possible etiological factors: the presence of mesiodens, the presence of agenesis in the permanent dentition, the presence of abnormal upper labial frenum, excessive interincisal osseous tissue, the presence of imperfect fusion of the mideline upper region and deleterious oral habits. Methods: The 520 panoramic radiographics of the children in 7 to 12 years of age, of both gender, treated in Pediatric Dental Clinic of the Piracicaba Dental School-UNICAMP was analysed and, only cases with diastema more than 1,5mm was selected and the diastema was direct measured in panoramic radiographics using a digital pachymeter. Results: The results demonstrated ausence of gender dimorphism and that the presence of diastema occurred in 29 cases with diastema more than 1,5mm. Concerning of the totality of the cases, 520 panoramic radiographics, the diastema occurred in 5,57% distributed: 10 cases in 7 years of age; 7 cases in 8 years of age; 8 cases in 9 years of age; 2 cases in 10 years of age; 1 case in 11 years of age and 1 case in 12 years of age; 6,89% associated with the mesiodens presence and 6,89% with agenesis; 10,34% associated with the presence low insercion of the labial frenum; 75,86% associated with excessive interincisal osseous tissue idiopatic. Conclusion: The authors concluded that the diastema incidence reduce with the advance of age.

176 The influence of the nasal morphology in nasolabial angle

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Aim:to verify the influence of the nasal morphology in the nasolabial angle by eletronic and manual review of the literature. The PIBIC EM FOP UNICAMP students will show cases with and without esthetics nasolabial angles, cases with propitious orthodontic treatment and not. Methods The activities developed in the project "theInfluence of the nasal morphology on thenasolabial angle" had included: mainly to receive orientações and training on theattainment from the scientific informationpublished in articles and propagated in thediverse sources from information the electronic;to select more pertinent scientific articles to the subject of the project; to receive training fromreading, interpretation of selected articles; to develop abilities that allowed to elaborate a synopsis of selected articles; to develop abilities for the scientific writing accomplishment. After the part of elaboration of scientific summaries: to receive training frommensuration of the nasolabial angle initiallyusing drawings of profiles with diverse types ofnasal morphology; to evaluate the nasolabialangle using photographs of profile of artistspropagated in searches; to evaluate nasolabialangle using telerradiografias, obtained in lateralnormal of patients between 09 and 10 years ofage, the feminine sex with normal occlusion; to receive training from statistical analysis of obtained data. Results and Conclusion These activities had allowed to visualize theroutine of a researcher in the area of Orthodontics.They had allowed visualizing as the researcher, after the attainment of the information published inscientific literature and of the data of its research, develops an article for the publication. All the aims initially stipulated for the developmentof the project "the Influence of the nasalmorphology on the nasolabial angle" widely were accomplished allowing the development of myscientific abilities extending the awareness of themy aptitudes which will guide me in the choice most appropriate of a profession in the future.

177 CCL5 interactions with its receptors CCR1 and CCR5 promote proliferation of oral squamous cell carcinoma cells

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Aim: The role of CCL5 in leukocytes in the tumor microenvironment is becoming clear, however, the extent of this chemokine functions on cancer cells remains largely unknown, especially in oral cancer context. Here, we aimed to examine the expression of CCL5 receptors (CCR1 and CCR5) in oral squamous cell carcinoma (OSCC) cell lines as well as the role of CCL5 in the proliferation of these cells. Methods: Chemokine receptors expression was investigated in human OSCC cell lines SCC-9, SCC-15, SCC-25 and LN1 using real time quantitative PCR. Proliferation index of OSCC cells treated with different concentrations (0, 1 or 3 ng/ml) of CCL5 was investigated by a ELISA system based on detection of the Ki-67 protein. Results: The results showed that SCC9 cells presented significant expression of CCR1 and CCR5. High expression levels of CCR5 were also detected in SCC25 and LN1 cells. However, SCC15 cells have not presented significant expression of none of receptors evaluated. The stimulation with CCL5 increased the proliferation of all OSCC cell lines analyzed. Although SCC9 and SCC25 cells have demonstrated higher proliferation only after their treatment with higher dose of CCL5 (3 ng/ml), LN1 cells showed significant proliferation even with 1 ng/ml of CCL5. Interestingly, even presenting lower expression of CCL5 receptors compared with the control, SCC15 cells showed significant proliferation rates even when treated with the lowest dose of CCL5 (1 ng/ml). Conclusions: Taken together, these results indicate that CCL5 promotes proliferation of oral cancer cells, suggesting that the analysis of CCL5 expression levels may represent an important prognosis factor.

178 Dental pulp reactions in radiation-related caries

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Aim: The aim of this study was to characterize pulp morphological reaction in RRC and to further compare with standard caries. Methods: Twenty-two carious teeth (received a mean dose of 53 Gy) extracted from 22 patients who underwent HNRDT were divided in control (n=11) and test (n=11) groups and further assessed by the Post-Radiation Dental Index (PRDI). Anatomical origin and PRDI scores matched samples from both groups. Optical light microscopy investigated micromorphological components of the dentin-pulp complex as well as patterns of demineralization. Results: Most of the patients were males (63.63% test vs. 90.9% control) with a mean age of 58 years. Patterns of dentin demineralization varied according to the PRDI (3.8 test and 3.2 control) in both groups, with similar lesions depth (1056,95µm test vs. 1158,58µm control). Pulp histopathological patterns were similar in both groups and varied according to PRDI scores. Chronic inflammation, pulp calcifications, disarrangement of the odontoblasts layer, reactional dentin and congested blood vessels were observed equally in both groups. Conclusions: The present study rejected the hypothesis that HNRDT is able to alter the micromorphological pulp reactions to RRC progression. Hence, direct effects of radiation may not be regarded as an independent factor to explain the rapid onset and aggressive clinical patterns of RRC progression.

179 Digit ratio of dental undergrad students may influence the choice of the postgraduate course

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Aim: The aim of this study was to determine the influence of digit ratio of undergrad students on the intention to attend latu sensu (specialization) or stricto sensu (Master or PhD) courses. Methodology: Eighty-nine undergrad students, 22 male and 67 female, from Piracicaba Dental School, University of Campinas, answered questions about the likelihood of attending lato or strict sensu post grad studies after graduation. Participants palms were photographed in an standard position, with a preset digital equipment in a stand and with a focal length fixed at 27 cm. Digital files were analyzed using Image J software. Results: The value of 2D:4D ratio for those who choose lato sensu option (Specialization) was 0,972519 (SD ± 0.040298) while for those who choose strictu sensu (Master or PhD) was 0,989682 (SD ± 0.035894). Spearman's correlation analyses showed a statically significant difference ($p<0.05$) between the group´s reading, being the higher values for students willing to choose a strictu sensu post grad courses. Conclusions: Fetal exposition to higher level of estrogen may result in higher tendency to choose more intellectual/less practical post grad courses.

180 Evaluation of the effects of different FASN inhibitors in a human oral squamous cell carcinoma cell line (SCC9)

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Aim: Fatty acid synthase (FASN) enzyme is responsible for the endogenous synthesis of palmitate. FASN is expressed and associated with the prognosis of oral squamous cell carcinoma (OSCC). FASN inhibition by Orlistat (ORL), Triclosan (TCS), and C75, which targets different catalytic domains of FASN, demonstrates antiproliferative effects in several tumor cell lines. The goal of this study is to calculate the half maximal inhibitory concentration (IC50) for each drug and compare their effects on the cell cycle and the morphology in SCC9 cells. Methods: The IC50 for each drug in SCC9 cells was calculated after 24 and 48 h of treatment using different concentrations of ORL, TCS and C75 and the viability was measured by MTT assays. Cell cycle analysis was performed by flow cytometer after the treatment with the IC12.5, IC25 and IC50 for all drugs. Results: TCS, C75 and ORL induced distinct morphology alterations in SCC9 cells. C75 displayed superior cytotoxicity when compared with TCS showing the IC50 of 26.38 µM and 37.81 µM for 24h and 11.59 µM and 23.29 µM for 48h respectively. C75 induced a dose-dependent cell cycle arrest with accumulation of cells in G0/G1 and reduction of the S phase. TCS also resulted in cell cycle arrest with accumulation of cells in G0/G1 phase. The IC50 calculation of ORL was impaired by the fact that this compound did not reduces the viability of SCC-9 cells above 30%. Conclusion: We show that the inhibition of the different catalytic domains of FASN with the pharmacological inhibitors TCS, C75 and ORL can induce different effects in the morphology and in the cell cycle progression of SCC9 cells.

181 Histopatological review of salivar gland tumors

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Aim: The aim of this study is to review the salivary gland neoplasms retrospectively reclassifying tumors whose diagnoses have been modified, to compare the diagnoses provided in the past and at presente, and analyze the follow-up of their cases. Methods: Our study is a retrospective histopathologic review of 300 cases of patients who developed some type of salivary gland tumor belonging to the Departments of Pathology, Faculty of Medicine / Unicamp and Hospital AC Camargo Cancer Center. The cases included in this study were collected from the files of the respective departments to establish the sample to be studied. Since certain existing cases, an active search for H & E slides and paraffin blocks was performed. Results: So far, we have reviewed 90 cases of salivar gland tumors. Of these, 30 were initially diagnosed as acinar cell carcinoma and after this review, 15 of them were reclassified as mammary analog secretory adenocarcinoma. Thirty cases initially diagnosed as polymorphous low grade adenocarcinoma resulted in the reclassification of one as cribriform carcinoma of the tongue and Salivary Glands Minor. Twenty cases were diagnosed as mucoepidermoid carcinoma and maintained this way. Ten cases were diagnosed as adenoid cystic carcinoma and maintained this way. Conclusions: The present case report the importance of reviewing and possibly reclassify the salivary gland tumors in order to establish new epidemiological data, provide a better understanding of the disease and give a better return to the affected patients.

182 Oral squamous cell carcinoma: clinicopathological study of a case series

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The squamous cell carcinoma (SCC) is the most common oral malignant neoplasia, responsible for more than 90% of the cases of oral cancer. Few studies describing the clinic-pathologic features of the disease have been performed in Brazil. Aim: To evaluate the clinic-pathologic features of oral SCC diagnosed in an Oral Pathology Laboratory in Brazil. Methods: Between 2000 and 2015, all oral SCC diagnosed in the Oral Pathology Laboratory at the Federal University of Pernambuco were include in the study. Clinical and epidemiological data were recorded from clinical charts, as well as the histopathological diagnosis with respective histological grade. Statistical analysis was performed using the chi-square test, with a significance of 5%. Results: A total of 201 cases of oral SCC were evaluated. Most of them (60.7%) occurred in men, and the male: female ratio was 1.5:1. The mean age was 65.4 years, ranging from 26 to 94 years, and 6.4% of cases occurred in patients younger than 41 years. An ulcerated lesion (46.8%) in tongue (25.8%) or floor of the mouth (18.7%) was the most frequent clinical finding. The histological grade of tumors revealed that most of them were well-differentiated (57.4%) and moderately differentiated (38.6%). Conclusions: The data found in the study are compatible with the expected profile of oral SCC. However, the clinicians should keep in mind the significant changes in the epidemiology of the disease, in order to oral cancer occurring in patients out of known profile may be diagnosed early.

183 Coronally advanced flap with porcine collagen matrix and enamel matrix derivate for treatment of gingival recession

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Aim: The aim of this case report is to evaluate the effect of the coronally advanced flap associated with a collagen porcine matrix (MC) and enamel matrix derivate (EMD) for root coverage. Methods: Female patient of 28 years old attended to FOP/UNICAMP, complaining dentin hypersensitivity (DH) and esthetics in the upper right region. During the clinical examination, it was observed gingival recessions on elements 13 and 14, with a small non carious cervical lesion in the 14. The patient didn't present any systemic problem or condition that could compromise the periodontal surgery. Before any procedure, the patient received instructions about the causes of gingival recession and was introduced into an oral hygiene program. The surgery procedure was a coronally advanced flap associated with MC and EMD. Clinical parameters were measured at baseline, 180d and 1 year after surgery, and included full-mouth visible plaque index (FMPI); full-mouth sulcus bleeding index (FMBI); gingival recession height (GR); probing depth (PD); clinical attachment level (CAL); keratinized tissue width (KTW) and patient perception of dentin hypersensitivity (DH). Results: After 1 year, GR improved from 1,8mm and 3,00mm to 0,0mm on 13 and 14 elements. PD improved from 2,0mm to 1,0mm in both elements. KTW improved from 2,2mm to 2,4mm and 1,0mm to 1,7mm on 13 and 14 respectively. DH showed variations from 6,5 to 0,0 and 7,2 to 1,8 on 13 and 14 respectively. Conclusion: After one year of follow-up it can be concluded that coronal advanced flap associated with collagen matrix and enamel protein matrix derivate provided a good result in root coverage.

184 Evaluation of doxycycline microspheres adjunct to nonsurgical periodontal therapy: a randomized clinical trial

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AIM: Asses the effect of ultrasonic periodontal debridement associated to locally delivered doxycycline by PLGA microspheres on chronic generalized periodontitis treatment. METHODS: Thirty patients with chronic periodontitis and a minimum of seven pockets (>5mm) in non-molars that bled on probing were selected. Patients were randomly assigned to ultrasonic debridement followed by local application of doxycycline microspheres (DB+DOX) or by administration of void microspheres (DB).Plaque index (PI), bleeding on probe (BoP), clinical attachment level (CAL), and probing depth (PD) were recorded at baseline,3 and 6 months. Subgingival biofilm samples were collected from moderate (5-6 mm) and deep (≥7 mm) pockets at baseline, 1, 3 and 6 months. Polimerase chain reaction analysis detected the frequency of Porphyromonas gingivalis, Tannerella forsythia, Treponema denticola, Aggregatibacter actinomycetemcomitans, and Prevotella intermedia. RESULTS: At 6 months, no difference was found between groups regarding PI and BoP. However, PD reduction was significant for DB+DOX in moderate (2.5± 1.3 mm) and deep (4.1 ± 1.1 mm) than for DB (1.1 ± 0.8 mm and 2.7 ± 1.6 mm); and CAL gain, DB+DOX showed gains (2.82 ± 1.3 mm and 4.73 ± 1.5 mm) versus DB (1.15 ± 1.7 mm and 3.24 ± 2.1 mm) in moderate and deep sites. There was significant reduction in the bacteria levels for DB+DOX along the follow up and after 6 months comparing to baseline and DB group. CONCLUSION: The use of doxycycline microspheres adjunct to periodontal debridement improved PD reduction and CAL gains followed by reduction of periodontal pathogens levels in chronic periodontitis.

185 Plasminogen activation system is an important regulator of cementoblast differentiation and nodule mineral formation

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Aim of this work was evaluated the effect of inhibition of plasminogen activation system in the cementoblast metabolism. Method: Cementoblast cell line (OCCM-30) were treated with the active form of plasminogen, plasmin, and with ε-aminocaproic acid (EACA), a lysis analog that inhibits the capacity of plasminogen to bind to the cell surface through its lysine binding sites. The effect of plasmin and EACA treatment in osteogenic marker gene expression and in mineralized nodule formation were evaluated by real time RT-PCR and Alizarin red-based assay, respectively. Results: In OCCM-30 cells, the inhibition of plasminogen activation system by EACA (100mM) treatment down-regulated the mineralized nodule formation and expression gene of cementogenic differentiation markers in a time- and dose-dependent manner (including: Ocn, Bsp, Alpl, Col1a1, Opn and Runx2). However, OCCM-30 treated with active form of plasminogen (5ug/mL plasmin) not significantly affect de mineralized nodule formation, up-regulated Col1a1, down-regulated Bsp, Opn and Ocn, and not altered the mRNA levels of Runx2 and Alpl. Conclusion: Inactivation of plasminogen activation system by a synthetic inhibitor EACA has a direct impact in the regulation of genes involved in cementoblast differentiation and mineralization, suggesting which regulation of extracellular proteolysis mediated by plasminogen is important to homeostasis of cementum.

186 Technique of connective tissue graft around mucosa perimplantar in the previous upper region: Case report

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Objective: The aim of this study is to report a case of connective tissue graft technique, in order to increase thickness of keratinized tissue and esthetic peri-implant in anterior superior region. Methods: Female patient, 28 year, sought the clinic Piracicaba dental school with aesthetic complaint in the upper anterior right region. After the clinical examination was found that the region that bothered the patient was mucosa around an implant that had been installed in the region of the element 12, which showed with characteristics of a thin tissue biotype, little height keratinized tissue. The implant was placed with a buccal inclination outside the alveolar bone envelope, verified by CT scan brought by the patient. This provoques that the implant platform was seen by transparency giving a grayish look to the periimplant mucosa and aesthetic dissatisfaction of the patient to smile. The treatment plan for the case, includes the maintenance of the implant, and conducting connective tissue graft with tunnel technique with lateral incision above the edge of the periimplant mucosa, aimed to improve the contour and thickness of the vestibular peri-implant tissue. Results: After post-operative follow-ups for two years, it was possible to verify that the procedure performed reached the initial goal of recovering the aesthetic of the periimplant tissue of element 12 and that despite having an implant installed outside the ideal position, the association connective tissue graft promoted an increase in volume of buccal soft tissue, that was sufficient to solve the case and return the desired aesthetics for the patient.

187 Comparison of titanium and zirconium infrastructures for prostheses protocol: 3D finite elements analysis

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Aim: This study compared the effect of two different materials, titanium and Zirconia used like bars for protocol prosthesis in a 3D model jaw. Methods: Through the Rhinoceros software (version 4.0 SR8, McNeel America North, Seattle, WA, USA), a toothless human jaw was modeled and in the region between the mental foramen 5 implants were installed. After all implants in their ideal positions, a bar model was designed to standard protocol. The retaining screw has also been done and allocated in his ideal position for each of the implants. The protocol bar had a height of 6,0 mm bone surface and owned a 10,0 mm lever arm on each side. At geometries were exported to ANSYS (ANSYS 16.0, ANSYS Inc., Houston, TX, USA) in STEP format. The materials were considered isotropic, homogeneous, and linearly elastic, having Young's modulus, Poisson ratio´s and pasted contacts. Fixing occurred in the cortical bone and the load applied to 200N left at the distal of the model, a 10% convergence test determined the total number of elements and the stress values are analyzed. Results: The standard stress were similar in the two bars. Conclusions: It was concluded that a protocol zirconia infrastructure behaves similarly to a metal infrastructure as titanium stress generated in jaw.

188 Finite element analysis 3D of differents mini prosthetic pillars for external hexagon and internal hexagon implants

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Aim: This study evaluated the micro deformations and stress distribution in the mandibular bone under the influence of differents abutments in implants with external hexagon (HE) and internal hexagon (HI). Methods: Through Rhinoceros software (version 4.0 SR8, McNeel North America, Seattle, WA, USA), a human toothless jaw was designed and in the posterior region implants were installed with 3 mm distance between them. Identical models of regular implant with HE and HI connections (3.75 mm diameter and 13 mm length) were designed according to the manufacturer's data (Eff Dental Components, São Paulo, Brazil) and divided into two groups for each connection: PCE (Conventional Pillar with screw for HE) PSI (Pilar Solid screw unit piece for HI), PCI (Pillar Conventional with screw bolt fixation for HI) and PSE (Pillar Solid screw unit part for HE). A metal bar simulating a two-element fixed prosthesis was fixed on the abutments and used as a load applicator (200N). The fixing occurred in the cortical bone geometry and was exported to the software ANSYS (ANSYS 16.0, ANSYS Inc., Houston, TX, USA) in STEP format. The materials were considered isotropic, homogeneous and linearly elastic, with Young's module, Poisson's ratio and bonded contacts. A 10% convergence test of the mesh determined the total number of elements and the stress values were analyzed. Results: the conventional abutments exhibited more homogeneous values of stress and smaller microdeformations. Conclusions: a less damage to bone tissue might be suggested when conventional abutments are used when compared to solid abutments.

189 Full-arch implant-supported prosthesis fractures. Systematic review

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The purpose of this study was to review the literature of the last ten years, recording the fractures occurred in full-arch implant-supported prosthesis and their treatments performed in order to solve this problem. A comprehensive review of the literature was carried out, covering the period 2006-2016, in the databases PubMed/Medline, Embase, Scopus e Cochrane Library with the following combinations of uniterms: "full-arch implant-supported OR full-arch fixed prostheses OR complete-arch implant-supported OR implant-supported fixed prostheses AND fracture". Studies that don't show fractures in full-arch implant-supported prosthesis were excluded. A total of 17 studies were identified for synthesis of data. We evaluated 766 patients in this review, where 3,935 implants were installed and 801 full-arch implant-supported prostheses were fabricated. The combination of metal infrastructure with acrylic resin teeth was the type of prosthesis most found in this study. The survival rate of the prosthesis varies from 73.8% to 100% among the studies included. The fracture of the acrylic tooth was the most prevalent, followed by the ceramic tooth fracture. Fractures in the metal infrastructure were present in 6 studies. No fracture in zirconia infrastructure was found. In view of this review of the current literature, it was found that the presence of fractures in full-arch implant-supported prosthesis is evident, regardless of the material used. Different types of fractures were found and treatments in order to solve them. Keywords: Implant-supported dental prosthesis, dental implants, prosthesis failure.

190 Influence of surface treatment on the repair bond strength in ceramics

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Aim: The aim of this study was to evaluate the efficacy of different surface conditioning methods on the microtensile bond strength of a restorative composite repair in three types of dental ceramics: lithium disilicate-reinforced, leucite-reinforced and feldspathic. Methods: Twelve blocks were sintered for each type of ceramic (n=3) and stored for 3 months in distilled water at 37 °C. The bonding surface of ceramics was abraded with 600-grit SiC paper. Surface treatments for each ceramic were: GC (control) - none; GDB - diamond bur #30 µm; GHF - hydrofluoric acid (10%); GT- tribochemical silica coating (45-µm size particles). Treatments were followed by cleaning with phosphoric acid 37% for 20 s + silane + adhesive. The composite resin was used as restorative material. After repair, samples were subjected to thermocycled ageing (10,000 cycles between 5 °C and 55 °C for 30 s). Thereafter, the samples were sectioned into 1.0 mm2 sticks and tested for microtensile bond strength with 0.5 mm/min crosshead speed. Data were compared by two-way ANOVA and Tukey's test (α=0.05). Results:The superficial wear with diamond bur proved to be suitable for feldspathic porcelain and for leucite-reinforced glass ceramic while hydrofluoric acid-etching is indicated for repairs in lithium disilicate-reinforced ceramic; tribochemical silica coating is applicable to leucite-reinforced ceramic. Predominance of adhesive failures was observed (>85% in all groups). Conclusions: In conclusion, the success of surface treatments depends on the type of ceramic to be repaired.

191 Integrated planning for successful treatment

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The success of oral rehabilitation in the anterior maxilla region depends on the aesthetic integrated planning specialties such as orthodontics, implantology, prosthetics and thus reaching treatment aims added the patient's expectations. Female patient attended the clinic with aesthetic dissatisfaction complaint. The planning involved orthodontics for better placement of the teeth, but mainly to gain bone height in the region of central, favoring the subsequent installation of the implants. This was followed by the extraction of central incisors, it made conservatively and in the same surgery were installed cone morse taper (MT). About implants straight abutments and provisional made were installed. But reassessing the position of the implants opted for the exchange of straight abutments for angulated. After gum complying with the provisional, custom abutments universal screws were installed. Preparations were performed in the lateral incisors and canines, and then the aesthetic rehabilitation included ceramic pieces for veneers and crowns on implants. Through a proper integrated planning and execution and correct choice of techniques and materials obtained the success of oral rehabilitation, restoring aesthetics and function combined with patient satisfaction. For successful treatment combined with patient satisfaction, following an integrated planning becomes essential to achieve aesthetics.

192 Multidisciplinary planning for oral rehabilitation with conventional fixed prosthodontics and implant

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Introduction: Multidisciplinary in oral rehabilitation course aims: restore esthetics, function and keep the healthy using prosthesis or by implants installation. By integrating different odontology areas and planning by the needs of each patient, it is possible to give back efficiency, harmony and emotional welfare to a patient that suffered structural modifications that goes beyond teeth losses. The objective of this case report is to present a oral rehabilitation by conventional prosthesis and implant supported. CASE REPPORT: Patient manifested esthetic dissatisfaction along masticatory difficulty. Clinic and radiographically was observed metaloceramics crowns on the upper arch unadapted with infiltrations, partial removal prosthesis on the lower jaw with bilateral free extremity and pillars on tooth 43 and 33. To the jaw was proposed the installation of 3 implants on each side and the confection of united crows from 44 to 47 and from 34 to 37, besides de confection of unitary crowns on the elements 43, 42, 41, 31, 32, 33. To the maxilla, the installation of implants on the elements 13, 23, confection of unitary implant-supported prosthesis, crown lengthening on the region of the elements 11 and 21 adapting the dental proportion and lastly confection of unitary crowns to the others elements of the upper arch. Conclusion: We conclude that the success of a extended rehabilitation case it is based on a individualized planning and integrated to other areas, thus ensuring satisfaction and welfare of the patient.

193 Prosthetic-surgical planning for protocols on immediate loading: a case report

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BACKGROUND: Prosthetic-surgical planning determines the success of extensive rehabilitation with implants, especially with protocol and immediate loading for both as for the maxilla as to the mandible, as well as correct choice and implementation of surgical and rehabilitation techniques. CASE: The patient attended the clinic and clinical examination show provisional removable partial dentures unsatisfactory as well as teeth with doubtful prognosis. After tomographic evaluation was done planning for immediate loading protocol. Following the principles of complete denture for rehabilitation, it has been made multifunctional guide to maxilla and performed extractions and implant placement. Selection of abutments and impression square transfer with multifunctional guide and installation of prosthesis provisional protocol superior. Preparation for mandible rehabilitation with implants in immediate function protocol, selection and installation of abutments, impression and subsequent installation of the mandible permanent prosthesis. After 6 months, the maxillary definitive prosthesis was made and replacing abutments for other with smaller height. Impression with square transfer to obtain new work model and Index were made. Records made in acrylic resin and mounting in articulator with the provisional prosthesis. Making the final prosthesis, with bar on fused, which was then installed. CONCLUSION: In conclusion, that from a prosthetic-surgical planning done well, the implementation of techniques for immediate loading becomes predictable, thus minimizing complications and increasing the success rates of the treatment performed.

194 Smile digital planning: clinical protocol step by step

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The digital smile planning has been shown as an important tool in height and format gingival corrections for pink esthetic; and line, proportion and shape of the teeth for white esthetic. This paper aims to show the use of DSD (Digital Smile Design) in the development of clinical case, approaching since planning until the aesthetic rehabilitation cementation. The digital design guided the gingival plastic and dental procedures. The selected material for aesthetic rehabilitation was the IPS e.max Press system in minimally invasive procedures type ultra-thin veneers. The case report conclusion presents the preservation of oral health and achievement of excellent aesthetic supported by digital techniques and detailed clinical protocols.

195 Stress distribution on 3-unit implant-supported prosthesis: photoelastic and strain gauge analysis

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Aim: Evaluate, through photoelastic and strain gauge analysis, the biomechanical behavior of 3-unit implant-supported prosthesis with different types of connections: external hexagon (EH), morse taper (MT), internal morse hexagon (IMH), morse taper hexagonon (MTH) and frictional morse taper (FMT) and different types of occlusal loads (axial and oblique). Methods: The specimens were divided into 5 groups of 1 specimen each for photoelastic analysis and 5 groups of 5 specimens each for strain gauge analysis. For each group a 3 elements dental prosthesis was made on 2 implants of 11,5x4mm (Osteofit). In photoelasticity test, a photoelastic model were positioned in a circular polariscope, and then loads were applied on axial and oblique direction, with support of a universal testing machine (EMIC). The generated stress were photographically recorded and analyzed qualitatively. For strain gauge analysis, 2 strain gauges of resistance were placed on the mesial and distal region of the implants directly on the marginal ridge of polyurethane models. The electric signals were captured by a data acquisition device. Results: By photoelasticity, in the axial load, all groups showed similar number of high-intensity fringes; in all groups there was increased tension in the oblique load. For the strain gauge analysis, in the axial load, there was a statistically difference only between the MT and MTH group. In oblique load, there was a statistically difference between all groups except the MT implants and IMH. Conclusion: The connection systems tested directly influenced on the stress distribution in both types of occlusal loads.

196 Tension distribution of implant-supported prosthesis with different connections: photoelastic and strain gauge analysis

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Aim: The aim of this study was to evaluate, through photoelastic and strain gauge analysis, the biomechanics' behavior of 1-implant-supported prosthesis with 2 types of connections (external hexagon (EH) and morse taper (MT)) and occlusal loads (axial and oblique). Methods: The samples were divided into 2 groups of 1 sample to photoelastic and 2 groups of 5 samples to strain gauge analysis. One element prosthesis was made supported by one implant of 11,5x4mm (Osteofit). In the photoelastic test, the kit photoelastic model/implant/prosthesis was positioned in a circle polariscopic and were load 100N in fixed points of the prosthesis occlusal surface. The generated tensions were photographically registered and analyzed. To strain gauge methodology, 2 strain gauges were horizontally positioned in mesial and distal regions of the implant, on the marginal ridge of the polyurethane models. The electrical signs were captured by a data acquisition device. The data were submitted to ANOVA and Tukey's test (α=0.05). Results: By photoelasticity, in the axial load, the group MT showed fewer high intensity fringes; in both groups there was increased tension in the oblique load. For the strain gauge analysis, in the axial load, there was no difference between the types of connections (p=0,300). There was a difference between the loads on both connections (p=0,001) and between the connections in the oblique load (p=0,043). Conclusion: It was concluded that different connection systems tested directly influenced the tension distribution only for the oblique load and, in both loads, the group EH showed higher tension values.

197 The importance of correct choice of morse taper platform implants to achieve aesthetic and function

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The choice of an implant is complicated by the large number of variations of components and the difficulty that many surgeons have to diagnose and plan the case correctly. The goal is to explain the importance of correct choice of morse taper implants conection and their components according to their mechanical and biological characteristics and indications according to each case, relating the function, aesthetics, stability, dissipation of occlusal forces, periodontal health and maintenance the peri-implant bone tissue, seeking for clinical success. In the clinical report case, the patient received immediate postoperative prosthesis of morse taper implant with abutment component universal trunnion CM (Neodent) with collar height below the recommended and height reduced trunnion. After osseointegration period the surgeon performed the exchange of abutment component to increase the height of the preparation and decrease depth of cementation line, providing greater stability and periodontal health, which could be seen in subsequent consultations with the peri-implant bone growth. The wax up diagnostic may assist in the correct choice of components providing satisfactory aesthetic and functional results, in other words, reach clinical success.

198 Three-unit fixed dental prostheses fabricated by CAD/CAM and overcasting technologies: similarity of fit and stress

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This in vitro study evaluated the similarity of the prosthetic framework fabrication method (CAD/CAM and overcasting) on the marginal fit and stress transmitted to implants using quantitative photoelastic analysis. The correlation between marginal fit and stress values was also investigated. CAD/CAM (n=10) and overcasting (n=10) methods were used to fabricate 3-unit implant-supported FDP frameworks. The frameworks were waxed simulating a mandibular first premolar (pillar PM) to first molar (pillar M) fixed dental prosthesis (FDP). The wax patterns were overcasted (overcasted experimental group) or scanned to obtain the frameworks (CAD/CAM control group) all fabricated from CoCr-alloy. The marginal fit was evaluated according to the single-screw test protocol. The stress was measured by quantitative photoelastic analysis after the tightening of frameworks for the photoelastic model with standardized 10-Ncm torque. The results were submitted to Student t-test, 2-way ANOVA, and Pearson correlation test (α=.05). The framework fabrication method and evaluation site (pillar PM and M) did not affect the marginal fit values (p=.559 and p=.065, respectively) and stress (p=.685 and p=.468, respectively) in the implant-supported system. Positive correlations between marginal fit and stress were observed (CAD/CAM: r=.922 p<.0001; overcasted: r=.908 p<.0001). CAD/CAM and overcasting methods allow for 3-unit FDPs with similar marginal fit and stress values. Increased marginal misfit of frameworks induces greater stress in the implant-supported system.

199 Effectiveness of Onabotulínim Toxin A on chronic myofascial pain

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AIM: To evaluate the effect of botulinum toxin type A (Botox®) on chronic myofascial pain. METHODS: Were selected 60 volunteers randomized into three groups: group 1: positive control (occlusal splint OS, n= 20), group 2 negative control (saline, n = 20) and group 3: treated (botulinum toxin A, n= 20). The volunteers were evaluated in the initial period, 7, 14, 21, 28 and 90 days after treatment. The dependent variables were: pressure pain treshold algometry (PPT), measured on superficial masseter and temporal anterior muscle; subjective pain, measured by visual analogue scale (VAS) and the electrical activity of the same muscles by electromyography (EMG). Statistical analysis was performed using analysis of variance. RESULTS: In the inicial two evaluations of PPT, there was no difference between the treated group and the negative controle, and the OS group showed the highest values ($p < 0.05$). After 7 days, all treatments were significantly different ($p < 0.05$), with the AIP showing higher values. The results of VAS showed the same trend, although after 7 days, there was no significant difference between the toxin application and the OS. In general, the PPT and VAS values improved over time. EMG of muscle at rest does not show significant difference between groups in different times. In the maximum voluntary contraction, the lowest values were recorded for the botulinum toxin group in the 28 and 90 days evaluation and was statistically significant ($p < 0.05$). CONCLUSIONS: botulinum toxin is an effective treatment for the management of chronic myofascial pain comparable with OS.

200 Oral health related quality of life and sleep in bruxers

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Aim: This clinical study aimed to compare the Oral Health Related Quality of Life (OHRQoL) and sleep quality of young adults with and without sleep bruxism. Methods: Fifty complete dentate volunteers were selected and divided into two groups: subjects with (n=25, mean age=30,3±6,0), and without sleep bruxism (control, n=25, mean age=26,2±3,1). Sleep bruxism was first recognized by anamnesis registering the self report of grinding teeth during sleep, and clinical exam to identify the presence of dental wear facets, tongue indentation, tenderness on palpation of masseter and temporalis muscles, and masseter hypertrophy. Besides, a electromyography/electrocardiography portable device was used to confirm the presence of sleep bruxism. The OHRQoL was evaluated by applying the OHIP-14. Sleep quality was assessed by the Pittsburgh Sleep Quality Index (PSQI), while daytime sleepiness were obtained by Epworth Sleepiness Scale (ESE). Qui-square test was used to analyze PSQI and ESE, while Mann-Whitney test was applied to OHIP-14 data, all with a significance level of 5%. Results: OHRQoL had a mean of 36 for bruxers and 15 for health subjects ($p<0,01$). Ninety-six percent of subjects presenting sleep bruxism was categorized as "poor" sleepers, while only 40% of health subjects showed the same classification ($p<0,01$). Daytime sleepiness was present in 52% of bruxers and in 16% of control subjects ($p<0,01$). Conclusions: Sleep bruxism impairs usual activities and quality of life. This condition also affects the quality of sleep, leading to an excessive daytime sleepiness.

201 Shutter-Palate Pharyngeal: case report

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Palate-pharyngeal clefts can be corrected through a surgical procedure or with an intraoral palate-pharyngeal prosthesis. It is mainly indicated to surgical failure cases. Aim: The objective of this study is to demonstrate a prosthetic technique of a palate-pharyngeal shutter. Materials and Methods: Male gender patient with 60 years of old, presented at the Graduation Clinic of FOP-Unicamp to get a palatal implant. He had some teeth (35, 34, 33, 32, 31, 41, 42, 43, 44 and 45) in good conservation. He also presented palate-pharyngeal cleft, requiring a complete denture with palate-pharyngeal shutter. Results: The patient pass trough all clinical stages before the conventional complete denture and the removable partial denture were done: the realization of functional molding, the installation of the models in a semi adjustable articulator and the assembly of the artificial teeth. In the palatine region (region of the hard / soft palate limit), it was made a resin extension. After the processing of the prosthesis, they were adjusted and installed in the patient. Conclusion: It were made five preservations and conventional complete denture was satisfactory.

202 The effect of guided meditation technique in the control of chronic pain in temporomandibular disorders

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Aim This study aims to compare the effect of guided meditation at the control of chronic pain of TMD, through a randomized clinical study on the analysis of the dependent variable after treatment. Keywords: TMD, MEDITATION, PAIN methods The 40 patients were evaluated according to the protocol RDC / TMD Axis I and II and take the pain threshold to pressure algometry, 20 patients in the control group (occlusal splints), and the other 20 patients participated in the guided meditation. Results and Discussion The results show that the average of the variables, Right Masseter (RM), Left Masseter (LM), Right Temporal (RT), Left Temporal (LT) of the control group and the group treated at the same time ($p < 0.05$). And comparing the horizontal average of variables for weeks also with $p < 0.05$, showing an effective efficiency in guided meditation technique in the eighth week comparing the control group and treated at the same time and a significant difference in the fourth week for variables RT, LT and fifth week RM, LM. This trend leads the patient to pay attention too much on the area of pain resulting in hypersensitivity in this area and a deficit of tactile sensitivity in other body areas. Patients with chronic pain are unable to filter stimuli of pain and are unable to modulate attention painful even increasing pain intensity stimulus. The meditation practice enables the practitioner to gradually increase their awareness in their own internal processes of reaction to their reality of life and properly control their emotions. Conclusion It is concluded that the guided meditation helps control chronic pain related to TMD.

203 A contemporary view of implant overdentures prostheses. Systematic review of the literature

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Aim: The purpose of this systematic review was to review the literature of the past five years in order to register the treatment options used in total edentulous patients, using implant-supported overdentures prosthesis. Methods: A comprehensive review of the literature was performed, covering the period from 2010 to 2015, in the databases PubMed/Medline and Embase, with the following combinations of uniterms: "implant-supported overdenture AND dental implant AND overdenture" and "overdenture therapeutics". Studies that didn't show prosthetic rehabilitation with implant-supported overdentures prosthesis, were excluded. A total of 18 studies were identified for the synthesis of data. 887 patients were included in this review, where 2,377 implants were installed. Implants with 3.75 mm to 8 mm in diameter were used. The connection system most used was the ball attachment, followed by the bar-clip system. The variety of protocols allowed a wide discussion about the methods currently available in the dental market. Results: This review of the current literature showed that therapeutic approach in edentulous patients may vary as the quantity, size and surface of the implants, besides the abutment can vary on the type. Conclusions: This study reviews the therapeutic approach of implant-supported overdentures, giving a current view of what is being used in this area, allowing the dentist to know and to choose the most beneficial treatment to your patient. Keywords: Prosthetic dentistry, dental implants, overdenture.

204 Adaptation of inferior complete denture bases under the effect of different polymerization cycles

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The aim was to evaluate the adaptation of inferior denture bases under effect of polymerization cycles of acrylic resins. Samples were made by Classico and Vipi (conventional); OndaCryl and Vipi Wave (microwave). Forty sets of gypsum-wax base were divided into 4 groups (n=10) by trademark. The manipulation of resins were maded by manufacturer recommendations. The samples were included in flasks (metal/plastic) and pressed by conventional method. After polymerization cycles A- heat water 74 ° C for 9 hours; B- 1400W microwave: 20 min at 10% power and 5 min 40% (Vipi Wave); 3 min at 30% power, 4 min 50% and 3 min at 60% (OndaCryl), the bases were deflasked, subjected to conventional finishing and polishing process, and fixed at the respective casts with cyanoacrylate adhesive. The base-cast sets were sectioned in three parts corresponding the distal canines (A) mesial first molar (B) and posterior area (C). In each set the misfit between model and base was measured in 6 points: right and left bottom labial groove, right and left alveolar ridges crests and right and left bottom of lingual groove. The adaptation was measured with Olympus linear microscope. The results were subjected to statistical analysis and compared with 5% significance. For Classico resin, the values were misfit (A) 0,1807mm; (B) and 0.2465 (C) 0.2598. OndaCryl, the averages (A) 0.2277; (B) and 0.2830 (C) 0.3110; for VIPI, (A) 0.2222; (B) and 0.2465 (C) 0.3006; and Vipi Wave (A) 0.3068; (B) 0.3744 and (C) 0.3495. The conclusions was no difference between the regions A, B and C in the same group and there were statistical differences between the analyzed trademarks.

205 Biocompatibility of an acrylic denture base resin after immersion in liquid disinfectant soaps

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Aim Considering the disadvantages of chemical agents used for disinfection or biofilm reduction from denture resins, studies are needed to evaluate mechanical and physical properties after immersion in different concentrations of liquid disinfectant soaps. The aim of this study was to evaluate the citotoxicity of an acrylic denture base resin after immersion in three different liquid disinfectant soaps. Methods Samples of acrylic resin (Vipi Wave) were prepared (14 mm x 1.2 mm) and divided into groups: AD: immersion in distilled water; SD: daily immersion in Dettol soap to 0.39% (MIC) for 8h at room temperature, followed by soaking in distilled water for a further 16h at 37°C, simulating the night disinfection of prostheses; SP: daily immersion in Protex soap to 3.12% (MIC) as described above for the SD group; SL: daily immersion in Lifebuoy soap to 0.78% (MIC) as described above for the SD group. Cytotoxicity was assessed at 0, 7, 14, 21 and 28 days of storage. The cytotoxic effect was assessed by queratinocytes cell cultures (HaCaT), and cell viability was evaluated by Alamar Blue® assay. For statistic analysis was used ANOVA followed by post-hoc Bonferroni test with (p=0.05) significance level. Results It was observed that all the soaps were classified as non-cytotoxic, because they showed less than 25% inhibition regard to the control group, independent of storage time. However, after 21 days, was observed a decrease in cell viability due to prolonged immersion, regardless of soap type. Conclusions It could be concluded that the 3 different liquid disinfectant soaps used for this study were classified like non-cytotoxic.

206 Effect of dental cleansers in physical properties of acrylic resins

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The aim of this study was to evaluate the effect of dental cleansers in physical properties brightness, roughness, hardness and impact resistance of acrylic resins. For the method,120 samples were made with Classico, Onda Cryl, Vipi and Vipi Wave (n=10) and divided into groups: A- control B- Corega Tabs and C- Kin Oro. After polymerization by conventional cycle (water heated to 74°C/9 hours) and microwave cycle, the samples were submitted to conventional finishing and polishing. The resins were evalueted after storage of in water at 37°C for 24h and after immersion for 8 hours in dental cleanser for groups B (Corega Tabs); C (Kin Oro) and A (control) repeated for 30 days. The brightness was measured with Multi Gloss 268 (GU), roughness was measured with rugosimeter (Ra-µm), Knoop hardness with Shimadzu HMV-2000 with 50g load for 10 seconds in 3 penetrations (center and borders of sample) and the impact resistance with Otto Wolpert Werke, by Charpy system 40kpcm impact (kgf/cm^2). The results submitted to ANOVA one factor and Tukey test (5%) showed that: Brightness, the highest value was obtained in group A (76.7), followed by group B (63.7) and C (63.6). Roughness, the best value was obtained in group A (0.918), followed by the C group (3,033) and B (3,267). Hardness, similar values were obtained: A- 24.7; B- 23.2 and C- 23.7. Impact resistance, group A showed a higher average (8.5) followed by group C (7.5) and B (7.3). In conclusion, dental cleansers negatively influenced brightness and roughness properties of all resins. Hardness (except Classico) and impact resistance (except OndaCryl), showed no influence by dental cleansers.

207 Effect of mechanical and chemical polishing on hardness and roughness of acrylic resins under two polymerization cycles

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Aim: evaluate the effect of mechanical and chemical polishing on hardness and roughness of acrylic resins under different polymerization cycles. Methods: Samples of resins Classico and Vipi (conventional); Onda Cryl and Vipi Wave (microwave) were made from aluminum matrix included in flasks (metal-plastic). The manipulation of resins was maded by manufacturer recommendations. After the polymerization cycles A- heat water 74 °C for 9 hours and B- 1400W microwave power (30% power for 3 min, 0% power for 4 min and 60% power for 3 min-Onda Cryl);and microwave power of 1400 W (10% power for 20 min and 30-40% power for 5 min-Vipi Wave), the samples were deflasked, cooled at room temperature and subjected to conventional finishing process and polishing: (A) Mechanical – using abrasive pastes and felt discs attached to polishing machine, and (B) Chemical - using the PQ9000 device with heated chemical polisher (PoliQuim, Classico) acting for 10 seconds, drying for 20 seconds and washing for 20 seconds under water. The hardness and roughness were measured after storage in water at 37 °C for 24hours. Knoop hardness was observed in Shimadzu HMV–2000 device calibrated with load of 50g for 10seconds, three samples penetrations (center and edges). Roughness was measured by Surfcorder SE1700 device. Results: Hardness average of mechanical polishing groups (A) and the chemical polishing (B) were 23.9 and 24.4 respectively. Roughness average were 0.5849 (A) and 2.3704 (B). Conclusion: polishing methods influenced roughness to all resins evaluated, and only Vipi Wave resin for hardness properties.

208 Effect of surface treatment on the bond strength of artificial denture teeth to self-curing acrylic resin

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Aim: Denture tooth debonding is a common complication for denture wearers. The aim of this study was to evaluate the effect of surface treatment on the bond strength between denture teeth and self-curing acrylic resin denture base. Methods: Three commercial brands of denture teeth (Trilux, Biolux and Vipi Dent Plus) and one self-curing acrylic resin (Jet) were tested. Each brand of denture teeth was divided into 4 groups (n=6). The surface of artificial denture teeth was subjected to different treatments: sandblasting with aluminum oxide (group SD), chemical treatment with monomer (group M), non-thermal plasma treatment (group NTP) and the non-treated surfaces were used as control (group C). The surfaces were characterized through roughness and scanning electron microscopy. Shear bond strength testing was performed at the resin/tooth interface of the specimens in a universal testing machine at a crosshead speed of 1 mm/min. Data were analyzed using 2-way ANOVA and Bonferroni test (a=.05) Results: Sandblasting and monomer treatments increased the bond strength between denture teeth and acrylic resin denture base (P<.05). NTP treatment exhibited the lowest bond strength values (P<.05). Increased surface roughness was noted after sandblasting treatment (P<.05). All commercial brands of denture teeth presented similar bond strength and roughness values (P>.05). The failure pattern was predominantly adhesive. Conclusions: Mechanical (sandblasting) and chemical (monomer) treatments on the tooth surface prior to the acrylic resin packing improved the bond strength between denture teeth and self-curing acrylic resin denture base.

209 Electrochemical behavior of titanium exposed to human perspiration

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Aim: To investigate the corrosion stability of commercially pure titanium (cpTi) exposed to simulated human perspiration at two different pHs (5.5 and 8). Methods: Fifteen titanium disks were randomly divided into three groups (n=5). Control group was subjected to a simulated body fluid (SBF). Disks from the other two experimental groups were immersed in simulated alkaline perspiration (SAKP) and simulated acidic perspiration (SACP). Electrochemical tests such as open circuit potential, electrochemical impedance spectroscopy and potentiondynamic tests were performed according to the standardized method of three-cell electrodes. Data were analyzed by one-way ANOVA and the Tukey honestly significant difference (HSD) tests ($\alpha = .05$). Results: Simulated human perspiration reduced the corrosion stability of cpTi ($P < .05$). SAKP and SACP groups increased the values of capacitance with no statistically significant difference from each other while SBF group presented the lowest capacitance values ($P < .05$). SAKP reduced the oxide layer resistance of cpTi ($P < .05$) and increase corrosion rate was noted for both simulated human perspiration. Conclusions: Craniofacial implants can corrode when in contact with simulated human perspiration where alkaline perspiration shows more deleterious effect. Perspiration induce a more corrosive effect when compared to simulated body fluid. New surface treatments resistant to corrosion might be interesting to reduce the incidence of failures.

210 Marginal leakage in bonded interfaces of conventional cement and self adhesive after aging

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The purpose of the in vitro study was to evaluate quantitatively the microleakage in cementation interfaces using different techniques of adhesive cementation. To this, 45 bovine teeth were used (n = 5). 5 x 4 x 1 mm blocks were manufactured, containing at least one of faces 20 mm2 fully dentin. The blocks were randomly divided into 3 groups, each group differed from the cementation technique. The specimens of each adhesive technique were divided into subgroups (n = 5) and then subjected to thermal cycling, chemical aging or storage in water (control). After the aging tests, all blocks were immersed in test tubes separately containing neutral methylene blue dye 2% for 8 hours. The blocks were washed, dried and prepared for analysis of microleakage. The results submitted to ANOVA and Tukey's test (5%) were analyzed and in conclusion, the conventional cementation of 3 steps showed lower microleakage for all treatments, the self-etching and self-adhesive techniques were not influenced by sodium hypochlorite; and the self-adhesive cement promoted greater microleakage.

211 Marginal microlinkage after aging in interfaces of selfetching adhesive system with different cementation techniques

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Objective: Avaliation of microleakage in cementation interfaces using different techniques of adhesive cementation.Materials and methods: 45 bovine teeth were used and blocks were confectioned with one of faces fully in dantine,they were divided in 3groups,that used differed technique:1selfetching adhesive two bottles and resin cement dual cure;2selfadhesive primer and resinous dual cure cement with photoactivation;3Cementing using selfadhesive dental primer and resin cement dual cure.On the dental has been cemented a resin block.The groups were divided into subgroups sbjected to thermal cycling,chemical aging or storing in water.After all blocks individually were puting in tubes with neutral methylene blue dye for8 hours.The blocks were washed and dried for analysis of microleakage.The results submitted to test showed that selfetching cement steps2 showed less infiltration in the immediate and larger value in thermocycled,hypochlorite presented an intermediate value.With EDPrimer(EDP) and EDPrimer+Oxygyard(EDO) the immediate infiltration/hypochlorite no significant difference.Thermocycling was higher with EDP and EDO.The selfetching cementing 2steps and EDP were similar in immediate and hypochlorite ratings with EDO presenting higher infiltration in both treatments.The thermocycled samples showed differences in the three cementation,higher for EDO and lowest for selfetching 2steps.Conclusion,the selfetching cement steps2 were lower microleakage in all treatments;the selfetching techniques and EDP were not influenced by sodium hypochlorite;the association prey chemical and Oxyguard were higher microleakage.

212 Early weaning and its association with the feeding in the first days of life

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The WHO recommends the exclusive breastfeeding until six month of children's life. The studies of variables that affect it maintenance are necessary to implement reinforcing strategies for this practice. Aim The objective of this research was to investigate the association between type of breastfeeding in the hospital upon newborn discharge and breastfeeding practice to six month of life. Methods The method was retrospective cross, with data collected from clinical records of 301 participating children in a program to encourage breastfeeding in the period of 2010 to 2013. Was considered present risk factors and breastfeeding protection after hospital discharge, such as age of parents, fellow presence, parity, family income, stay in rooming, time elapsed from birth to the first feeding, hospital stay, type of breastfeeding at hospital discharge and pacifier use over six months life. Results The results showed a significant association between exclusive breastfeeding at hospital discharge and at six months of life (p=0,0205). Conclusion The observation of these data shows that it is important that the baby keeps exclusively breastfeeding when leaving the maternity, because thereby will have 2.5 times more likely to maintain this breastfeeding until six months of life.

213 Knowledge of mothers on risk factors for Death Syndrome Sudden Infant.

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The Syndrome of Sudden Infant Death (SIDS) is defined as the death of any infant under one year of age that remains unexplained after a complete investigation of the case, when there is a specific cause, but risk factors. AIM: This study investigated the mothers of knowledge about the factors associated with SIDS, checking socioeconomic and demographic conditions are associated with their level of knowledge. METHODS: Participants were 502 mothers of children who were present on D-Day of vaccination against poliomyelitis in 2015, a medium-sized municipality in the state of São Paulo. Through interviews, so collected socioeconomic and demographic information and the knowledge of mothers about the risk and protective factors for SIDS. simple analysis was performed at the 5% significance level to test the association between the dependent variable (number of correct answers of mothers about the risk factors) and the independent variables (socioeconomic and demographic). RESULTS: Most mothers reported having heard about the syndrome, but only just over half of the sample could describe SIDS. CONCLUSIONS: There was an association between lower accuracy in questions (p = 0.0001) and have never heard about the syndrome.

214 A descriptive assessment of the image archive of CBCT exams from the Oral Radiology Clinic at FOP/UNICAMP.

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Cone-beam computed tomography (CBCT) is an imaging modality widely used in dentistry. The aim of this study was to make a descriptive analysis of CBCT examinations and compare with the panoramic radiographs obtained at the Dental School of Piracicaba (FOP), University of Campinas (UNICAMP) in 2015. Panoramic radiographs and CBCT exams obtained in 2015 at the Clinic of Radiology at FOP / UNICAMP were recovered and the information such as sex and age of the patient and date of the examination were obtained and compiled. Descriptive analysis for each imaging modality was performed and graphs were plotted to represent the patient profiles. The total number of patients in 2015 was 2531 (panoramics) and 641 (CBCT). The number of females was higher than the males for both imaging modalities. November and August were the months with the highest number of patients for panoramic and CBCT, respectively. January and December were the months with the lowest number of patients for panoramic and CBCT, respectively. Patients aged between 21 and 30 years were the most prevalent and between 81 and 90 years were the least prevalent for both imaging modalities. The Radiology Clinic at FOP/UNICAMP serves a large number of patients. The organization and characterization of the image archive of CBCT exams contributed to the knowledge of the patients' profile, as well as the recovery of specific clinical cases for future research.

215 Comparative study between solutions and images revealing fixers radiographic for durability and deterioration

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INTRODUCTION: Periapical radiographs are the most used in dental offices for most of Dental Surgeons. The revealing liquid solutions contain water, potassium sulfite, diethylene glycol and hydroquinone. The processing liquid solutions containing water, ammonium thiosulfate, sodium sulfite and acetic acid. AIM: The aim of this study is to compare two brands net of developers and fixers solutions regarding the degradation and durability after the revelation of the Kodak brand film. METHODS: Two different darkrooms were used. The first was placed a liquid solution of Contrast® brand in closed containers with lid itself when not in use and open, in the darkroom and in the second chamber solution Carestream Dental brand - Kodak®. RESULTS: We observed that the container was in the liquid solution of Contrast® showed higher degradation and less durability, while the open container was 70% lower when compared degradation. The durability of the open container was also evaluated in the two most brands. CONCLUSION: It was concluded that since both chambers were kept at the same temperature with the same local light and humidity, the greater degradation in closed containers occurred by interference from oxygen circulation. The solution used Carestream Dental - Kodak® showed less color change and degradation compared to Contrast® brand.

216 Comparison of digital radiographic systems and CBCT in detection of fractured endodontic instruments

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Aim: To compare the detection of fractured instruments in root canals with and without filling by periapical radiographs from 3 digital systems and cone-beam computed tomography (CBCT) images with different resolutions. Methods: Thirty-one human molars (80 canals) were used. Root canals were divided in: G1 - without filling; G2 - without filling and with fractured files; G3 - filled; G4 - filled and with fractured files. Digital radiographs in ortho, mesial and distoradial directions were performed in two semidirect systems (VistaScan and Express) and one direct system (SnapShot). CBCT images were acquired with 0.085 mm and 0.02mm voxel sizes. All images were assessed and reassessed by four observers, for the presence or absence of fractured files, on a 5-point scale. The sensitivity, specificity and accuracy were calculated. Results: In the absence of filling, accuracy values were high and there were no statistically differences between the radiographic techniques, different digital systems, or between the different CBCT voxels sizes. In the presence of filling, the accuracy of periapical radiographs was significant higher than CBCT images. In general, SnapShot showed significant higher accuracy than VistaScan and Express. Conclusions: Periapical radiographs in one incidence were accurate for the detection of fractured endodontic instruments inside the root canal in the absence or presence of filling, suggesting that this technique should be the first choice, as well as the direct digital radiographic system should be prefer. In the presence of filling, CBCT should be avoided.

217 Comparison of radiolucent lesions of the jaw assessed by panoramic radiography and computed tomography

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Aim: To compare the characteristics of radiolucent lesions of the jaw, as well as their diagnostic hypothesis, when assessed by panoramic radiography and computed tomography. Methods: Twenty cases of radiolucent lesions of the jaw were selected; each of them should have panoramic radiography, computed tomography and histopathology with final diagnosis. Four examiners assessed the imagens independently and randomly in different moments, first the panoramic radiography and then the computed tomography, without knowing the histopathology diagnosis and without associating the exams. For the statistical analysis, the McNemar test and the t test were performed for qualitative characteristics of the radiolucent lesions and for the area, respectively. Results: According to the statistical tests, the computed tomography was superior only in the assessment of cortical bone expansion and perforation. No difference was found between the panoramic radiography and the computed tomography for the other characteristics and for the diagnostic hypothesis of the radiolucent lesions. Conclusion: In general, the panoramic radiography and the computed tomography were equivalent in the assessment of radiolucent lesions of the jaw. Therefore, the request of computed tomography must not be performed indiscriminately and should be pondered for each case considering the radiation dose involved.

218 Estimate of dental age: comparison between nolla and demirjian methods

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Aim: The aims of this study were to decide the best method to estimate dental age on Brazilian children by reviewing Nolla and Demirjian methods and to illustrate the differences among them. Methods: The records of Brazilian children between 7 and 13 years old who visited the Department of Oral Radiology of the FOP/UNICAMP were reviewed and a total of 403 healthy children with complete records, satisfactory panoramic radiographs, similar socio-economic background and ethnic origin were included. Panoramic radiographs were examined with Nolla's and Demirjian's methods. Dental age was calculated for each method; additionally estimated dental ages were compared to chronological age by analysis of variance with post-hoc Dunnett. Results: An over-estimation of the dental age was observed by using Demirjian's method (for boys 0,89-1,84 and for girls 0,69-1,97) for all age groups; using Nolla's method, a statistically significant differences was observed only for 12 years for boys (1,00) and between 11 and 12 years for girls (0,51 and 059, respectively). Conclusion: The Nolla´s method is suitable for Brazilian children for age estimate with care for the growth spurt of early stage (around 11 and 12 years). Already Demirjian's method should not be used because over-estimated the age in both sexes.

219 Evaluation of a metal artefact reduction tool on different positions of a metal object in a fov

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Aim: This study aimed to evaluate the metal artefact reduction tool on different positions of an artefact generator metal object in a FOV. Methods: A cylindrical utility wax phantom with a metal alloy sample inside was made. The phantom was positioned centrally and peripherally in the FOV for image acquisition, in the presence and absence of the metal artefact reduction tool. Standard deviation values (image noise levels) from areas around the metal sample and the control area were obtained. The numbers were compared by Student's t-test ($\alpha = 0.05$). Results: In the presence of the tool, a statistically significant difference of image noise was observed for central and peripheral positioning, for both control area ($p = 0.0012$) and test area ($p = 0.03$), and a smaller level of noise was observed for images with phantoms in central positioning. A decrease on image noise with the tool activated was found only in phantoms with the metal alloy positioned centrally in the FOV. Conclusions: For the metal artefact reduction tool to be effective, the artefact generator object needs to be in the central region of the FOV.

220 Evaluation of endodontic treatment quality on cone beam computed tomography images

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Aim: To evaluate the endodontic treatmentquality, identifying the most frequent failures and the most affected teeth andto associate it with the periapical and root conditions using computed tomography cone beam (CBCT). Methods: Six hundred and one teeth (1061 root canals) endodontically treated were evaluated for the quality of endodontic treatment and for the absence or presence of root resorption and apical periodontitis. Assessing the endodontic treatment quality considered the length of the filling, its homogeneity, coronal sealing and absence of technical failures. Periapical status was analyzed according to already established CBCT-PAI index for radiologic evaluation. Descriptive analyzes, Chi-square's test and Spearman 's correlation were performed.Results: Endodontic treatments were adequate in 53.4% (321) of the teeth and 60.4% (641) of root canals evaluated. The main cause of failure was the filling more than 2 mm below the apex, and the most frequently affected teeth were the maxillary molars (65% of cases). There was a statistically significant association between inadequate endodontic treatment and the presence of periapical lesions ($p<0.0001$). However, there was no association between the endodontic treatment quality and the presence or absence of root resorptions ($p>0.05$). Conclusion: It was conclude that endodontic treatment quality has great influence in the presence or absence of periapical lesions, which can directly affect the management and outcome of these cases.

221 Evaluation of the volume of airways space and its correlation with mandible and hyoid bone

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Aim: The aim of this study was to evaluate the volume of the airways space, the size and shape of the mandible and the hyoid bone, as well as their relationships, in patients with different facial types and skeletal classes. Furthermore, the volume of the airways was determined through a formula using only linear measurements. Methodology: A total of 161 i-CAT Next Generation (Imaging Sciences International, Hatfield, PA) cone beam CT images (80 males, 81 females, aged between 21 and 58 years old, mean age = 27 years), were retrospectively studied. Skeletal classes and facial type were determined for each patient from multiplanar reconstructions using NemoCeph® software (Nemotec, Madrid, Spain). Linear and angular measurements were performed using Carestream 3D Imaging® software 3.4.3 (Carestream Health Inc., Rochester, NY), while volumetric analysis of the upper airways was carried out from the 3D model of the semi-automatic segmentation mode Insight software ITK-SNAP 2.4.0 (Cognitica, Philadelphia, Pa). Results: The volume of the airways space when correlated with mandible and hyoid bone through linear and angular measurements showed significant correlations with regard to the skeletal class and/or the facial type. The Linear regression to predict the volume of the airways showed that the R was 0.92 and the adjusted R2 was 0.8362. Conclusions: There were some significant correlations between the volume of the airways space, the mandible and the hyoid bone. It was also possible to elaborate a formula with great accuracy, showing that the model could be very useful to predict Volume of Airways.

222 Incidental rare findings in the paranasal sinuses diagnosed by cone beam computed tomography

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The paranasal sinuses are air spaces enclosed by the nasal cavity, divided into: maxillary sinus, frontal, ethmoid and sphenoid. The diseases that affect this region can be discovered incidentally on imaging exams ordered for other reasons. Cone beam computed tomography (CBCT), being an examination which provides image in three dimensions and multiplanar reconstruction allows detailed assessment of the anatomy of the paranasal sinuses. In this study are reported 2 cases of hyperdense lesions found incidentally inside the sinuses paranasal. In case 1 there was the presence of expansive training, homogeneous, oval, well-defined, occupying the inside of the ethmoid sinus, along the medial aspect of the lamina papyracea, with symptoms of nasal obstruction and constant runny nose. The diagnosis was sinolith, extremely rare calcification, which was confirmed after the removal of the lesion and histopathological examination. In the case 2, the presence of a large well-defined mass connected with the cortical bone by pedunculated base was detected, located on the frontal sinus and extending to the ethmoid sinus. Considering the clinical characteristics (headache) and images, location and extent of injury, established the diagnosis of giant osteoma. Despite this is the most common neoplasm of the paranasal sinuses, giant osteoma are extremely rare. In all cases, CBCT was an effective method for detection of these lesions, combined with skill, knowledge and experience of the dentist in evaluating the entire volume image.

223 Influence of ambient light on the image quality of digital phosphor plate radiographic systems: a pilot study

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Aim: To evaluate the influence of ambient light on the image quality of digital phosphor plate radiographic systems. Methods: Radiographs were obtained by using three digital phosphor plate radiographic systems: VistaScan®, Digora Optime and Express™. All phosphor plates were of size 2 (31 x 41 mm). Basal radiographic exposures (without any object) were carried out under four different times: 0.02 s, 0.05 s, 0.063 s and 0.08 s. After exposure to X-rays, all phosphor plates had half the active face exposed to ambient light during the times 1 s, 2 s, 4 s, 6 s 8 s and 10 s; and they were scanned. All images produced were exported to TIFF file format. In the ImageJ software, two regions of interest were selected, such that one was in the area exposed to light and another one in the unexposed area, and the mean values and standard deviation (noise) of the gray values were obtained. Pearson's correlation coefficient was calculated between the mean gray values and light exposure time for each X-ray exposure time. Quantitative analysis was performed of the difference of gray values and noise between the exposed and unexposed to light areas for all the light and X-ray exposure times. Results: A positive correlation was observed between the mean gray values of exposed-to-light areas and light exposure time. In general, light exposure induced an increase of gray values and decrease of noise for different X-ray exposure times on the three digital phosphor plate radiographic systems. Conclusion: Phosphor plate-based digital image quality has potential to be influenced by ambient light.

224 Influence of sodium alendronate in the cortical bone resistance of ovariectomized rats

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Aim: to evaluate the effect of sodium alendronate in the bone mineral density and microarchitecture of ovariectomized rats cortical bone. Methods: twenty Wistar female rats, with 90 day-old, were subjected to ovariectomy and were randomly divided into 2 groups (n=10): control and treated. After 05 days, sodium alendronate was administrated (5 mg/kg body weight) on the treated group, three times for week, by gavage, during all the experiment. At 131 day-old, all the animals were sacrificed. The femurs were withdraw, scanned and the cortical bone was traced by an automated selection in micro-Computed Tomography and by dual-energy X-ray bone densitometry. The data were subjected to statistical analysis by ANOVA and Kruskal-Wallis tests. Results: in the treated group, the thickness, cortical volume, total surface and total volume increased significantly ($p<0.05$), and the connectivity density decreased. At the same way, the bone mineral content and area increased significantly ($p<0.05$). Conclusions: the administration of sodium alendronate is associated with the reduction of cortical bone reabsorption in estrogen deficiency rats which can improve the bone resistance and to reduce the fractural risk.

225 Measurements of the maxillary sinus as a tool for sex determination: a CBCT-based study

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Aim: Sex determination is an important step for identifying decomposed bodies and skeletal remains, and it is usually attained by analyzing skeletal morphometric traits in the pelvis, the skull and in long bones. However, in most cases, the pelvis and long bones are fragmented or absent, which further assigns more importance to craniometrical study. Our goal was to assess the possibility of sex determination through measurements of the maxillary sinuses in a Brazilian population by means of Cone-Beam Computed Tomography scans (CBCT). Methods: Linear and volumetric measurements for the maxillary sinus were assessed bilaterally in 94 CBCT scans from 45 males (mean age 25.2 ± 0.79) and 49 females (mean age 23.7 ± 0.50). The OnDemand 3D® software was employed to determine the linear measurements (height, length and width of, and the largest distance between the right and left maxillary sinuses), while the ITK-SNAP® segmentation software was used to acquire the volumetric data. Results: Maxillary sinus' measurements were significantly higher in males, without statistically significant differences between the right and left sides within each group. Based on the logistic regression model developed from the measurements performed, it was possible to create a formula that lead to a sex prediction of 87.8% for females and 80% for males, with an overall accuracy of 84%. Conclusion: Linear and volumetric measurements of the maxillary sinus based on CBCT scans can be useful for sex determination. The formula presented here can be used to predict sex with high level of accuracy.

226 Number of basis images associated to effect of metal artifact reduction tool

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AIM: To compare the presence of artifact in acquisition protocols of different numbers of basis images and the presence and absence of metal artifact reduction (MAR) tool, in cone beam computed tomography (CBCT) images. METHODS: An Acrylic resin phantom with a metal alloy sample inside was scanned changing of number of basis images (450 and 720 basis images) and using the MAR tool (absence or presence). The standard deviation values of the control area and test area (the area around the sample) were obtained and statistically analyzed by two-way ANOVA with Tukey's as post hoc ($\alpha = 0.05$). RESULTS: The increased number of basis images resulted in a decrease in the artifact to control area ($p<0.05$) but did not reduce the artifact in the test area ($p>0.05$). The MAR tool was only effective to the protocol of 720 basis images ($p <0.05$) in the test area. The protocol of 450 basis images with the tool showed no significant difference ($p<0.05$) compared to 720 base images protocol, regardless of the tool. CONCLUSION: In the presence of objects that generate artifacts it is recommended to acquire CBCT images with fewer basis images to minimize the noise of the tomographic image and without exposing the patient to a higher radiation dose. Keywords: cone-beam computed tomography; artifacts; basis images

227 Reliability assessment of automatic cephalometric analysis

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Aim: The aim of this study was to assess the reliability of automatic cephalometric analysis in relation to the manual method. Methods: Fifty digital lateral cephalometric radiographs obtained from the K9000 C3D (Carestream Dental, Atlanta, USA) were selected. Steiner's and Tweed's cephalometric analyses were performed automatically and manually by using, respectively, the KDIS® software (Kodak Dental Imaging Software) and the RadioCeph Studio 2 (Radio Memory, Belo Horizonte, Brazil). Two dentists, both with experience in cephalometric analyses, being one specialist in Radiology and the other one in Orthodontics, performed the manual analysis. Ten factors of both analyses were selected and the measurements obtained by the automatic method were compared to the manual method. The values obtained from both dentists were analyzed by Student's t-test and, since no significant difference ($p>0.05$) was found between them, the values were averaged. The comparison between the mean values of the dentists and the automatic values was also evaluated by the Student's t-test with a significance level of 5% ($\alpha=0,05$). Results: All tested factors were significantly different($p<0.05$) between automatic and manual cephalometric analysis. Conclusion: Automatic cephalometric analysis was not reliable in relation to the manual method.

228 The use of orthodontic measures to analyze sexual dimorphism using images of Cone Beam Computed Tomography

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The aim of this study was to evaluate sexual dimorphism performing orthodontic measurements on dental arches images by Cone Beam Computed Tomography (CBCT). Subjects (n=100) involved a Brazilian population (50 men and 50 women), aged 18–60 years. The CBCT images were analyzed by 2 reviewers, who performed four measurements in the analysis of sexual dimorphism: Intercanine Distance (ID), Intermolar Distance (IM), Required Space (RS) and Perimeter of Dental Arch (PDA). The measurements were repeated with 20% of the sample 15 days after the first evaluation. For statistical analysis, the t Student test was used to compare the mean values of these measurements. All measurements showed higher values for males, showing statistically significant difference between sexes ($P<0,05$). In conclusion, the orthodontic measurements used in this study have presented statistically significant difference between sexes, therefore can be used for sexual differentiation in forensic settings.

229 The use of magnetic resonance imaging for diagnosis of dentigerous cyst: case report

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Odontogenic cysts have a high prevalence in the dental clinic population, with dentigerous cyst being one of the most frequent ones and whose aetiology involves accumulation of fluid between the reduced enamel epithelium and the crown of an unerupted tooth. In the diagnostic process of these lesions, one should consider complementary imaging exams such as conventional radiography and computed tomography, which are commonly used for providing anatomical information on the tissues compromised by the lesion, but not on the nature of it. Magnetic resonance imaging (MRI) scans are non-invasive modalities which, due to their unique acquisition characteristics, can provide distinct information on the nature of the lesion. This study reports on a case of dentigerous cyst in the mandible of a 9-year-old patient, documented by means of different imaging modalities. MRI played an important role in both diagnosis of the lesion and differential diagnosis between neoplastic lesions presenting similar imagenological behaviour under other techniques of radiography.

230 Volume assessment of the mandibular condyle in patients with unilateral posterior cross-bite

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Changes in the occlusal pattern, as the presence of posterior cross-bite, may act as an adjunctive factor for increased intra-articular force. It was observed that, in patients with mixed dentition and unilateral posterior cross-bite, there were changes in positioning and linear measurements in the mandibular condyle on the side affected by the cross-bite. The aim of this study was to evaluate the volume of mandibular condyles in patients with unilateral posterior cross-bite. A total of 22 subjects (44 temporomandibular joints) with mixed dentition, of both sexes, with unilateral posterior cross-bite and orthodontic treatment indication were evaluated. Cone-beam computed tomography volumes for the TMJs were acquired. The volumes of the mandibular condyles were measured using the software ITK-SNAP, and analyzed statistically using the paired Student t-test. There was no significant difference observed between the volumes of the mandibular condyles for the crossed and uncrossed side.

231 Reliability of ICDAS and post-radiation dental index in radiation-related caries

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Introduction: Radiation-related caries (RRC) is an aggressive type of caries that affects up to 25% of head and neck cancer patients who underwent radiotherapy. Aims: The aim of this study was to validate and assess the reliability of the International Caries Detection and Assessment System (ICDAS) and the Post-Radiation Dental Index (PRDI) for assessing RRC. Methods: Clinicopathologic data and intraoral digital photographs of 55 patients from ICESP/FMUSP and OROCENTRO/ Piracicaba Dental School (with a total of 761 teeth) affected by RRC were assessed and classified according to the criteria of ICDAS (stage 0 to 6) and PRDI (stage 0 to 5) under the same experimental conditions. Results: In this study, 749 of the 761 teeth presented RRC lesions ranging from early stage to complete tooth destruction. The median rates for the whole sample were 4 for PRDI and 5 for ICDAS. The highest individual rate was 5 for PRDI and 6 for ICDAS. The lowest median rate was 1 for PRDI and 1 for ICDAS. Conclusions: These results suggest that RRC is predominately diagnosed in late stages and reinforce the need for early diagnosis. The ICDAS is an index for conventional caries and the PRDI is an ex vivo index for RRC that doesn't represent the real clinical features of the lesions. The development of a clinical classification index individualized by RRC patients may guide clinicians to recognize incipient cases of RRC and to improve diagnosis and prompt treatment.

232 Expansive osseous dysplasia: case report and reappraisal of the classification

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The osseous dysplasias (ODs) are non-neoplastic conditions characterized by replacement of bone with abnormal fibrous tissue accompanied by gradual deposition of mineralized masses in the jaws. The classification of ODs includes focal OD, periapical OD, florid OD and familial gigantiform cementoma. An expansive growth is rare, and occurs most frequently in the latter group. Recently, several cases of expansive OD have been reported, a diagnosis that appears to better describe the "familial gigantiform cementoma" group. A 33-year-old woman was diagnosed with florid OD in 2011 through radiographic exams. Five years later, she was referred exhibiting an expansive lesion of the mandibular anterior region. The intraoral examination revealed an expansion on the vestibular and lingual cortical bones and the teeth showed displacement, without alterations of pulp vitality testing. There was no pain or paresthesia. The panoramic radiograph showed an expansive mixed lesion. Teeth resorptions were not visualized. The computed tomography showed a dense mixed lesion closely associated with the roots of the mandibular incisors. Intraoral incisional biopsy was performed, which proved difficult to detach from adjacent bone, and microscopically revealed a benign fibro-osseous lesion. The clinicopathological features favored the diagnosis of expansive OD. Expansive lesions should be considered in the differential diagnosis of OD. Similar with previous studies, we considered that the term "familial gigantiform cementoma" be replaced by "expansive OD" and sub classified into familial- and non-familial types.

233 Orofacial lesions in human immunodeficiency virus infected patients

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Aim: to identify the relative frequency of oralfacial lesions in a sample of Human Immunodeficiency virus infected (HIV+) patients. Methods: fifty hiv+ patients were selected and invited for a clinical exam. They were requested about health and social status, hiv infection and diagnosis, preexisting diseases and treatment modality. Extraoral and intraoral physical exam were performed to evaluate the presence of orofacial disorders. If necessary, patient was submitted to a complementary exam. Results: there were 27 female (54%) and 27 caucasian (54%). mean age was 49.1 years-old. Forty-one patients had no preexisting disease (82%). Mean time of hiv infection diagnosis was 9 years and 46 patients were in use of highly active antiretroviral therapy (92%). Thirty-nine patients had an undetectable viral load value. The number of cd4 cells ranged from 64 cells/µl to 1,509 cells/µL of blood (mean of 632.14 cells/µL). Sixteen patients had an orofacial disorder (32%). pseudomembranous candidiasis, denture stomatitis, fibrous hyperplasia, hairy leukoplakia, papilloma, stomatitis aphthous, lymphoid hyperplasia, linear gingival erythema, facial lipodystrophy were the lesions identified. It was also possible to observe that the patient with the lowest cd4 cells count and the highest viral load value had both pseudomembranous candidiasis and hairy leukoplakia. Conclusions: actually, the presence of orofacial lesions in hiv+ patients are not common, but may occur and be associated with systemic status of the patient; thus dentist should always perform a thorough clinical exam in these patients.

234 Syphilis on palate: a serie cases

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Introduction: syphilis is a sexually transmitted disease caused by the bacterium Treponema pallidum. Oral manifestations can appear according to the clinical stage. Any oral anatomical sites may be involved. The Syphilis presents a large variability of clinical appearences, thus, the differential diagnosis must include several diseases. Methods: it were selected the clinical files of patients with Syphilis attended in the Oral Medicine Service (OMS), of the Faculty of Odontology of Araraquara (UNESP). Exclusion criteria: inconclusive diagnosis and incomplete files. Inclusion criteria: syphilis on the palate with serological confirmation. The analysis were performed based on photography. Results: we found 20 patients with syphilis in the OMS files, being 12 (60%) with palatal lesion. The median age of these 12 patients was 41 years, 7 were women and 5 men. The median period of evolution was 4 month. In 10 cases there was also involvement on tongue (66.6%), lips (50%), buccal mucosa (58.3%), skin (50%), and linphadenopathy (33.3%). The palatal lesions were clinically erosive/ulcerated, erithematous, with finely granular wound bed, some cases presented peripheral reticular appearance (77.7%). Eleven (91.6) patients reported pain. Conclusion: the palatal lesions present a less variable appearance in relation to syphilis lesions on any others anatomical sites. This observation is usefull to direct the clinical diagnosis, since the syphilis is also called the great imitator due to large spectrum of clinical appearance.

235 Subjective evaluation of contrast resolution on different digital imaging systems

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Aim: to subjectively evaluate the contrast resolution of different digital radiographic systems. Methods: Five radiographic phantoms were prepared containing a solution of dipotassium phosphate (K2HPO4) in 6 different volumes. Each phantom presented the solutions of K2HPO4 in a different sequence and was X-rayed with 5 digital radiographic systems: Digora Toto, Digora Optime, Snapshot, Express and VistaScan. All 25 digital radiographic images were exported, stored in TIFF format and evaluated in the JPEGView software. Ten examiners had to identify the sequence between the lowest and the highest volume of K2HPO4 solution. For each image, the percentage of correct answers was calculated. After 15 days, all images were re-evaluated to test the intra-rater reproducibility. The Mann-Whitney test compared the digital systems in pairs. Intraclass correlation analysis assessed the level of intra-examiner agreement. Results: Intraclass correlation coefficient (ICC) ranged from moderate to almost perfect. The Digora Toto and Express were the systems with the highest values of percentage of correct answers. The Snapshot presented intermediate values and did not differ from Express and Digora Optime. The Digora Optime and VistaScan were the systems with the lowest values of percentage of correct answers. In conclusion, among the digital radiographic systems evaluated, Digora Toto and Express produced radiographic images with the best subjective contrast resolution. Conclusions: Among the digital radiographic systems evaluated, Digora Toto and Express produced radiographic images with the better subjective contrast resolution.

236 Oral hygiene habits and periodicity of visits to the dentist of high school students from Piracicaba

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Aim: To investigate which are the oral hygiene habits and periodicity of visits to the dentist of high school students from state schools in the city of Piracicaba, State of São Paulo. Methods: In this research were randomly selected, three schools. Data collection was through questionnaires applied to high school students (1st, 2nd, 3rd year). Results: 699 students participated in this research, and 359 (51.36%) female and 340 (48.64%) males, aged from 14 to 19 years. We note that these adolescents have good oral hygiene, as the total of adolescents: 554 (79.26%) carry out cleaning after meals, 243 (34.76%) use dental floss after meals, 289 (41.34%) make use of mouthwash after meals, 248 (35.48%) attend the dentist (CD) 6 in 6 months, 299 (42.78%) had oral hygiene orientation, 388 (55.51%) held ATF occasionally, 584 (83.55%) do not realize dentist change. Conclusions: We conclude that the high school students from Piracicaba have good oral hygiene as these, in most cases, have good hygiene habits and periodicity of visits to the dentist. We also conclude that they have good adhesion to dental treatment since, in addition to having good periodicity of visits to the dentist, they mostly do not have the habit of making the exchange of professional.