### 1. MORPHOMETRIC ANALYSE OF GREATER PALATINE FORAMEN IN HUMAN SKULL OF DIFFERENTS GENDERS

FELIPPE BEVILAQUA PRADO; MAISE MENDONÇA AMORIN, PAULO HENRIQUE FERREIRA CARIA. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Introduction: The anatomic localization of the greater palatine foramen is important to clinic procedures like anesthetic of the greater palatine nerve, periodontal surgery, palatine tumour, abscess drainage and others clinical interventions. To know the position of the greater palatine foramen and their variations offer safety to carry out conservative procedures during the clinical activity. The aim of this study was analyze the variations of the greater palatine foramen position in human skull in both genders. Material and Methods: It was used a digital calipers to measure the distances between the greater palatine foramen to the posterior border of the hard palate and the greater palatine foramen to the median palatine suture, of the 144 humans skulls (62 males and 62 females), bilaterally. The values obtained from the both gender and sides, were submitted to analysis of variance and Test t Student (p<0,05). Results: The medium distance from the centre of the greater palatine foramen to the median palatine suture was the 18,47 mm in males skulls and 17.54 in females skulls. The medium distance between the centre of the greater palatine foramen and the posterior border of the hard palate was the 8,43 mm in males and 7,80 in females. Significants statistically differences were observed in position of the greater palatine foramen between the sides evaluated in the same skull and between genders. Conclusion: There is difference of the position greater palatine foramen between the genders analyzed and between the sides of the same skull.

#### 3. RADIOGRAPHIC STUDY OF BIOMECHANIC CRANIO-MANDIBULAR, QUANTIFIED BY THE SURFACE ELEC-TROMYOGRAPHY OF MASTICATORY MUSCLES - REPORT CASES

COELHO-FERRAZ, M. J.; BÉRZIN, F.; COLLETES ALVES, L. M.; BÉRZIN, M. DA G. R. FOP/UNICAMP

This study intends to demonstrate the objective relationship between the Panoramic radiographics images, analyzed by the Hyperbolic line of Brazil (Cheida et al. 2005) and the teleradiography based in the line of Rocabado(1994) and the electromiographics lines of the masticatory muscles of the craniomandibular biomechanics by the study of the muscles forces levers, in four report cases. Method: METHOD: The radiographics images followed the Piracicaba DentIstry College(UNICAMP) standards. Electromyography results of the Mm masséter, temporal, anterior and posterior portions and supra-hyoids were obtained at the postural position, habitual chewing and maximum intercuspation. It was used surface electrodes, of the Ag/AgCl, trade mark Meditrace, connected to the Myosistem 1 equipment, trade mark Prosecon Ltda, frequency of 1000Hz, digital filter with a band pass of 20-500 Hz. RESULTS: the results confirm the objective relationship between the radiographics images and the electromyographics results, that make possible a better diagnosis precision of the temporomandibular disfunctions.

### 5. EFFECT OF MASSAGE THERAPY ON THE ELECTROMYO-GRAPHIC ACTIVITY AND PAIN OF PATIENTS WITH TEM-POROMANDIBULAR DYSFUNCTION.

JULIANA DE PAIVA TOSATO; PAULO HENRIQUE FERREIRA

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Physical therapy contains several resources relevant to the treatment of temporomandibular dysfunction (TMD), massage therapy observed among these resources. Assess the effect of massage therapy on masseter and temporal muscles, along with the painful sensibility response on TMD patients. 10 women with myogenic TMD signs and symptoms were selected. After the selection, all volunteers performed the electromyographic exam with isotonic and isometric contractions, on a portable 8-channel device with signal conditioning system, external power supply, filter with band between 20-500 Hz, amplifier with 1000x gain, and common mode rejection ration of >120dB. The pre-amplified active surface electrodes presented gain of 20x, and common mode rejection ration of >100dB. After the electromyographic exam, the volunteers answered the Visual Analogue Scale Pain. Each volunteer was re-assessed after therapy. The assessed muscles manifested greater electromyographic activity immediately after the proposed therapies (p=0,02), and decreased pain scores (p = 0.000000009). It is possible to suggest that the proposed therapy promoted improvement regarding the pain onset, although the muscles assessed presented greater RMS values.

### 2. RADIOGRAPHIC STUDY OF BIOMECHANIC CRANIO-MANDIBULAR, QUANTIFIED BY THE SURFACE ELEC-TROMYOGRAPHY OF MASTICATORY MUSCLES - REPORT CASESNEUROMASTICATORY FACILITATION TECHNIQUE ASSOCIATED - TWO CASES REPORT

COELHO-FERRAZ, M.J.P.\*; BERZIN, F.; COLLETES ALVES, L.M.; BERZIN, M.G.R.

FACULDADE DE ODONTOLOGIA DE PIRACICABA/UNICAMP

This study intends to demonstrate the objective relationship between the Panoramic radiographics images, analyzed by the Hyperbolic line of Brazil (Cheida et al, 2005) and the teleradiography based in the line of Rocabado(1994) and the electromiographics lines of the masticatory muscles of the craniomandibular biomechanics by the study of the muscles forces levers, in four report cases. The radiographics images followed the Piracicaba Dentistry College (UNICAMP) standards. Electromyography results of the Mm masséter, temporal, anterior and posterior portions and supra-hyoids were obtained at the postural position, habitual chewing and maximum intercuspation. It was used surface electrodes, of the Ag/AgCl, trade mark Meditrace, connected to the Myosistem 1 equipment, trade mark Prosecon Ltda, frequency of 1000Hz, digital filter with a band pass of 20-500 Hz. The results confirm the objective relationship between the radiographics images and the electromyographics results, that make possible a better diagnosis precision of the temporomandibular disfunctions.

### 4. MORPHOLOGICAL DESCRIPTION OF MANDIBULAR CANAL IN PANORAMIC RADIOGRAPHS

AMORIM, M.M.\*; CARIA, P.H.F, NETO; HAITER-NETO F. FOP/UNICAMP

Morphological and topographic knowledge of the mandibular canal is paramount during dental procedures in the jaw, as structures that go through this canal must be preserved. The aim of this study was to analyze morphologic and morphometrically the course and relations of the mandibular canal of both male and female adults, belonging to two different groups of ages. The sample was composed of 300 panoramic radiographs shared in 4 groups: Groups F1 and F2: female gender (ranging between 18-40 years and above 40 years, respectively); Groups M1 and M2: male gender (ranging between 18-40 years and above 40 years, respectively). Seven linear vertical measurements were performed in the radiographs to describe the course and relations of the mandibular canal with anatomic structures of jaw. Mental foramen horizontal position and proximity relation between the mandibular canal and the roots of the inferior teeth were also evaluated. Statistically significant differences were observed in four of the measurements between genders. However, there was no difference between groups of age for any of the measurements. The most frequent position of the mental foramen was between the roots of the inferior pre-molars; and the mandibular canal shows proximity relation to the roots of the inferior third molar, moving gradually away from the roots of the other teeth. The results suggest that the measurements related to mandibular canal performed in this study can be influenced by the gender but are independent of age.

# **6.** GENOTYPIC DIVERSITY OF STREPTOCOCCUS MUTANS IN DENTAL BIOFILM FORMED IN VIVO AND IN SITU IN THE PRESENCE OF SUCROSE AND GLUCOSE+FRUCTOSE

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It is known that extracellular polysaccharides and acids produced by fermentation of sucrose may select acid tolerant microorganisms, but it is unclear the effect of sucrose on the genotypic diversity of S. mutans. The aim of this crossover study was to evaluate S. mutans genotypic diversity in dental biofilm formed in vivo and in situ in the presence of sucrose (S) or glucose+fructose. Saliva of 7 volunteers was collected before the beginning of the study. The volunteers rinsed with 15 mL of distilled and deionized water (W), 10% glucose + 10% fructose (G+F) or 20% S solution, 8x/day, during 3 days for in vivo biofilm formation on upper posterior teeth. Further, the same volunteers wore an in situ intraoral appliance with 2 human enamel blocks, which were treated with the same solutions, 8x/day, during 3 days. S. mutans were isolated from saliva and biofilms. 371 isolates were genotyped by arbitrarily primed PCR with OPA-02 primer and a total of 31 distinct genotypes were identified considering all volunteers. 85.7% of volunteers harbored just 1 salivary genotype, which was also found in both biofilms. In vivo and in situ biofilm showed similar genotypic diversity. There was no quantitative difference in the genotypic diversity of S. mutans among the experimental treatments, but G+F and S presented different genotypes compared to W. Research is needed to evaluate their characteristics and virulence factors

# 7. MICROBIOLOGICAL EVALUATION OF DENTAL BIOFILM FORMED IN VIVO AND IN SITU IN PRESENCE OF SUCROSE AND GLUCOSE+FRUCTOSE

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Due to the acid production followed by sugar fermentation, microbial changes may occur in biofilm. However, dental biofilm formed in situ was neither evaluated in shorter periods nor compared with those formed in vivo. Thus, the aim of this crossover study was to evaluate the microbiological composition of dental biofilm formed in vivo (IV) and in situ (IS) during three days in presence of sucrose (S) or glucose+fructose. Saliva of 7 volunteers was collected before the beginning of the study. The volunteers rinsed with 15 mL of distilled and deionized water (W), 10% glucose + 10% fructose (G+F) or 20% S solution, 8x/day, during 3 days for IV biofilm formation on upper posterior teeth. Further, the same volunteers were an in situ intraoral appliance with 2 human enamel blocks, which were treated with the same solutions, 8x/day, during 3 days. The counts of S. mutans (mean±sd) in saliva was (CFU/mgx104): 106.0±116.0; in IV was: 4.0±9.7;9.6±20.0;22.0±34.0; and in IS: 0.51±1.19;0.09±0.11;0.13±0.23, in presence of W, G+F and S. The percentage of S. mutans in relation to total streptococci in saliva was: 0.279±0.206; IV:  $0.232\pm0.585$ ;  $1.454\pm3.578$ ;  $1.242\pm1.645$ ; and in IS:  $0.036\pm0.087$ ;  $0.005\pm0$ ; 006;0.007±0.008. Independent of treatments, the counts were higher in IV when compared to IS (p<0.05). The data suggest that the structural changes induced by S. mutans in dental biofilm seem more important than their counts.

# 9. EFFECT OF SUCROSE EXPOSURE FREQUENCY ON DENTAL BIOFILM COMPOSITION AND ENAMEL DEMINERALIZATION IN THE PRESENCE OF FLUORIDE

CCAHUANA-VÁSQUEZ, R.A.\*; VALE, G.C.; TABCHOURY C.P.M.; TENUTA L.M.A.; DEL BEL CURY A.A.; CURY J.A. FOP/UNICAMP

The objective of this in situ study was to evaluate, in the presence of fluoride, the effect of sucrose exposure frequency on dental biofilm composition and enamel demineralization in the presence of fluoride. Ten volunteers wore palatal appliance containing four human dental enamel blocks, during 3 experimental phases of 14 days each. The volunteers used fluoride dentifrice 3 times/day. The following frequencies of exposure to 20% sucrose solution were evaluated: 0 (control), 2, 4, 6, 8 and 10 times/day. Microbiological, biochemical and mineral loss analysis were realized. The results (mean±sd) for the frequencies 0, 2, 4, 6, 8 and 10 were respectively (p<0,05): &#8710;Z: 497.6±191,3a, 473.6±216,1a, 631.1±376.2ab, 645.0±281.3ab, 789.6±435.5b, 812.5±289.5b; lactobacilli (CFU/mg x 105): 0.0066±0.0a, 1.6±3.1ab, 30.2±68.8bc, 35.3±54.5cd, 92.2±113.0de, 94.7±122.0e, whole plaque concentration : F  $(\mu \text{mol/g})$ : 3.9±1.7a, 2.1±1.8b, 0.8±0.8bc, 0.3±0.4c, 0.1±0.0c, 0.1±0.1c; calcium (mmol/g): 129.7±87.3a, 43.8±36.1b, 28.1±27.7bc, 18.5±16.7c, 10.9±4.6c, 10.8±4.6c e inorganic phosphorus (mmol/g): 157.5±72.4a, 59.6±41.3b, 27.9±16.9bc, 21.5±7.6cd, 19.0±11.7cd, 15,1±4,5d. The results showed that fluoride can reduce enamel demineralization if sucrose consumption is not higher than 6 x/day, but changes in the biochemical and microbiological composition of the biofilm are observed with lower frequencies of sucrose use.

# 11. ORTHODONTIC ANCHORAGE WITH MICROIMPLANTS OR MICROPLATES AND MICROSCREWS. LITERATURE REVIEW AND CASES PRESENTATION.

STABILE, G.A.V.\*; SVERZUT, A.T.; RODRIGUES, J.C.; MORAES, M.; MOREIRA, R.W.F; MAZZONETTO, R. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Orthodontic treatment is a complex process, requiring a method that balances the orthodontic biomechanics of an individual patient. Anchorage control is the cornerstone of the orthodontic force system. When using skeletal anchorage such as endosseous dental implants, miniplates, miniscrews, or microscrews, clincians can expect reliable anchorage without patient compliance. Several kinds of titanium microimplants or microplates that provide skeletal anchorage have attracted a great deal of attention. The characteristics of an ideal orthodontic anchor are: strong enough to resist the mass orthodontic forces; ease of insertion and removal and benefit of cost. They have been applied in the following situations: to intrude/extrude teeth; close edentulous spaces; reposition malposed teeth; reinforced anchorage. The surgery protocol is similar to standard implant surgery or internal rigid fixation installation by aseptic atraumatic, and precise surgical technique. Conversely, a waiting period for osseointegration is not necessary because their primary stability (mechanical retention) is sufficient to sustain normal orthodontic loading, and this would not compromise the clinical stability of the orthodontic anchorage. The aim of this study is the review of the literature concerning implant materials for orthodontic anchorage, presentation of implants modality, principles of surgical skills and 2 cases presentation.

### 8. ANTI-CARIES EFFECT OF FLUORIDE DENTIFRICE EVALUATED IN SITU

CEREZETTI, R.V.\*; TENUTA, L.M.A.; CENCI, M.S.; PEREIRA, T.; DEL BEL CURY, A.A.; CURY, J.A. FOP/UNICAMP

Since further knowledge on caries inhibition/progression could be obtained from models evaluating the dynamics of fluoride (F) from dentifrice in dental biofilms, this double-blind, crossover, in situ study aimed to evaluate this. Ten volunteers wore palatal appliances containing 4 enamel blocks covered by a S. mutans 'test plaque'. Appliances were immersed for 1 min in one of the treatment: non-F dentifrice (NFD-negative-control) and F dentifrice (FD- 1100  $\mu g$  F/g as NaF, silica-based) and volunteers brushed their teeth with the same dentifrice. A rinse with 20% sucrose solution provided a cariogenic challenge. Before and 5 min after the rinse, pH of the 'test plaque' was measured and after 45 min the appliances were removed. 'Test plaque' from 2 layers was collected for fluid analysis. The % of surface microhardness change (%SMC) was determined. FD-treated enamel blocks showed a statistically lower %SMC (p<0.05). No significant difference was observed between DF and NFD in the initial pH (p>0.05), but pH 5 min after the challenge was lower for the NFD (p<0.05). F concentration in the plaque fluid was higher while calcium and inorganic phosphorus concentrations were lower for the FD treatment than for the NFD (p<0.05). The results suggest that the anticariogenic effect of F dentifrice could be associated to a high F concentration in the biofilm fluid and to a low acidogenicity.

# 10. SUCROSE-INDUCED CHANGES ON BIOCHEMICAL COMPOSITION OF DENTAL BIOFILM AND ON ENAMEL DEMINERALIZATION IN SITU AS FUNCTION OF TIME

VALE, G.C.\*; TABCHOURY, C.P.M.; ARTHUR, R.A.; PAES LEME, A.F.; DEL BEL CURY, A.A.; CURY, J.A. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP.

The purpose of this in situ study was to evaluate the timing effect on biochemical composition of dental biofilm exposed to sucrose and on enamel demineralization. Volunteers (n=12) subjected enamel blocks, placed in palatal appliances, to the following treatments 8 times/day: water (C, negative control), 10% glucose + 10% fructose (GF) and 20% sucrose (S) solution. The biofilms formed during 3, 7 and 14 days were collected biochemical analyses (Ca, Pi, F, insoluble EPS and IPS concentration). Integrated mineral loss (ΔZ) was determined on enamel by cross-sectional microhardness. The ΔZ values (vol% .µm: mean  $\pm$  SD) were C: 401 $\pm$ 152aA, 362 $\pm$ 130aA, 451 $\pm$ 195aA; GF: 360±226aA, 409±195abA, 672±324bA; S: 519±175aA, 820±302aB e 1359±394bB respectively for the accumulated biofilm during 3, 7 and 14 days. Lower case letters show difference among treatments within each time, capital letters show difference among time within each treatment (p<0.05). On the 3rd day, S was able to provoke significant change (p<0.05) in biofilm composition, increasing insoluble EPS, and decreasing Ca, Pi and F concentration compared with the C; however, the only significant difference with regard to the GF group was a higher concentration of EPS. The data suggest that although sucrose provokes significant enamel demineralization after 7 days of biofilm accumulation, changes in the biochemical biofilm composition are found earlier

### 12. ANALYSIS IN VITRO OF BACTERIAL LEAKAGE AND THE ADAPTATIONS IN THE IMPLANT-ABUTMENT INTERFACE.

OLIVEIRA, G.R.\*; LUNA, A.H.B.; PEREZ, M.A.J.; ALBERGARIA-BARBOSA, J.R.; MOREIRA, R.W.F. FOP-UNICAMP

The purpose of this study was to evaluate in vitro the bacterial contamination through the implant/ prosthetic connector interface of endosseous implants. Eighty two-stage implants and their respective prosthetic connectors (40 external hexagon - HE and 40 internal hexagon - HI). The microbiological analysis was performed by incubation of Streptococcus sanguis in the internal part of the implants. A prosthetic connector was then adapted with a 20 to 30 Ncm torque. The composition was inserted in a Brain Heart Infusion (BHI) culture medium, and stored in a bacteriological stove for period of 30 days,. Daily evaluations to verify the contamination of the BHI were performed in this period. After 30 days, all implants were subjected to a scanning electron microscopic (SEM) analysis to assess the dimension of the microgaps in the implant/ prosthetic connector interface, under a 25 to 2500x magnification. Different contamination degrees of the groups could be observed, varying from zero to 90%, with statistically significant differences. However, there was no significant difference in the contamination degrees between external and internal hexagon implants. The mean microgap in the implant/ prosthetic connector interface, found in the SEM, did not present a correlation with the bacterial contamination degrees.

## 13. SLEEP APNEA OBSTRUCTIVE SYNDROME: SURGICAL AND ORTHODONTIC TREATMENT

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The Sleep Apnea Obstructive Syndrome (SAOS) is considered a lethal breathing disorder, frequently associated with hypertension, lung hypertension, night heart arrhythmias and infarct of the myocardium. The SAOS is caused by repeated episodes of obstruction of the superior aerial roads during the sleep, accompanied of a reduction of the circulating oxygen in the blood, being able to cause serious heart problems. That disorder happens when the individual enters in sleep REM and your muscles are more relaxed, causing total or partial closing of the superior aerial roads. This work comes to present an orthodontic treatment and a surgical treatment of SAOS; in the first case, white woman 63 years old with mandibular and maxillary retrognathism and with maloccclusion of Angle class II, suffered treatment only orthodontic; in the second, white man 39 years old with mandibular retrognathism and with malocclusion of angle Class II, bearer suffered treatment surgical and orthodontic.

## 15. THE INFLUENCE OF TOBACCO USE IN EARLY DENTAL IMPLANTS FAILURE

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The introduction of osseointegration principles and improved surgical protocols has resulted in an increasing use of oral implants in clinical practice. The failure of dental implants was divided into early and late. Early failure were defined as those occurring between first- and second-stage surgery. Late failure were defined as those occurring following stage 2 surgery. This study aimed to evaluate the influence of tobacco use in early implants loss, and to contribute to the knowledge of clinical factors related to oral implant failures. The study was based on a retrospective cohort of patients who received implants between 1996 and 2004. The clinical files of all patients subjected to the installation of dental implants in the Oral and Maxillofacial Area, Piracicaba Dental School, State University of Campinas, in the period from 1996 to 2004, were analyzed. The study consisted of 660 patients ranging in age from 13 to 84 years (mean 45,5 years) with a total of 1649 implants. Follow-up ranged from 9,6  $\pm$  5,8 months, period between first- and second-stage surgery. There were 593 nonsmokers (1451/55 installed/lost), 43 social smokers (117/6 installed/lost), 9 moderate smokers (34/0 installed/lost), and 15 heavy smokers (47/1 installed/lost). The tobacco use variable no showed significant statistical value (P=0,46468) for early implants loss.

According to used methodology was not found association between the early failure of implants and the use of the tobacco. Prospective studies are needed to assess the risk of early implant failure in conjunction with tobacco use.  $Fapesp - N^{\circ} 04/05244-6$ 

## 17. SURGICALLY ASSISTED RAPID MAXILLARY EXPANSION: TECHNIQUE PRESENTATION AND CASE REPORT

ANDRADE, D.O.\*; PAULESINI, W.J. COMPLEXO HOSPITALAR PADRE BENTO DE GUARULHOS

Transverse maxillary hypoplasia, in adolescents and adults, is frequently seen in non-syndromal and syndromal patients including cleft patients. In skeletally matured patients, the uni- or bilateral transverse hypoplasia can be corrected by means of a surgically assisted rapid maxillary expansion (SARME). The treatment is a combination of orthodontics and surgical procedures and provides dental arch space for alignment of teeth. SARPE is a distraction osteogenesis of the maxilla in a transverse plane. The benefits of its use are gradual callous distraction that allows the soft tissues to accommodate

The procedure also causes a substantial enlargement of the maxillary apical base and of the palatal vault, providing space for the tongue and correct swallowing and thus preventing relapse. In addition, a distinct subjective improvement in nasal breathing associated with enlargement of the nasal valve towards normal values is seen with an increase of nasal volume in all compartments. In this case report the authors present the surgical technique of the surgically assisted rapid maxillary expansion

## 14. EVALUATION OF THE MORBIDITY OF ILIAC CREST BONE HARVESTING: A 5-YEAR RETROSPECTIVE STUDY

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The iliac crest is frequently used as a donor site in Oral and Maxillofacial Surgery. This study aimed to evaluate retrospectively the morbidity and the patients' satisfaction concerning autogenous bone harvesting from the iliac crest. The records from the OMS area FOP- Unicamp, from the period of January 1999 to December 2004 were assessed, and 47 patients met the inclusion criteria (iliac crest harvesting for Oral and Maxillofacial reconstruction). From the 47 patients, 18 agreed to participate in the study. All patients were interviewed and examined by a single evaluator. The obtained data were analyzed through descriptive statistics and Wilcoxon test at a 5% significance level. The mean age of the patients was 43.3 years; 72.2% were female; 83.3% of the patients had the maxilla sa the receptor site, and 55.6% had the mandible. Concerning the postoperatory period, 88.9% reported more pain at the harvesting site, and 11.1% at the receptor site; 88.9% reported that they would have the same procedure done again if necessary. Post-operatory morbidity was transitory and not frequent, and does not counter-indicate the iliac crest as a harvesting site for autogenous bone grafts. In conclusion, autogenous bone grafts from the iliac crest are an adequate option in procedures that demand great volume of bone.

# 16. POSTERIOR SEGMENTAL MAXILLARY OSTEOTOMY: A SURGICAL ALTERNATIVE FOR PROSTHETIC SPACES REESTABLISHMENT

SERRA E SILVA, FM; SVERZUT, AT; CHESSA, JR; KLUPPEL, LE; MORAES, M; MAZZONETTO,R. FOP-UNICAMP

Loss of intermaxillary space frequently results in compromised prosthetic restoration of posterior mandibular ridge. Some treatment alternatives can be applied, like endodontic therapy and restorative procedures to reduce the crown height of upper jaw tooth, or even tooth extraction. However, the Posterior Segmental Maxillary Osteotomy (PSMO) can be a surgical alternative for the reestablishment of compromised prosthetic space. The application of PSMO to intrude over-erupted dentoalveolar segment was firstly described by West & Burk (1974). Since then, the PSMO became a viable surgical alternative for correction of compromised prosthetic space in the posterior mandibular ridge. Through the presentation of a case report, the authors aim to evaluate the indications, counter-indications, advantages and disadvantages of PSMO and also describe details of the treatment plane and surgical technique.

Key-words: maxillary osteotomy; prosthetic restoration.

18. RETROSPECTIVE ANALYSIS OF THE TREATMENT OUT-COME OF GIANT CELL GRANULOMA FROM THE ORAL AND MAXILLOFACIAL DIVISION, PIRACICABA DENTAL SCHOOL, BETWEEN 1996 TO 2006: CLINICAL AND PATHO-LOGICAL CORRELATIONS

LUNA, A.H.B.\*; OLIVEIRA, G.R.; SAWAZAKI, RENATO; PEREZ, M. J; MORAES, M; ALBERGARIA-BARBOSA, J.R. FACULDADE DE ODONTOLOGIA DE PIRACICABA

The central giant cell granuloma (CGCG) is a benign lesion accounting for fewer than 7% of all benign tumors of the jaws. The pathogenesis of CGCG is not completely understood. The clinical behavior of central giant cell granuloma (CGCG) of the jaws is variable and difficult to predict, ranging from a slowly growing asymptomatic swelling to an aggressive process associated with pain, cortical bone destruction, root resorption, displacement of teeth, and a high recurrence rate. The common treatment of CGCG is surgical removal represented by simple curettage, but in some cases it has also been supplemented with peripheral ostectomy. CGCG has also been treated with conservative methods such as systemic daily application of calcitonin, intralesional injections of corticosteroids, and subcutaneous a-interferon injections. This restrospective study analyzed the clinical data of all patients presenting GCCG, from the Oral and Maxilofacial Division, Piracicaba Dental School – Unicamp, drawing clinical-pathological correlations. The sample was represented by 14 patients (9M; 5F) with a mean age of 18.5 ( $\pm 14.04$  years). The most affected site was the anterior region of the maxilla, and 85.72% of the lesions were unilocular. Most of the cases (9) were treated with non-surgical means, while 5 were treated with curettage with peripheral ostectomy. No recurrence was found after a mean follow-up of 38.22 ( $\pm 51.68$ ) months.

## 19. DENTAL RETENTION: CONSIDERATIONS OF CLINICAL AND SURGICAL INTEREST

OLIVEIRA, G.A.G.\*; GONÇALES, E.S.; GONÇALES, A.G.B.; SILVA, V.B.

Enclosed tooth is the one that presents completely or partially (half-enclosed) immersed in the interior of the bone tissue, whereas, restrained tooth is the one that, after the period of irruption, remains in the interior of the bone tissue. The dental retention generally elapses of mechanical impediment, as inadequated dental positioning, being the bigger incidence of retention found in third molars, followed by canines. Restrained third molars can be classified in accordance with the relation between its long axle and the long axle of as the second molar in: vertical, mesioangular, horizontal, inverted, distoangular, bucally deflected and lingually deflected; they are also classified, in accordance with its depth in the mandibular bone (A, B, C) and its relation with the anterior border of the mandibular ramus (Class I, II and III). The restrained tooth permanence can lead to mechanical local (root resorption of the adjacent teeth), neurological (parestesia), infectious (pericoronarite) and pathological (odontogenic cysts and/or tumors, generally derivatives of the pericoronal capsule of the restrained tooth) upheavals. The treatment of choice is the removal of these teeth. The purpose of this work is to detach important aspects on the dental retention, to revise pertinent literature on the subject and to present a case of bilateral retention of third and second lower molars, classified as horizontal, class II and C.

### 21. TYPES OF GRAFT MATERIAL FOR DENTAL IMPLANTS

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As noted above, the three primary types of bone graft material are autogenous bone. homogenous, heterogeneous and alloplasts. The mechanism by witch these graft materials work normally depends on the origin and composition of the material. Autogenous bone, an organic material harvested from the patient, forms new bone by osteogenesis, osteoinduction, and osteoconduction. Harvested from cadavers, allografts, witch may be cortical and/or trabecular, have osteoconductive and possibly osteoinductive properties, but they are not osteogenic. Alloplasts, witch may be composed of natural or synthetic material, are typically only osteoconductive. In determining what type of graft material to use, the surgeon must consider the characteristics of the bony defect to be restored. In general, the larger the defect, the greater the amount of autogenous bone required. For small defects and for those with three to five bony walls still intact, alloplasts may be used alone or with allografts. For relatively large defects or those with only one or three bony walls intact, autogenous bone must be added to any other type of graft material being considered.

### 23. CONSERVATIVE TREATMENT OF EXTENSIVE ODONTO-GENIC KERATOCYST

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Odontogenic keratocyst is a particular kind of cyst which has distinct clinical and histopathologica caracteristics. Patient CAR, female, 18 years, attained to our service for a mandibular swelling. Extraoral examination showed facial assimetry and intraoral examinations showed mandibular bone expansion since body region to ramus in the left side. Patient related painful to direct palpation. Radiographic images demonstrated multiloculated radiolucent areas occupying all left hemimandible, expansion of mandibular cortical bone as well as inclused teeth 38. The diagnostic hypotesis were ameloblastoma and odontogenic keratocyst. A positive needle punction aspiration was performed followed by incisional biopsy. Histopathological findings reveled as result odontogenic keratocyst. Despite of the extensive lesion size, the treatment choice was decompression associated to clinical and radiographic control until total lesion remission. Current radiographic images demonstrate new bone formation in the afected area. Tooth 38, which migrated cervically, was removed. Considering the recurrence possibility the patient continue having periodic controls.

### 20. SOLITARY BONE CYST - A REVIEW OF 10 CASES

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FACULDADE DE ODONTOLOGIA DE PIRACICABA

Solitary bone cyst (SBC) is a radiolucent lesion widely known as the traumatic bone cyst. The cause of SBC is still unclear and several theories have been proposed; however, It is still difficult to evaluate the role of trauma. SBC is usually seen in patients from 10 to 20 years of age; males are affected more often than females (3:2 ratio). Most SBCs are asymptomatic, but some patients may present with pain, swelling, and tooth sensitivity. SBC is an intraosseous empty cavity sometimes lined by a thin layer of fibrous connective tissue without epithelium; it can also contain a serosanguinous fluid, granulation tissue, erythrocytes, hemosiderin, and osteoclasts. The teeth in the involved area are usually vital. The purpose of this study was to perform a retrospective analysis of the SBC cases treated by the Oral and Maxillofacial Surgery Area, Piracicaba Dental School. The patient records of the last 7 years were screened. The detailed histories of 10 cases with confirmed diagnosis of solitary bone cyst were studied. These included detailed history, radiographical findings, and histopathological examination. 60% of the patients were male with age ranging from 13 to 20 years, and all patients were asymptomatic; Although previously reported, no patient presented any sign of recurrence after a follow-up period of 13,8 ( ± 11,1 months).

## 22. DONOR AREA COMPLICATIONS OF CHIN GRAFTS: RETROSPECTIVE STUDY OF 113 CASES.

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The mandibular symphisis is a frequent area for autogenous bone graft remove. On this retrospective study were analyzed 113 patients attended by the Oral and Maxillofacial Surgery and Trauma Area of the Dental Faculty of Piracicaba-UNICAMP with the main purpose of evaluate the chin grafts complications. In relation with the trans-surgical accidents, it was presented one hemorrhagic, one infection and one suture dehiscence, all of them at the donor site. On the receptor area, it was presented sixteen cases of graft exposure and five infection cases, reminding that two of them were related to a previous graft exposure. Two cases between twelve of those whose presented dehiscence were considerate for graft remove, and were classified like a graft failure. Two cases that were attended because an infection, another two were at the anterior maxilla region, two at the posterior maxilla region and one at the posterior mandibular region. Totally were eight graft failure cases, two of them associated to graft exposure, three to infection cases and further in three cases, non accomplished by post surgery complication, on the graft opening moment for the implant installation, could be prove that it was not an integration of the graft to the receptor area. Concluding, a mandibular symphisis is a donor area option associated to lower complications scales.

### 24. EARLY DENTAL IMPLANTS FAILURE LEVELS IN RECONSTRUCTED SITES BY BONE GRAFTS

SAWAZAKI R.\* ; SVERZUT A. ; STABILE G.V. ; ANBROSANO G.M.B. ; MOREIRA R.W.F. UNIVERSIDADE ESTADUAL DE CAMPINAS

The aim of the present study is to evaluate the index of early implant loss that were installed in areas were chin, mandibular ramus, iliac crest, cranial vault, tibia, maxillary tuberosity and lyophilized bovine bone grafts were used for previous reconstruction. A retrospective study on chart of patients that received dental implant in the department of oral and maxillofacial at Piracicaba dental school – Unicamp from 1996 to 2004. 660 patients with the age varying from 13 to 84 years (mean 45.5 years) who received a total of 1649 dental implants were analyzed. The mean time between implant installation and second surgical phase was 9.6  $\pm$  5.8 months. In the areas that received chin grafts 5 cases of failure occurred (3.6%; p 0,5263); In those that received mandibular ramus grafts 3 failed (7%; p 0,2640); when iliac crest was used as a donor site, 4 implants failed (5,6%; p 0,5). No implant failure could be observed when implant were installed in areas where cranial vault (p 1,0), tibia (p 1,0), maxillary tuberosity (p 0,6364) and lyophilized bovine bone (p 1,0) were used.

According to the applied methodology it was not possible to associate early implant failure with different types of bone grafts.

### 25. RELATION OF MANDIBULAR FRACTURE COMPLICATIONS WITH SUBSTANCE ABUSE CONSUME.

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Has been related at the literature that some variations about the etiology of the maxillofacial fractures can be attributed to the environment and to social and culture factors. Between the most common causes are mentioned motor vehicle accidents, falls, and assault. The facial bone with higher percentage of fracture occurs is the mandible, HAUG et al. (1990) describes that the mandible fractures outnumbered zygomatic and maxillary fractures by a ratio of 6:2:1. MANWELL and coworkers (2005) affirms that a relation between substance abuse and trauma patients are higher than other medical areas. SANDLER and MINN (2001) relate that the substance consume abuse compromised the immunologic system with an organism susceptibility increase to created a bacterial colony. Otherwise, exists a protein reduction and an improper hemostase that favored a deficient cicatrisation. It was realized a study including 1024 patients, and 472 of the patients presented mandible fracture (46%). on a period from April 1999 to March 2004, at the attention service of the Oral and Maxillofacial Surgery and Trauma Area of the Dental School of Piracicaba – Unicamp. At the study, 248 patients (52.6%) related consume of minimum one substance between smoking, alcohol, illicit nonintravenous drugs and intravenous drugs. Post-surgery complications were found in 59 patients (12.5%) who related some kind of substance consume.

### 27. ATYPICAL EVOLUTION AFTER EXTRACTION OF INFERIOR THIRD MOLAR

ZEN FILHO, E. V.\*; CARDOSO, C. L.; SANT'ANA, E.; FERREIRA JUNIOR, O.; CARVALHO, P. S. P. FACULDADE DE ODONTOLOGIA DE BAURU - USP

Complications associates with extraction of third molar despite uncommon can occur in some cases. The mean complication is infection (alveolitis) treated local and systemically, therefore, rarely can to spread to fasciais spaces. This report is about an atypical evolution of extraction of inferior third molar in an young, leucoderma, healthful patient that presented pain and edema, without clinical and radiographics signals of infection, 10 days after the extraction of tooth 48. The protocol of treatment of alveolitis was initiated, however 11 days later regression was not observed. At this time there was formation of an abscess spreading to submandibular space of the affected side. The antibiotic was changed but was necessary to perform an extrabuccal draining. Many systemic and local factors can be considered as cause of this abscess and requires attention of the dentist for the pre and postoperative systemics cares.

# 26. CRITICAL ANALYSIS OF THE DIVERSES TECHNIQUES USED IN THE INCISION FOR EXTRACTION OF IMPACTED THIRD MOLAR

SATO, F.R.L.\*; STANG, B.; MORAES, M.; PASSERI, L.A. FOP - UNICAMP

The surgeries for removal of the third molar is one of the most frequently procedures practiced in dentistry. Although the technique is presently well defined, it is possible to find diverses variations between the professionals, in special about the form of the incision when the third molar is impacted. Front to this fact, the objective of this work was to identify these variations of techniques, pointing indications, contraindications, advantages and disadvantages of each one of them, through a critical revision of literature. Diverses are the incisions used for removal of an impacted third molar, as Mead or Szmyd's incision, of Maurel, of Avellanal and in Comma. There are some factors that can be studied in the postoperative period, such as: the repair of the periodontal tissue (Peng et al., 2001, Rosa et al. 2002, Chang et al., 2004, Krauz et al., 2005), related pain (Clauser and Barone, 1994), the mastigatory function (Shevel et al., 2001) and the postoperative complications (Capuzzi et al., 1994). For all these factors, literature shows no significant difference between the diverses techniques. Based on that, it can be concluded that although the innumerable techniques, there are no evidence that proves the advantage of using a determined incision, being the choice a criteria of the professional, in accordance with its clinical experience.

# 28. CLOSURE OF IMMEDIATE BUCOSINUSAL COMMUNICATION USING PEDICLED FLAP OF BUCCAL FAT PAD (BICHAT FAT PAD).

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The closure of bucosinusal communication must be realized immediatly when the communication is created or latter in cases of a long period fistula or in a fail of primary closure. The most frequently affected tooth in this kind of accident are the second molar, followed by first molar and third superior molar. There are many different ways of treatment for the closure of bucosinusal communication in the literature like for example: 1- slip of buccal flap, 2- rotation of palatal flap, 3- pedicled flap using the buccal fat pad and others. The use of buccal fat pad is a reliable option in the treatment of immediate or chronicle bucosinusal communication. The clinic case to be apresented reffer to a white woman wich had the tooth 17 extracted and your roots was in close contact with the maxilar sinus. During the procedure we observed a bucosinusal comunnication that was treated by immediate way using for the closure a buccal fat pad.

### 29. IMMEDIATE CHARGING IN IMPLANTOLOGY ORAL

MORETTI, ANDRÉA GONÇALVES & ALBERGARIA-BARBOSA, JOSÉ RICARDO FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Perhaps the most important change in osteointegrated implantodonty procedues was the changing in its main principle, that have seemed unchanged since the osteointegration bases have been stabilished. That is the concept concerning about the need of remaining submerged implant under buccal mucose, and complete absence of load on the implant until osteointegration finish. Nowadays it's accept that implants can remain exposed in buccal cavity, and that they also could be submitted to immediate funcional charging. Occlusal simultaneous forces must be considered the main factor in immediate charging of implants. In this case, the occlusal strenght are concomitant on implant insertion, and the mecanostate bone will be stimulated by the elastic deformation osteo trabecular. This fact will itself unchain osseoinduction, wich will improve the periimplantar quality of the osteo issue. In this work the authors present a revision of literature about immediate charging in oral implantodonty, and clinical reports related to that, and accomplished in Dental College od Piracicaba- Unicamp.

### 30. rigid internal fixation techniques in the lefort i orthognathic surgery

OLIVEIRA, C.\*; PASSERI, L.A.; BRASILEIRO, B.F.; GREMPEL, R.G.; SATO, F.R.L. UNIVERSIDADE ESTADUAL DE CAMPINAS

This work aims to present the most used osteosynthesis techniques in Le Fort I orthognathic surgery in the Division of Oral and Maxillofacial Surgery, Piracicaba Dental School – Unicamp. The employ of internal rigid fixation in maxillary orthognathic surgery is very flexible, being able to vary in nature of the utilized material, which can be metallic or absorbable; in the shape and size of the plates and screws; and in its combination with the different techniques. In this department, the technique consists, usually, in the use of titanium plates and screws of the 1.5 mm system, "L" shaped in the region of the canine buttress, associated with plates "L" or straight lines, of the same system, or still skeletal suspensions with steel wire in the region of the zygomatic-maxillary buttress. Therefore, the knowledge on the charateristics of each one of the diverse techniques of rigid internal fixation becomes essential, associated or not with the fixation with steel wire, for Le Fort I osteotomy, once the correct indication of the adopted technique makes possible the optimization of the clinical results.

### 31. SUBCUTANEOUS EMPHYSEMA FOR IATROGENIC PROCEDURE IN ENDODONTIC TREATMENT: A CASE REPORT

GREMPEL, R.G.\*; PASSERI, L.A.; MORAES, M.; SERRA E SILVA, F.M.; SERENA, E.G. UNIVERSIDADE ESTADUAL DE CAMPINAS

Subcutaneous emphysema is the introduction of air into the soft tissues. It could be caused for trauma, dental operation, orthognathic surgery, and others, since there is a disruption of the paranasal sinuses mucosa, with a pressure increase of the exhaled air. The subcutaneous emphysema, at the head and neck region, could, depending on the severity, extends for other spaces like mediastine, pleural and retroperitoneal space and, in the more severe cases, cause death. An important clinical finding is crepitation in alternating rolling of two fingers; added with the injury history and tomographic findings can confirm the diagnosis. Infection is the more common complication so, it is necessary a prophylactic antibiotic coverage for an average of seven days. It has a good prognosis with spontaneously regression of the signs between the 2nd an 14th day. This work aims to present a clinical case of iatrogenic subcutaneous emphysema for endodontic treatment in a 30 year-old patient, female gender, followed out through complete regression of the signs and also, make a brief literature review emphasizing the cause and cares to be taken for the prevention, as well as the behavior for its treatment.

### 33. AMELOBLASTIC FIBRO-ODONTOMA: A CASE REPORT

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The ameloblastic fibro-odontoma (AFO) is defined as a tumour with the general features of ameloblastic fibroma but that also contains enamel and dentin. AFO is normally found in young patients, with mean age of 11.5 years. Clinically, it presents with the lesion being equally found in the mandible and maxilla and no significant gender predilection. The lesion is assyntomatics, being view in radiographic exam of rotine. Radiographically present a radiolucency unilocular presence of the large radiopaque mass was found to be involved by the mineralized mass. Histologically, present showed narrow cords and small islands of odontogenic epithelium in a loose primitive-appearing connective tissue that resembled the dental papilla. The conservative treatment is preconized, and performed with enucleation of lesions. The prognostic is excelent, being incommum the recurrence. The will be presented the patient case of male gender, 9-year-old, with radiolucid lesion in mandible posterior region, that was the Division of Oral and Maxillofacial Surgery, Piracicaba Dental School -Unicamp, to treatment.

## 35. ANKYLOSED MAXILLARY CENTRAL INCISOR REPOSITIONING BY OSTEOGENIC DISTRACTION TECHNIQUE

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Ankylosed and misplaced teeth presence on anterior region constitutes an esthetical and functional problem to patients and a challenge to dentistry. Osteotomies performance on ankylosed tooth adjacent areas followed by osteogenic distraction is a resource that can be used on the solve these cases. Anterior maxillary teeth are most favorable for theses procedures, though it can be performed on pre-molars and molars, being indicated as a treatment option to ankylosed teeth that did not respond to distraction nor forced luxation. A 32 years old, leucoderma, female, patient presented at UFU with 11 tooth aesthetic complaints, which presented at infra-occlusion and lengthened clinical crown. She reported previous distraction and forced luxation non successful treatments. It was chosen a bone block construction including the tooth and its repositioning through osteogenic distraction principles. Seven days after oteotomy, distraction was started using steel wires, on a 1mm/day regimen, till desired position was attained, followed by 45 days fixation. This technique has a technical details richness, and complications can occur. For its appeasing it is necessary that dentists have surgical fundaments principles domain and maxillo-facial complex anatomy knowledge.

#### 32. LANGENBECK MODIFIED TECHNIQUE OF BUCCO-NA-SAL COMMUNICATION CLOSING ON FIRE GUN VICTIM PATIENTS

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Bucco-nasal communications (BNC) can be easily addressed through simple surgical procedures use. These communication closure techniques are used to correct labial-palatal cleft and fistulae due to transurgical or accident complications. The most used techniques for BNC closure are palatine flap rotation and Von Langenbeck's modified technique. We present a clinical case where Von Langenbeck's technique was used. E.C.S, 30 years old, male patient, presenting a BNC at palatine suture, due to fire gun projectile injury, arrived at Uberlândia Federal University ambulatory, one month after the accident occurred, with pain, feeding and phonating discomfort complaints. Surgery was done under local anesthesia, incisions were done on fistulae defects associated to lateral incisions, bilateral, on both alveolar process and palate union, so increasing tissue elasticity for a good BNC closure. Thus, flap is medially mobilized and tissue closure is started by nasal mucosa, followed by palate mucosa on fistulae area and finally by lateral flap borders. Sutures were removed after 15 days. We concluded that this technique allows great BNC accurate closure, using soft tissue flap, improving nasal and oral mucosa healing.

# **34.** ANALYSIS OF BONE HEALING AROUND TITANIUM IMPLANTS PLACED ON A BIOMATERIAL AND SUBJECTED TO LASER IRRADIATION

PEREIRA, C.L.\*; SVERZUT, A.T.; AMBROSANO, G.M.B.; SALLUM, E.A.; NOCITI-JUNIOR, F.H.; MOREIRA, R.W.F. UNIVERSIDADE ESTADUAL DE CAMPINAS

Materials and techniques to improve bone healing before and after the placement of dental implants have been sought. This study aimed to evaluate the influence of a low intensity laser and a biomaterial on bone healing around titanium implants. Two bone defects were prepared in each tibia of twelve adult rabbits; the distal defects were filled with a calcium phosphate cement (BoneSource, Stryker) and the proximal defects, with blood cloth. All defects were covered with collagen membranes. After six weeks, the areas of all defects received titanium implants, and only the right tibiae received 7 low-level laser irradiations - GaAlAs diode laser (Twin Laser, MMOPtics), every 48h. After 3 or 6 weeks, the animals were sacrificed (6 animals/period), non-decalcified sections were obtained and analyzed for bone-to-implant contact (CO) and bone area within the implant threads (AO). The results were analyzed statistically using ANOVA and Tukey's test. CO presented significant increase in laser irradiated groups, when compared with non-treated groups, in both periods (p<0.003); CO was similar between groups with and without the material, in both periods. CO did not increase significantly with time, when 3 and 6 weeks periods were compared. Considering AO, means were similar between groups with and without material and with and without laser, in both periods. AO increased with time, when comparing 3 and 6 weeks groups, regardless the use of laser or material (p<0.0001). In conclusion: (1) low-level laser irradiation improved bone-to-implant contact; (2) the alloplastic material allowed bone healing, similarly to blood cloth.

## 36. SULCOPLASTY USING KAZANJIAN MODIFIED TECHNIQUE: CASE REPORT

FÉLIX, F.S.\*; MARQUEZ, I.M.; BATISTA, J.D.; COSTA, M.D.M.A.; ZANETTA-BARBOSA, D.; TRINDADE, T.L. FACULDADE DE ODONTOLOGIA - UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The prosthesist frequently are confronted with an extensively reabsorbed mandibular residual ridge, which can cause a buccal fornix loss and superficialization of mentual muscle insertion, in relation to the crest of the ridge, being able, with its contraction, to cause the disappearance of the vestibular fornix and dislocate the complete denture. In fact, many patients with mandibular atrophy have a minimum area of support for prosthesis and the preprosthetic surgery is a valuable method to increase it. Patient NMB, female, leucoderm, complaining of lack of stability of mandibular complete denture was directed for UFU Oral Surgery ambulatory to perform a mandibular sulcoplasty. The patient presented loss of vertical dimension, lack of support of inferior lip and extensive resorption of the mandibular alveolar process. In radiographic images was observed mandibular atrophy, however with enough height for the sulcoplasty procedure. The surgical technique choice was a sulcoplasty using modified Kazanjian technique. Although the great advance of the implantology, the vestibuloplasty still are a good choice when conventional complete dentures will be used, mainly for economic reasons. The modified Kazanjian technique is simple procedure, presenting great results, with low recurrence, without secondary epithelization area and low tissue damage.

## 37. EXTRACTION OF IMPACTED THIRD MOLAR IN ATROPHIC MANDIBLE: CASE REPORT

CURY, M.S.\*; ZANETTA-BARBOSA, D.; MARQUEZ, I.M.; BATISTA, J.D.; COSTA, M.D.M.A.; GONDO, R.M. FACULDADE DE ODONTOLOGIA - ÁREA DE CTBMF - UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Impacted lower third molar in the mandible occupies a space that normally would be filled by bone. This situation weakens the mandibular bone, that becomes more susceptible to fractures, being more critical when jaw is atrophic. A female 27 years old patient, leucoderm, presented absence of 45, 46 and 47 teeth. At periapical radiograph, it was observed that the 48 tooth was totally inclused occupying all bone height, with te mandibular canal passing through the cervical part of the crown. For mandibular canal localization in buccolingual direction, it was made an occlusal radiographic where it was observed that the canal was vestibularly related to the tooth. After conservative ostectomy preserving maximum of bone structure the tooth was removed after sectioned in small fragments without complications and minimum morbidity. Despite of the close contact with alveolar inferior nerve, the patient didn't report any sensorial alteration. After 6 months it was made a panoramic radiograph observing complete healing of the site. A mandibular fracture during dental extraction is a rare complication, being associated almost exclusively to the surgical removal of impacted third molar, being more critical in an atrophic jaw. An adequate surgical planning associated to extra care during and after extraction is important to this procedure success.

### 39. ALTERATION OF DENTAL POSITION AFTER EXODONTIA OF THE THIRD MOLAR ONES:

TANAKA, K.M.\* ; SHINOHARA, E.H. ; LANDGRAF, H. ; GAIA, B. ; TINO, M.T. FOUSP

Alteration in the dental positioning after extration of 3M is described event in literature. Some works cite the verticalization of second molar next 60 days the exodontias; alterations genese of loads to articulate and to the stability of the orthodontic treatment. This work aims at to measure the alterations in the dental positioning as well as in the length of the dental arc after the extration of the third molar ones.

8 young patients with indication for extration of 3M and without sistemy alteration compose this study. It had been made by professional, technique standard, composed for incision intrasulcular and ostectomy initial and enough distal, with turbine of high rotation with liquid refrigeration and irrigation of the remnant with physiological solution and sutured.

In the immediate daily p.o. one got models of the dental arcs, as well as in 15th, 30th and in 60th day. The measures had been gotten with digital caliper digital and the results had been tabulated in fiche standard.

All the measures had presented variation between the initial data and the end. In relation to the width of the inferior arc, in 6 patients had increase of 0,02 to 1,39 mm (M: 0,41/DP 0,43). And in relation to the length, in 5 patients had increase of 0,12 to 0,44 mm (M: 0,28/DP: 0,14).

The exodontia of 3M cause variation in the positioning and perimeter of the dental arc, independent of the technique or extracted tooth number

### 41. SUPERNUMERARY TEETH AND IMPLICATIONS

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There is a series of factors that can influence the normal development of the occlusion and to interfere in the correct alignment of the teeth and harmonic relationship with antagonistic and adjacent elements. Teeth in excess of the normal number are referred to as supernumerary teeth. The most are considered the result of the development of the horizontal proliferation or hyperactivity of the dental lamina and they can be classified in agreement with his location in: mesiodens, paramolares and distomolares teeth (Kokten et al., 2003). It's more frequent in the jawbone (75% to 88.9%) than in the jaw (Casetta et al., 2001) and his prevalence varies from 0.15%to 1%, in the permanent teething and up to 0.66% in the deciduous teething, with larger predilection for the masculine gender. A lot of times are associated it some complications as: lingering retention of the deciduous tooth; delay of the eruption of the permanent tooth; absence of the eruption of the permanent tooth; ectopic eruption; badly occlusion; development of cysts; reabsorption of roots of the adjacent teeth, aesthetic factors, among others. Ehsan et al., 2000 affirms that the supernumerary teeth can be found in the maxillary breast, soft palate, nasal cavity and in dentigerous cysts. The diagnosis is made clinically and in image exams and the treatment consists of the surgical removal, and in some cases it is made orthodontic management.

### 38. ECTOPIC TOOTH IN NASAL CAVITY: CASE REPORT

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Ectopic tooth development can occur in a variety of places of oral cavity and other parts of the body like maxillary sinus, mandibular condyle, coronoid process, orbit, palate, skin and nasal cavity. Although the accurate mechanism of teeth eruption in nasal cavity is not clear, some theories have been proposed to explain it, including history of surgery or trauma and anatomical malformation. The cleft palate is a congenital alteration that occurs in the embryonic period of development and can lead to anatomic deformities that will follow the patient for the rest of his life. Dental anomalies are particularly common in this situation, mainly the positional anormalities. This study will report a case of a patient who was submitted to previous surgery for cleft palate closing and after that was diagnosed with the presence of a tooth partially erupted in anterior region of the nasal cavity. The intranasal tooth is a condition usually found in cleft palate patients, so it can be more frequent than has been described in literature, so additional reports are necessary for better understanding of this condition.

### 40. THE USE OF ZYGOMATIC FIXATIONS FOR THE TREAT-MENT OF ATROPHIC EDENTULOUS MAXILLA

LEANDRO EDUARDO KLÜPPEL\*; RENATO MAZZONETTO; JOSÉ RICARDO ALBERGARIA BARBOSA; FABRÍCIO MOREIRA SERRA E SILVA; GLAYKON ALEX VITTI STABILE FACULDADE DE ODONTOLOGIA DE PIRACICABA

Osseointegrated implants are being widely used by dental professional for the treatment of tooth loss. Specially in those cases in wich the upper arch become edentulous, insertion of the implants may be extremely difficult due to the high degree of bone resorption that may develop in some situations.

Installation of conventional osseointegrated implants in atrophic maxillae requires an additional surgical procedure for bony reconstruction. This results in elevated morbidity, treatment time and costs. In an attempt to solve this problem, zygomatic fixations were developed and become an alternative to bone grafts. Zygomatic implants are five times longer than conventional implants, and their positioning requires higher surgical precision and skill, since they must be inserted in the maxillary sinus and their locking point is situated in the body of the zygomatic bone.

The aim of this presentation is to report a clinical case in wich zygomatic fixations were used to rehabilitate a patient with maxillary edentulism associated with important bony atrophy. Concomitantly a review of the pertinent litterature will be exposed.

# 42. THE FEATURES OF THE PATIENTS AND THEIR PROTETIC REHABILITATIONS, AND TO ESTIMATE THE RANGE OF SUCCESS OF IMPLANTS OF EDENTOLOUS PATIENTS MINISTER ON SURGICAL CLINIC OF FOP/UNICAMP, BETWEEN JULY/2004 AND DECEMBER/2005.

BLOES, P.B.\* ; STABILE, G.A.V. ; MAZONETTO, R. FOP/UNICAMP

The use of many odontologic resources is necessary to restore the functional and esthetic rehabilitation of edentolous patients. It happens because the increase of world population life expectation and the wide range of edentolism of this same population. Many researchs focus their study in a munch functions, specially in implant-retained overdentures. The implant-retained overdentures have some properties as to avoid bone resorption; to be a esthetic rehabilitation; do not move while speaking and to restore the munch function. Based on may studies in the literature, the objectives of this study are: to determine the features of the patients and their protetic rehabilitations, and to estimate the range of success of implants of edentolous patients minister on surgical clinic of FOP/UNICAMP, between July/2004 and December/2005.

### 43. IMMEDIATE LOAD IN MONO BLOCK FIXTURE AFTER **EXODONTICS - CONTROL OF 1 YEAR**

BARBOSA, B. A.\*; ISSA, C. C.; FRANCISCHONE JR, C. E.; FRANCISCHONE, C. E.

UNIVERSIDADE DO SAGRADO CORAÇÃO - BAURU/SP

The loss of teeth can cause some problems to the patient, since functionaries as masticatory difficulty, until psychological problems unchained by the aesthetic disharmony. As Bränemark (1985) was postulated that we must wait of 3 the 6 months for the reopening of the fixtures and confection of the prostheses.

With the advance of the techniques and development of new fixtures one became possible to reduce the treatment time and to simplify the rehabilitator procedure, applying load immediately after the exodontics and installation of the fixture. In accordance with De Bruyn (1998), the indices of success of the

protocol of 2 surgical times are the same ones of immediate loads. The proposal of this work is the presentation of a clinical case in which, the patient presented breaking to radicular of tooth 24. The atraumatic exodontics was carried through, preserving the walls of the alveolus and in the same surgical procedure the installation of a mono block, conical fixture was made, with treatment of surface and confectioned a provisory crown. After 3 months were carried through the definitive crown in Procera. After 1 year we observe the excellent whitewashing in clinical and radiographic conditions.

We conclude that the aesthetic success and the reduction of the treatment time are a reality in the Dentistry, taking care of the clinical expectations of the surgeon dentist and the patient.

### **44.** MULTIPLE EXTRACTIONS IN A STROKE PATIENT – CASE REPORT

FINOTI, F\*; LUIZ, TBC; FRANCISCO, IG; ALKMIN, TY; SOUZA, PC; UEMURA, ST. FUNDAÇÃO HERMINIO OMETTO - UNIARARAS

Cerebral Vascular Accident (CVA), popularly known as a stroke, may be of two types: ischemic stroke and hemorrhagic stroke. The treatment of CVA is a medical emergency. The patient must immediately be taken to hospital for attendance. Thrombotics and anticoagulants may diminish the extent of the damage. Unfortunately, brain cells do not regenerate and there is no treatment able to recover them. Nevertheless, there are therapeutic resources capable of helping to restore functions, movements and speech. The aim of this work is to relate a clinical case of a patient, victim of an ischemic type stroke, attended by the Dentistry Course at the "Fundação Hemínio Ometto-UNIARARAS Dentistry Clinic for Patients with Special Needs, to perform multiple extractions. Attendance of this patient required special care: blood pressure and stress level monitoring, and suspension of the use of AAS 24 hours before the procedure. It was concluded that the surgical procedures could be safely performed in stroke victim patients, provided that adequate pre- trans- and post operative care is taken.

### 45. CLINICAL EVALUATION OF METRONIDAZOLE 10% AND RIFAMICIN B DIETILAMIN IN THE DRY SOCKET TREATMENT

SIMAO, A.F.C\* ; ZANETTA-BARBOSA,D ; MARQUEZ, I.M ; FURTADO, L.M ; COSTA, M.D.M.A UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The dry socket is characterised as a dull pain and its difficult control, and it could be treated by socket curettage, followed by inserction of topical medication. This research has the main objective to evaluate and compare the Metronidazole 10% and Rifamicin B Dietilamin paste, in the control of the pain originated by dry socket, and propose a protocol for its treatment by the found results. This research was done with 30 patients who consecutively appeared in the Emergency of the Federal University of Uberlandia, presenting clinical symptom of dry socket, and did not presented local or systemical alterations, not even conterindications of the mediations that mould alterations, not even couterindications of the medicines that would be used. The patients quantifyed their pain before treatment, marking a numerical scale, and they recieved standardized pre and postoperative medicines, and instructions about its use, and data collect. The sockets were abundantly irrigated with a physiologic solition and cleaned up with a Lucas curett. The patients were randomly put in one of the three groups, (Metronidazole 10%, Rifamicin B Dietilamin and Blood clot), and the time of pain return and its intensity were evaluated. The results indicated that the three treatments proposed were effective in the combat of the dry socket pain, with no difference between the groups.

### 46. REIMPLANT OF AVULSIONADED TEETH: STUDY OF CASE.

CARVALHO, Q. A. DE\*; FERNANDES, A. V.; SPINI, T. S.; SIQUEIRA, A. L.; ROCHA, F. S.; CURY, M. S. UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The incidence of dental avulsion places around 0,5 to 16% of all indent alveolar traumas, and central superior incisors are the ones that more frequently avulsionate. Traumatically avulsionaded teeth must be reimplanted as fast as possible, aiming to increase the success possibility. In 06/12/1999, patient E. C. S., 17 years old, masculine, came for evaluation of indent alveolar trauma, occurred after vehicle accident, two days before. The patient's mother removed of her purse the tooth 11, which was involved in paper. It was proceeded the scraping of radicular surface and endodontic treatment. Reimplant was made as well as containment, which was removed after three months. The pacient has been accompanied through periodic clinical and radiographic exams. Currently, after six years and eight months, evolution of anchylosis is noticed, evidencing bigger areas of the root involved in reabsortion for substitution. Periodontal evaluation didn't show any pathological alteration. Reimplant of avulsionaded teeth, despite carried through delayed, can keep natural sapace preserving height and thickness of alveolar bone. This factor is important to rehabilitate functional and aesthetic these patients.

### 47. BONE REPAIR HISTOLOGICAL ASSAY USING BOVINE ORGANIC BONE ON RABBIT CALVARIA WOUNDS

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INSTITUTO DE CIÊNCIAS BIOMÉDICAS DA UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Bovine bone has been used as a graft aiming to favor bone regeneration and reduce autogenous bone needs. The present study aimed to perform bone repair histological assay on rabbit calvaria using particulate bovine organic bone graft. It was used 20 rabbit, on each animal two wounds were done, one on right and the other on left parietal bone. The 40 wounds were randomly divided in 4 groups and filled by clot (group I) or bone graft: autogenous (group II), medullar organic bovine (group III) or cortical organic bovine (group IV). Thirty days following surgery animals were killed, calvaria were removed, fixed in formol, demineralized in EDTA and processed for paraffin inclusion. Histological sections were stained in HE and Mallory Trichrome and assessed to the light microscope. On group I (clot) half wound was filled by bone tissue formed from lesion border and central area presented cellular connective tissue. On group II (autogenous) almost all lesion was repaired by bone tissue. on groups  $\vec{II}$  and  $\vec{IV}$  (cortical and medullar bovine) near  $^{1}\!\!/4$  of lesion was filled by bone tissue, formed from border and central area was occupied buy fibrous connective tissue. Almost all graft was reabsorbed remaining few fragments that were associated to foreign body giant cell reaction. Medullar or cortical organic bovine bone graft used in isolated way did not favor bone repair process.

## 48. RIGID INTERNAL FIXATION TECHNIQUES IN THE LE FORT I ORTHOGNATHIC SURGERY

OLIVEIRA, C.\*; PASSERI, L.A.; BRASILEIRO, B.F.; GREMPEL, R.G.; SATO, F.R.L. UNIVERSIDADE ESTADUAL DE CAMPINAS

This work aims to present the most used osteosynthesis techniques in Le Fort I orthognathic surgery in the Division of Oral and Maxillo-facial Surgery, Piracicaba Dental School – Unicamp. The employ of internal rigid fixation in maxillary orthognathic surgery is very flexible, being able to vary in nature of the utilized material, which can be metallic or absorbable; in the shape and size of the plates and screws; and in its combination with the different techniques. In this department, the technique consists, usually, in the use of titanium plates and screws of the 1.5 mm system, "L" shaped in the region of the canine buttress, associated with plates "L" or straight lines, of the same system, or still skeletal suspensions with steel wire in the region of the zygomatic-maxillary buttress. Therefore, the knowledge on the charateristics of each one of the diverse techniques of rigid internal fixation becomes essential, associated or not with the fixation with steel wire, for Le Fort I osteotomy, once the correct indication of the adopted technique makes possible the optimization of the clinical results.

# $49. {\rm FINITE}$ elements analysis of the cementation line configuration effect of different types of samples in microtensile test

SANTOS-FILHO, P. C. F.\*; CASTRO, C.G.; SOARES, P. V.; SOARES, C. J. FACULDADE DE ODONTOLOGIA DA UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The aim of this study was to analyze the influence in the stress distribution of the cementation line configuration effect of different types of samples in microtensile test. Sticks and hourglasses used in microtensile mechanical tests for indirect restorations in dentin were simulated. The images were generated in CAD software (Mechanical-AutoCAD V6) and exported to finite elements software (Ansys7.1) for generation of three-dimensional, elastic, isotropic models numerical and homogeneous of sticks (11x1x1mm) and hourglass (11x5x1mm). Mechanical properties of laboratorial resin, resinous cement and dentin were got and the model was threshed. In the inferior portion null displacement was defined, and in the superior portion the application of tensile load was defined in 30N. The cementation line varied in perpendicular straight line tensile load, inclined straight line, soft curve and accented curve, the results analyses was qualitative and comparative of the stress distribution carried through in Sx, Sy and Von Mises. The cementation line inclined straight line resulted in shear stress and the curves had presented not uniform stress distribution. When the cementation line was perpendicular straight line to tensile load resulted in more homogeneous stress distribution, concentrating in the adhesive interface, with lesser accumulation of stress in the interior of the resinous cement and in the body of substrate. It can be concluded that for microtensile test the cementation line must be perpendicular straight line to the tensile load for homogeneous stress distribution.

# 51. EFFECT OF CONFIGURATION AND COMPOSITION MATERIAL OF POSTS IN THE STRESS DISTRIBUTION - FINITE ELEMENTS ANALYSIS

CASTRO, C.G.\*; SANTOS-FILHO, P.C.F., SOARES, P.V., SOARES, C.J. FACULDADE DE ODONTOLOGIA DA UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The posts composition and configuration influence on stress generated in endodontically treated tooth. This study hypothesized that the type of material: carbon and glass fiber and the external configuration: smooth and serrated influence in the stress distribution in simulations by finite elements methods: protusion loading and 4 points flexural mechanical test of posts. The models were generated from image of anatomical plate and post in CAD and exported to Ansys. The structures were considered elastic, isotropic, homogeneous and linear with exception of the post which assumed orthotropic behavior. The protusion loading simulation the bone region model was fixed and a tangential load of 2N was applied with an angulation of 45° to the tooth longitudinal axis at level of the palatal surface of the crown. In the simulation of flexural mechanical test 1N perpendicular to the post was applied in 2 points. The stress results were recorded qualitatively by von Mises criteria and quantitatively by von Mises and Sx graphs. There was no stress distribution difference in the load oclusal for material and configuration posts. For the flexural test the serrated posts presented higher stress concentration. It concludes that the post external configuration influences in the loading direct, when the post was integrated to the tooth and setting material there was no influence on biomechanical behavior.

## 53. INFLUENCE OF ROOT DEPTH THE AND POST TYPE ON KNOOP HARDNESS OF A DUAL RESINOUS CEMENT

MENEZES, M. S.\*; VERÍSSIMO, A.G.; FONSECA, R. B.; SILVA, A.L.F.; MARTINS, L.R.M.; SOARES, C. J. FOUFU E FOP-UNICAMP

The aim of this study was to evaluate the influence of the post type and root depth on Knoop hardness of a dual resinous cement. Twelve bovine incisors roots, 12mm length, were selected and randomly divided into 4 groups (n=3): G1- Reforpost; G2- C-post; G3- Lightpost; G4- Aestheti-Post plus. After the post lutting with a dual resinous cement Rely-X (3M-ESPE), the samples had were transverselly seccioned in five slices according with different depths (P) from the coronary limit (mm): P1) 0,0; P2) 2,5; P3) 5,0; P4) 7,5; P5) 10,0. The samples were included, polishing and submitted to the knoop hardness test, performed on the cement with a load of 25g for 30s. Data were submitted to split-plot ANOVA two-way and Tukey potshoc test (p<0,05). There isn't statistical significance to post factor (p>0,05) and duple interaction post x depth (p>0,05). The results for depth in KHN were: P1= 57,35 (4,11)a, P2= 52,70 (5,30)a, P3= 45,95 (3,51)b, P4= 44,05 (3,82)b, P5= 40,04 (2,24)c. It can be concluded that the type of post didn't influenced in the Knoop hardness of dual resinous cement. However, the increase of the depth reduced the hardness of the resinous cement.

## **50.** INFLUENCE OF THE CAST METAL CORE CONFECTION IN THE RADICULAR STRAIN.

CARVALHO, M.C.M.\*; RAPOSO, L.H.A; SILVA, G.R.; SANTOS-FILHO, P.C.F.; SOARES, C.J. FACULDADE DE ODONTOLOGIA DA UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The aim of this study was to evaluate the influence of the construction process of casting metallic post in the radicular deformation of bovine teeth. Were used 6 bovine roots with 15,0 mm of length that had received endodontic treatment using cement of zinc oxide and eugenol and it was prepared of standardized form in the length of 10,0 mm. The roots had been divided of random form in two groups (n=3): (G1) group has controlled was composed of treated roots endodontically and alliviated in 2/3 of the total diameter of the root, (G2) it was composed of roots weakened with remainder of axial wall of 1,0 mm. Had been confectioned casting metallic post in copper-aluminum alloy for the two groups. Strain gauges had been fixed in the proximal face in the length of 5,0 mm of the cervical ending to evaluate the radicular deformation decurrent of the impression of root canal of direct form with acrylic resin activated quimically, the cast core and post were fixed with zinc fosfate cement. The results were(µs): G1- molding: 30µs and cimentation: 30µs. G2- molding: 150µs and cimentation: 80 µs. It was conclude that how much higher the internal lost structure of the radicular canal, greater will be the deformation suffered during the confeccion of the casting metallic post.

### 52. EFFECT OF CAVITY PREPARATION AND POLYMERIZATION TECHNIQUE IN THE FRACTURE RESISTANCE OF PRE-MOLARS

CASSELLI, D.S.\*; MARTINS, L.R.M FOP/UNICAMP

The aim of this study was to evaluate the fracture resistance of human premolars with extensive cavity preparations of the inlay and onlay types, restored using hybrid resin, in direct and indirect manner. 84 pre-molars divided into 7 groups of 12 samples each were used. The samples were divided according to the following experimental groups: G1=whole teeth; G2=inlay/Z250 direct; G3=inlay/Z250 photo-polymerized indirectly; G4=inlay/indirect Solidex; G5=onlay/Z250 direct; G6=onlay/Z250 photo-polymerized indirectly; G7= onlay/indirect Solidex. The indirect Z250 resin restorations received only photo-activation using the EDG-lux oven. All samples were submitted to axial compression load in an Instron Machine. After the tests the following measurements were obtained for resistance to fracture values (Kgf): G1=124,00(B); G2=113,52(B); G3=117,08(B); G4=119,80(B); G5=160,33(AB); G6=197,81 (A); G7=131,22(B). According to ANOVA (a=0,05%) there was difference among the groups that were identified by the Tukey test. We may conclude that the teeth prepared and restored with resin Z250 onlay showed values of average resistance to fracture statistically higher than teeth restored with Solidex resin onlay and the teeth in the positive control. There was no statistical difference in values of resistance to fracture among the teeth of inlay type preparations restored with Z250, Solidex and the group of whole teeth.

### 54. INFLUENCE OF PREPARATION TYPE AND USE OF GLASS-FIBER POST ON FRACTURE RESISTANCE AND STRESS DIS-TRIBUTION OF ENDODONTICALLY TREATED PREMOLARS.

SOARES, P.V.\*; CASTRO, C.G.; SANTOS-FILHO, P.C.F.; MENEZES, M.S.; MARTINS, L.R.M.; SOARES, C.J. FACULDADE DE ODONTOLOGIA - UFU; FOP-UNICAMP.

The aim of this work was to evaluate the influence of the preparation and use of fiber post in the biomechanic behavior of endodontically treated premolar. One selected 50 mandibular premolars human, with similar dimensions. It was confectioned simulation of the periodontal ligament with elastomeric material and polystyrene resin. The teeth was divided in 5 groups (n=10): G1- sound  $teeth; G2-mesio-occluso-distal\ preparation\ (MOD)+restoration\ with\ composite\ resin\ (CR); G3-MOD+fiber\ glass\ post\ (FGP)+CR; G4-MOD,\ removal$ of 2/3 of the crown + RC; G5- MOD + removal of 2/3 of the crown + FGP + CR. The samples were submitted the tangential loading of mechanical machine, with speed of 0,5mm/min until the fracture. The fracture pattern was classified in 4 levels. The data were submitted to the analysis of variance and Tukey's test (p<0.05). The samples with loss reduce of structure and absence of FGP presented values of significantly superior of fracture resistance to the too much groups. Numerical 2D-models had been generated of finite elements with similar characteristics to the samples of each experimental group, with simulation of the periodontal ligament and loading type. This study demonstrated to negative influence of the removal of structure and fiber posts in the biomechanical behavior of endodontically treated premolars, proving the association of different methodologies.

### 55. ANALYSIS OF FLUORIDE- CONTAINING SELF-ETCH-ING ADHESIVES ON DENTAL ENAMEL SUBMITTED TO A PH CYCLING.

PINTO, C. F. \* ; PAES-LEME, A. F.; AMBROSANO, G. M. B.; GIANNINI, M. FOP/UNICAMP

Anticariogenic and antibacterial components like fluoride (F) and bromide (Br) have been introduced to adhesive systems to improve the clinical longevity. However, these components were not evaluated in cariogenic challenge. Thus, the aim of this study was to evaluate the effect of different self-etching adhesives contains or no fluoride pH cycling. Fourty bovine enamel blocks with cavity preparations and restorations with adhesives systems: Single Bond (SB); Clearfil SE Bond (SE); Clearfil Protect Bond (PB/ with F and Br) and One-up Bond F (OF/ with F). The specimens were submitted to an 8 days pH-cycling regimen simulating caries development. After cariogenic challenge enamel was evaluated to detect caries lesions to cross-sectional Knoop microhardness (transformed to % mineral volume), polarized light microscopy (PLM) and scanning electronic microscopy (SEM). The statistical analyses were made through ANOVA and Tukey test (p<0,05). The results show that the % volume mineral did not show statistical difference, however PLM showed lower caries lesion extension to adhesive PB. The SEM images showed lower caries lesion extension to PB. The results showed that PB promoted lower enamel demineralization submitted to a cariogenic challenge, suggesting a great potential to control caries lesion development around restorations (FAPESP#04/05317-3).

### 57. INTRACANAL FIBER POSTS: POSSIBILITIES

KOVACS, A. P.\*; TANGERINO, C.M.B.; MENDONÇA, A.A.M.; CANDIDO,M.S.M.; LIMA, D.M.; GUIMARÃES, M.S. FACULDADE DE ODONTOLOGIA DE ARARAQUARA - UNESP

The Contemporary Restorative Dentistry has had modifications in clinical and scientific field, with evolution in mechanical and physical properties of dental materials as well as improvement of restorative techniques, with aim to assist to demanding of the patients. Thus, the restorative treatment of teeth treated endodontically evidences restorative possibilities that assist the main requirement of who has such complaint, the aesthetics. Therefore, the present work, has the objective to present the clinical sequence of a restorative treatment which involved two anterior teeth (12, 11), which have been fractured, involving the dentin-pulp complex. Therefore, endodontic treatment was proposed for each dental element. With objective to restorative fractured teeth, aesthetics post was indicated being a fiberglass and other indirect ceramic posts for the tooth 11 and 12, respectively. As complemented treatments were accomplished preparations for total crown to both teeth, and subsequent restorative treatment, resulting in complete the patient's expectations.

## 59. ESTHETIC DENTISTRY: CLOSING OF DIASTEMATA WITH DIRECT COMPOSITE RESIN RESTORATIONS.

BARONI, D.B.\*; MENEZES, M.S.; SILVA, A.L.F.; SOARES, P.V.; GIANNINI, M.; SOARES, C.J.; MARTINS, L.R.M. FOP-UNICAMP E FOUFU

The anterior teeth present extreme importance in face's esthetic. Diastematas on anterior teeth are seen by some patients as a negative factor under the social point of view. The distinguishing diagnosis of this anomaly of occlusion must be done the earliest possible, having to be the orthodontic treatment the initial choice, searching to reestablish the patient's esthetic. When the patient presents satisfactory occlusion and diastemata, a viable alternative is the closing throught direct technique with composite resin, solving the case in a economic way for the patient. The authors related a case in wich the patient of the masculine sex, 22 years of age, presented diastematas between the incisors, after orthodontic treatment per 4 years, and he refused to submit himself it new orthodontic treatment. Closing of diastemata with restorations in micron-hybrid composite resin was carried through (Opallis, FGM), searching to emphasize the principles and techniques of use of the materials, being proved the esthetic quality and making possible to the patient harmonic and natural smile.

### 56. ESTHETIC AND FUNCTIONAL REHABILITATION IN FRAC-TURED TEETH

TANGERINO, C.M.B.\*; KOVACS, A.P.; MENDONÇA, A.A.M.; CANDIDO, M.S.M.; LIMA, D.M.; GUIMARÃES, M. S. FACULDADE DE ODONTOLOGIA DE ARARAQUARA - UNESP

The appearance of the Adhesive Dentistry, fruit of the development of the technique of acid conditioning and development of the composed resin, they did with that the Dentistry impelled the restoring treatments executed until then, minimizing this way the wear and tear of the dental structure. It is added to this fact, the improvement of the adhesive systems and of the composed resin, the ones which more and more present characteristics susceptible to indication in wide climbs in the more variables clinical situations. A clinical situation in matter does with that such materials are of supra importance in the form re-establishment, function and aesthetics of the dental structure: the dental fractures, which are of difficult clinical resolution, mainly in young patients. The reproduction of the translucency, texture and anatomy, mainly when the dental fragment is not had will depend on the use of composite resins, that you/they get to fill out such requirements. Of this it sorts things out, the present work has for objective to demonstrate the restoring clinical sequence of a case of fractured previous teeth, by use of a silicon guide, for more necessary re-establishment of the palatine anatomy, following protocol of use of the composed resin, with the objective of reproducing inherent characteristics to the dentine and the enamel.

# 58. INFLUENCE OF PREFABRICATED POST COMPOSITION AND GEOMETRY ON STRESS DISTRIBUTION – FINITE ELEMENTS ANALYSIS.

SILVA, N.R.\*; SANTOS-FILHO, P.C.F.; CASTRO, C.G.; SILVA, G.R.; SOARES, C.J.

FACULDADE DE ODONTOLOGIA DA UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Different patterns of stress concentration can be determinated by posts external configuration and composition. This work evaluated the influence of different pre-fabricated posts, glass fiber and metallics in titanium varying the external conformation, on the stress distribution by finite elements analysis. The models were generated from image of anatomical plate and of metallics posts: ParaPostXH, ParaPostXT, ParaPostXP, Flexi-Flange and of non-metallics: ParaPost Fiber Lux, in software CAD and exported to Ansys 9.0. The dental materials and structures were considered elastic, isotropic, homogeneous and linear except the fiber post, with orthotropic characteristic. For loading simulation the bone region model was fixed and load of 2N was applied in the lingual surface at an angle of 45°. The stress results were recorded by Von Mises criteria. There was no stress distribution difference between the metallic posts in radicular portions and in interior structure of this posts, and in the coronary portions the stress concentration was proportional to retentive areas quantity. The fiber post showed pattern similar to sound tooth. It concludes that however the metallic posts are constituted by the same material the external configuration influences in the loading direct, when the post was integrated to the tooth and setting material. Fiber post showed better homogeneous stress distribution than metallic posts.

### **60.** LIGHT ACTIVATION OF DUAL-CURED ADHESIVE SYSTEMS: EFFECTS ON BOND STRENGTH.

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FACULDADE DE ODONTOLOGIA DE PIRACICABA-UNICAMP

This study evaluated the effect of light activation of light- and dualcured adhesive systems on microtensile bond strength to dentin. Occlusal dentin surfaces of 20 human third molars were exposed and flattened. Teeth were assigned into 8 groups (n=5): Prime & Bond NT/Calibra (Dentsply), Prime & Bond NT + Self-Cure/Calibra (Dentsply), Excite/Variolink (Ivoclair-Vivadent) and Excite + Self-Cure/Variolink (Ivoclair-Vivadent) with and without light-activation of the adhesive resin. A 2-mm thick pre-polymerized resin disc (Z250) was cemented on the bonded dentin and the teeth were stored in water at 370 C for 24 hours. The restored teeth were both mesial-distally and buccal-lingually sectioned to obtain multiple bonded beam specimens with 0.8 mm<sup>2</sup> of cross-sectional area. Each specimen was tested in tension at a crosshead speed of 0.5 mm/min until failure. Data (MPa) were analyzed by 3-way ANOVA and Tukey's post-hoc test (α=0.05). Lower bond strength was observed when the bonding agents were not light-activated before cementation. Light-activating adhesive resin before cementation of indirect restorations increased the microtensile bond strength to dentin. The self-curing activator may not work in both systems as expected.

### **61.** ENDOCROWN – CEREC IN LAB, IN THE RESTORATION OF POSTERIOR TEETH.

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To restore totally a dental crown of molars and pre-molars treated endodontically is a challenge in the prognosis. Non-vital teeth could be reconstructed with different systems of cores and posts. The dentinary adhesion allows dental reconstructions without metallic or ceramic post. CAD/CAM equipments make possible the confection and automatically production of endocrowns (retention crowns on the pulp camera). These are ceramic restorations which feel totally the dental crown and integrate their retention apically in the pulp camera. Also, in everyday's office, it's recognized the difficulty and inconvenience of many patients in going to multiple visits to the realization of the treatment. This fact added to the demand of schedule in consults, requires faster and precise restorative techniques, with satisfactory results in a long term. With the arrival of new technology, it is destacated the utilization of CEREC in Lab which reproduces inlay, onlays, crowns, veneer crowns and coping from an optic impression. This work can be made in a few consults, reducing the obtention of impressions and models. This paper has the objective of presenting of presenting a clinical case, describing the technique with an endocrown prepare and a CEREC crown.

# 63. EFFECT OF CHEMICAL DEGRADATION ON RESTORATIVE COMPOSITE SURFACE ROUGHNESS AND MICROHARDNESS

PIMENTEL, K.S.\*; VOLTARELLI, F.R.; SANTOS-DAROZ, C.B.; CAVALCANTI, A.N.; MARCHI, G.M. FACULDADE DE ODONTOLOGIA DE PIRACICABA-UNIVERSIDADE ESTADUAL DE CAMPINAS

This study evaluated the effect of food-simulating liquids on light-curing composite microhardness and surface roughness. Sixty composite specimens were prepared and divided into 12 groups (n=5) according to the restorative material (Quixfil/Dentsply; Supreme/3M ESPE; Z250/3M ESPE) and chemical solution used (Water-Control, Heptane, Citric Ac., Alcohol). Microharness (25g; 20s) and surface roughness analysis (Ra, µm) were performed before and after 7-day immersion period. Before the immersion, Quixfil's hardness was higher than Supreme and Filtek Z250. After immersion, Quixfil microhardness was significantly reduced and the lowest values were found with citric acid. Supreme presented reduced harness value after immersion in heptane, citric acid and alcohol, also Filtek Z250 in heptane and alcohol (Split-plot ANOVA, Tukey Test, alpha=5%). In relation to surface roughness, all composites presented similar values prior the immersion. Citric acid significantly increased Quixfil surface roughness; Supreme and Filtek Z250 didn't show any difference on roughness (Kruskal-Wallis/Wilcoxon, alpha=5%). The food-simulating liquids presented more effect on resin composite microhardness than surface roughness. The changes on surface characteristics were dependent on the restorative material composition.

# **65.** MICROLEAKAGE EVALUATION OF COMPOSED RESIN AND GLASS IONOMER RESIN MODIFIED CEMENT RESTORATIONS IN BOVINE TEETH, AFTER ER: YAG LASER OR HIGH SPEED TURRINE.

BARBOSA, C. S.; DI NICOLÓ, R.; ARAÚJO, M. A. M.; ARAÚJO, R. M. UNESP- SÃO JOSÉ DOS CAMPOS

The use of Er-YAG laser in dentistry. The aim of this in vitro study was to evaluate the microleakage of composed resin and resin modified glass ionomer cement restorations of bovine teeth. The microleakage of composed resin and resin modified glass ionomer cement restorations of bovine teeth was evaluated before the following variables: high speed turbine and Er. YAG laser. For this purpose 60 bovine teeth were selected, from animals with medium age of three years old, without carie lesions or fractures. Half of the specimens (n=30) were perpared with high speed turbine and the other half (n=30) with Er. YAG laser From the prepared teeth with high speed turbine, half of these sample (n=15) were restored with composed resin and the remaining restored with resin modified glass ionomer cement both in agreement with the manufacturer's instructions. The same procedure was accomplished for the teeth that were prepared of Er. YAG with laser. The teeth were submitted to the methodology of marginal microleakage, with aqueous solution of silver Nitrate. Each tooth was split up in the bucal-lingual sense. The cutted parts were agglutinated in glass sheet and properly identified, for evaluation and mensurement of the degree of marginal microleakage in Karl Zeiss- estereomicroscopy coupled to the the Image Tool -3.0 program. Microleakage in high speed- turbine prepair: 2,01mm (mean) Microleakage in Er-YAG laser prepair: 0,97mm (mean). The results showed that independently of the material, teeth prepared with Er: YAG laser presented smaller values for marginal microleakage, being these values estatisticaly significant.

# **62.** INFLUENCE OF LIGHT-CURING DEVICES ON POLYMER-IZATION EFFECTIVENESS OF COMPOSITE CYLINDERS WITH DIFFERENT HEIGHTS

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Introduction: Nowadays there are differents light-curing units available on the market. Objective: To evaluate the effect of light-curing devices on the microhardness of bottom and top surfaces of composite resin cylinders with different heights. Materials and methods: For this study 120 specimens of Filtek Z250 (3M ESPE) composite resin were prepared and randomly allocated into 12 experimental groups (n=10), according to the light-curing devices (Halogen/Optilux 501-Demetron; LED/Freelight Elipar 2-3M ESPE; Argon Laser/AccuCure 3000-LaserMed; Plasma Arc/Apollo 95E Ellite-DMD) and specimens heights (2, 4 and 6mm). After 24h, the microhardness test was performed on bottom and top surfaces (25g/20s). Results: Statistical analysis (Split-plot ANOVA/Tukey Test; Alpha=5%) showed significant interaction among devices, height and surface factors (p=0,0040). On top surface, all light-curing devices showed similar polymerization effectiveness. On the bottom surface, the plasma arc presented hardness values lower than the other light-curing units in the group with 6mm height. All bottom surfaces showed lower hardness value compared to the top surfaces, except for the 6mm height group polymerized with halogen light. Conclusions: The light-curing devices showed better polymerization effectiveness on the top surface. In higher deepness, the plasma arc didn't show proper polymerization ability

# 64. EFFECT OF LIGHT CURING UNIT ON THE ADHESION AND MICROHARDNESS OF CLASS II COMPOSITE RESIN RESTORATIONS

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A lot of light sources are used for composite photoactivation. The effect of light curing units on the bond strength and Knoop microhardness (cervical, middle and occlusal thirds) of Class II composite restorations was evaluated. Proximal cavities with cervical margin in dentin were prepared in 40 bovine incisors. The Single Bond/3M ESPE adhesive system and Filtek Z250/3M ESPE composite were used for restorations, that were light cured with different photo curing devices (n=10): LED-EliparFreelight 2/3M ESPE, Halogen-Optilux 501/Demetron, Argon Laser-AccCure 3000/LaserMed and Plasma Arc-Apollo 95E Elite/DMD. After 24h, the restorations were polished and cut in slabs for microhardness (n=1) and microtensile test (n=2). The slabs with an hourglass shape at the bond interface (1mm2) were tested in tensile (v=0,5mm/min). There was no significant difference on the bond strength values among the photo curing units (ANOVA;p=0.7553). The microhardness results did not show any difference among the photo curing devices within each depth, however the occlusal thirds of the restorations light cured with halogen light and plasm arc showed a higher hardness than the cervical third (Repeated measures ANOVA/Tukey;alfa=5%). The type of light curing unit did not influence the adhesion at the cervical wall. The halogen light and the plasma arc showed reduced polymerization ability at the cervical third (FAPESP-03/12592-8).

## **66.** TEMPERATURE VARIATION DURING IN-OFFICE BLEACHING. IN VITRO STUDY.

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The purpose of this in vitro study was to evaluate the temperature variation (&#916,T) of the enamel (1) and opposing dentine (2), during toothbleaching. Blocks obtained from human molars were randomly distributed in 20 groups (n=5) according to whitening agent: 35% hydrogen peroxide (Opalescence Xtra and Whiteness HP), 37% carbamide peroxide (Whiteness Super) and no whitening agent; activated by: Halogen lamp (H) and Plasma Arc lamp (AP) both in bleach mode, LED (L), LED/Diode Laser (D) and Argon Laser. During the bleaching, the enamel and dentin ΔT (final temperature – initial temperature) were measured using a laser digital thermometer and a K-type thermocouple, respectively. The ANOVA test revealed significant differences among surfaces, whitening gels and source factors, and a triple interaction among these factors (ANOVA and Tukey test, p<0.05). On the surface 1, the D presented the highest ΔT for all whitening gels except for the Opalescence Xtra, which presented no statistical difference when compared with the H. On the dentin surface, D also presented the highest ΔT not significantly differing from the H for all whitening gels, except for the Whiteness HP, which presented significantly lower ΔT means. Among the light sources tested, the LED/ Diode laser and halogen lamp in bleach mode presented the highest temperature variations.

# 67. COMPARATIVE ANALYSIS BETWEEN TWO METHODS FOR ASSESSING MARGINAL LEAKAGE BY MEANS OF DYE PENETRATION

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In spite of development of new techniques and restorative materials, microleakage continue to be a problem. The importance of this study is based in the premisse that anykind of restorative materials to be able to promove perfect marginal seal. This study compared two methods for assessing marginal leakage by means of dye penetration. Class V preparations were made in 45 bovine tooth fragments, restored with composite resin and randomly divided into: G1 - control (without sealing); G2 - sealing Fortify (Bisco); G3 - sealing Biscover (Bisco). The restorations were thermal cycled and immersed in 2% Methylene blue. The qualitative method was performed with a stereomicroscope. For quantitative assessment, the test specimens were ground in a hard tissue mill and the powder obtained from each sample was immersed in absolute pro-analysis alcohol for subsequent centrifugation. The supernatant of the solution was submitted to quantitative analyses by absorbance spectrophotometer. For qualitative analysis, the results were submitted to the Kappa and Kruskal-Wallis tests. For the quantitative analysis, they were transformed into dye concentration, and submitted to ANOVA and the Tukey test (p<0,05). For both methods, it was shown that the sealants Fortify and Biscover presented the lowest mean marginal leakage values, differing from the G1. It was concluded that there was no difference between the two methods tested.

## 69. CORE BUILD UP WITH AESTHETIC DIRECT RESTORATIVE MATERIALS

SILVA, B.M.H.; FREITAS, M.F.A; PEREIRA, E.M; FREITAS, C.A.; MONDELLI, J. FACULDADE DE ODONTOLOGIA DE BAURU - USP

With intention to provide large extensively lesions teeth, generally caused for caries or fractures, the reconstruction is a procedure very used in the dentistry. Actually, the aesthetic restorative materials are glass ionomer and composite resin obtaining good results in relation its resistance of masticatory force, becoming these applicable materials to this procedure that commonly is known as core build-up. The use of the restorative materials establishes an adequate support to get the function through the replacement of the dental with an indirect restoration. Associated to these restorative materials, the necessity of retention of the same ones was established through the cavity modifications, adhesive system and the posts its necessary, because first evaluate the integrity of the tooth to choose the restorative procedure. This work by means of a literature revision illustrated with clinical cases comes to argue two types of aesthetic direct restorative materials, besides to discuss the types of retentions associates the presence or absence of pulp vitality, indicating when should use to obtain a clinical success procedure.

## 71. IN-OFFICE TOOTH BLEACHING WITH OR WITHOUT LIGHT? CASE REPORT

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Analysis of the techniques currently proposed for tooth bleaching reveals that utilization of a light source is frequent, since it accelerates the rupture of hydrogen peroxide molecules, reducing the working time. However, recently, some studies have disagreed with this viewpoint, demonstrating that it is possible to obtain the same results of in-office tooth bleaching without utilization of a light source. This case report aims at comparing the in-office tooth bleaching with and without activation of the bleaching gel by a light source. The 35% hydrogen peroxide (Whiteness HP – FGM) was applied on the maxillary and mandibular left hemiarches and activated with LED; the same material was applied on the maxillary and mandibular right hemiarches, yet without utilization of a light source. The hemiarches were separated by a barrier fabricated with Top Dam (FGM), to avoid the influence of light on the right hemiarch. After completion of tooth bleaching, no clinical difference was observed between the techniques. It could be concluded that tooth bleaching achieved with or without activation by LED was clinically similar, thus demonstrating the efficacy of 35% hydrogen peroxide as a bleaching agent.

## **68.** MIMICRY EFFECT OVER ADVANCED ANTERIOR COMPOSITE RESIN: ADVANTAGE CONCEPTS AND TECHNIQUES

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This work has the objective to exhibit, by mean of a presentation of one case report, advanced concepts and essential means to achieve the excellence cosmetic. New technique will be approach in relation of two aspects: attainment of the adjusted value of the composite resin during the reconstruction of anterior teeth and gum conditioning beforehand to the closing of diastema. The correct understanding of the attribute that constitute the color of a composite resin is essential for the success of its selection. Is mandatory to cognize the solid knowledge of: hue, color, value, opalescence and fluorescence.

It is very important to accentuate the concept of value as an indispensable characteristic in the make-up of an anterior restoration executed with a composite resin. Besides the value, the others characteristics are pre-established by the manufacture of each composite resin syringe and, therefore, its can not to be controlled by the operator.

However, the value is easy to set up, but this characteristic is difficult to be assimilated by the clinician. In relation to the closing of diastema, can through make-up composite resin restorations. With this technique is possible to mold gum tissue the clinical procedure.

Moreover, the treatment simulation is a form to gradually evaluate the improvements of the reconstitution of the cosmetic procedure. Further, the physiological factors and the tissue answers are previously evaluated.

Will be presented both, the objective to get allegiance of the cosmetic and functional; many aspects had been observed, not only in relation to the intrinsic factors of each dental element but also to the conformation of the gum tissue. It was possible to reestablish the harmony of the smile of the patient and predict the health of periodontology tissue by following these innovative concepts and techniques.

## 70. POLYMERIZATION CONTRACTION FORCE OF LIGHT CURING MATERIALS

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The composite resin has been very used as restorer material, in anterior even posterior region, due to phyical, mechanical and optical properties. This study aimed to determine the intensity of forces generated during the polymerization contraction of light curing lining materials, a composite resin and association of these materials. Two rectangular steel bases (6 X 2mm) were positioned in an universal testing machine (Emic - DL 500). The materials were inserted between the bases, with volume of 12mm3 and FC 1,5 and, in the association, 6mm3 for lining and 12mm3 for resin (n=10). The tensions generated during the light curing (20s) were registered for 120s. The values were expressed in curves (force X time) and the means were compared by statistical analysis. The calcium hydroxide produced smaller force of contraction (5,5N) than composite resin (7,0N) and glass ionomer cement (10,3N). The resin association with calcium hydroxide (medium=7,0N) didn't demonstrate statistical difference related to resin composite alone. However, glass ionomer cement associate with composite resin provided significant increase of resin's contraction force (9,4N), whereas the association of two increments of composite resin determined the biggest force (11,9N). In conclusion, according the results, resin components included in lining materials can influence the stress generated during the polymerization contraction of composite resin.

### 72. ABFRACTION LESIONS – AN ALTERNATIVE RESTORATIVE TREATMENT

NATALÍCIO, G.L.\*; NICODEMO, C.A.Z.; CONSOLMAGNO, E.C.; SILVA, B.M.H.; FREITAS M.F.A; FREITAS C.A.; MONDELLI J. FACULDADE DE ODONTOLOGIA DE BAURU - USP

Abfraction lesion has a complex etiology, and diverse forms of treatment exist and involve different restorative materials. The patient V. C. G., female, 33 years, came to dental clinic of operative densistry, of Bauru dental school, it complained of the great painful sensitivity in teeth 34 and 35, because for abfractions lesions, also present in other teeth, without painful. The teeth, were perfomed with a glass ionomer modified for resin with a rubber dam to expose the lesions. In each tooth was realized a little wear with diamond bur 3118, was applied poliacrilic acid 10%, during 10 seconds. After washing and drying, each cavity was filled with the restorative material, manipulated as manufacturer recommend and applied with syringe Centrix type; the restorative material was compressed with a transparent matrix and respective polimerization per 40 seconds with a halogen lamp. Removed the matrix, was applied the protective especific varnish and big excess it was effected with bisturi n?12. After 7 days, the finishing and polishing were take with FlexiBuffs discs and multilaminated bur. At the moment, the patient told that the painful sensitivity disappear, what it indicates a favorable prognostic of restorative treatment.

# 73. CLINICAL PROTOCOL TO THE CONFECTION OF INDIRECT PORCELAIN RESTORATIONS- INTERACTION BETWEN THE DENTIST AND THE PROSTHETIC TECHNICIAN

CLAVIJO, V.G.R\* ; SOUZA, N.C ; KABBACH, W. ; CALIXTO, L.R. UNESP - ARARAQUARA

The patient's exigency is increasing every day in relation to get nicer teeth. It has become a reality in recent Dentistry, where the obtention of invisible restorations is a very important requisite in the search of a satisfactory esthetic treatment. The composite resins have evoluted a lot and offer a variety of colors to get mimetism of the esthetic restorations. However, these materials still have some limitations as spotting, low resistance and low durability. With this, the use of odontologic porcelain, which has superior properties, has become a more common procedure, obtaining very satisfactory esthetic results. The objetive of this paper is to present, by a clinical case, all the steps to confection an indirect porcelain restoration, from the prepare, impression and cementation, as the interaction between the dentist and the laboratory technician through pictures, models, diagnostic waxing and provisory restorations.

# 75. ESTHETIC REANATOMIZATION OF SMILE BY COSMETIC ADJUSTMENT AND COMPOSITE RESIN RESTORATION

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Many factors may affect smile esthetic, which conoids teeth, principally the young peoples. This work has as objective to relate to clinical case of aesthetic reanatomization of the smile by means of cosmetic adjustment and restorations with composed resin. Patient feminine sort, 22 years of age, looked the Clinic of after-graduation of FOP (Unicamp), presenting insatisfação with the aspect of its smile. The presence of diastemas was diagnosised, conóides and turn-shed teeth. The technique of reconstruction of the aesthetic harmony of the smile with direct restorations in composed resin was selected, with previous cosmetic adjustment. For in such a way, the confection of study models was carried through, with objective to plan the insertion of the restoring material by means of enceramento. The silica base was confectioned the first guide of molding material for addition. After absolute isolation, the matrix was located guiding the confection of the restorations with micron-hybrid composed resin (Opalis, FGM), with different types of characterizations and employed colors of effect in accordance with the norms of the manufacturer. The final result reached considered the aesthetic and functional objectives, as well as the expectations of the patient, demonstrating to be one technique of ample use, easy planning and execution. May conclued this techinique is a very important for esthetic rehabilitation.

## 77. SUBSTITUTION OF AMALGAM RESTORATIONS - WHEN SHOULD CHANGE?

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The dental amalgam is still the more durable and strength direct restorative in the mouth. However, the great search for the aesthetic one makes with that, each time less patient accepts this type of material. The purpose of this work is report a clinical case with amalgam unacceptable restorations in the lingual face of teeth 12 and 22. The patient B. J. J. P., 29 years, came to the clinic of operative dentistry of Bauru Dental School saying that tooth 22 presented painful sensitivity found in the clinical exam. It was changing the restorations of both teeth. A diamond bur type reel was used to remove the amalgam and a spherical carbide to carious lesion. After the preparation and cleanness of the cavity, a glass ionomer curing light was applied to protect the complex dentin-pulp, the etching with phosporic acid 37 % was applied per 15 seconds, application of the adhesive system Adper Single Bond and the restoration with the Vit-1-escence composite resin with shades A1, A2, TM, PN. After 7 days were performed the finishing and polishing with diamond bur 3118F, discs FlexiBuff and felt discs with abrasive diamond paste. What mainly it characterized the substitution of the restorations was the presence of a carious lesion, therefore in first place it was evaluated health of the teeth, and, later, aesthetic and the harmony of teeth between itself.

### 74. PORCELAIN VENEERS IPS ESTHETICS

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Introduction: The IPS Empress II, composed by litium of dissilicate, had been introduced in the ceramic market in 1998. Studies proved that this system has translucence, fluorescence e opalescence very similar to the natural tooth, making the restauratives more esthetics. However it has a low fusion point making the color gray. To correct it, the manufacturer has development a new system called IPS Esthetics. This new system also composed by litium of dissilicate has a higher fusion point, what means an improve of the resistance and opalencence of the ceramic. The veneers made of IPS Empress II differently of those made of IPS Esthetics can be stratified making the protetics more naturally.

Case Description: Pacient Ř.M.L.S., male, 18 years old went to the FOP-Unicamp's clinic with the incisor of 21 broken. It was noticed, in the clinical exam, that the tooth was broken and the presence of a big restaurative of resin in all the vestibular face of the teeth 11 and 21. After the clinic and radiographic diagnostic, it was decided that the treatment should consist in make verneer of porcelain in those teeth using IPS Esthetics.

Conclusion: To sum up, the IPS Esthetics System has a large advantage in comparision with the others conventional ceramic's system, because it can be painting and also stratified making easier the reproduction of the esmalte dental characteristic.

## 76. NONCARIOUS CERVICAL LESIONS: DIAGNOSTIC, PLANNING AND TREATMENT.

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The noncarious cervical lesions's study deserves great appreciation. Its etiology is multifactorial and is normally related to attrition, abrasion, erosion, abfraction or the association among them. Dentinal exposure can occur causing discomfort, with is given by hypersensibility, for the patient and, in some cases, esthetic compromising. A working criterion must be followed to conduct to a correct diagnostic, such as, observing the regions of dentinal exposure and the causative factors elaborating a plan of treatment adjusted for the case, preventing that posterior imperfections occur. There are different ways to treat these types of injuries, such as the diverse desensitizer techniques, as well as the restorations. As for the restoration of the injury, it is necessary to adopt the best technique for each situation. This report describes a clinical case of restoration of noncarious Class V lesions in the right upper second premolar with composite resin in a 38 years old male patient, trying to explain the chosen criterion during the planning of the case, with intention to increase the longevity of the restoring treatment and to a sure a desirable esthetic condition removing the patient's dentinal hyperesthesia. The patient had shown clinical improvement and since then he's been in periodic accompanying

### 78. INFLUENCE OF THE RESTORING TECHNIQUE IN THE FRACTURE STRENGTH AND PATTERN FRACTURE OF ENDO-DONTICALLY TREATED PREMOLARS

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This study evaluated the fracture strength and pattern fracture of the endodontically treated premolars, prepared and restored with: amalgam, composite resin, laboratorial composite and ceramic. Seventy intact maxillary premolars with similar dimensions had been embedment in polystyrene resin to simulation periodontal ligament. The teeth were endodontically treated and randomly divided in to 7 groups (n=10): G1, intact teeth (control group); G2, Mesial-occlusal-distal (MOD) preparation for direct restorations; G3, MOD preparation for indirect restorations; G4, MOD preparation and restored with amalgam; G5, MOD preparation and restored with laboratorial composite; and G7, MOD preparation and restored with ceramic. The samples were then submitted to an axial compression load at a speed of 0.5 mm/minute until the fracture. Values of fracture strength had been gotten in Kgf, tabulated and submitted to statistical analysis by one-way ANOVA and Tukey's multiple comparison test (p<0,05). Results: (G1) 114.7 $\pm$ 23.60A; (G6) 94.3 $\pm$ 20.61B; (G5) 93.00 $\pm$ 18.40B; (G7) 78.7 $\pm$ 13.11C; (G4) 41.5 $\pm$ 16.38D; (G3) 38.7 $\pm$ 15.11D; (G2) 22.9 $\pm$ 14.21E. The type of restorative technique influenced in the variation of the fracture pattern. The teeth with conservative prepare and restored with adhesive materials had demonstrated the better values of fracture strength.

# 79. INFLUENCE OF THE EATING DISORDERS IN THE ORAL HEALTH-DIAGNOSIS AND ESTHETIC AND FUNCTIONAL PROCEDURE REHABILITATED: CLINICAL CASE REPORT

SANTOS, T.C.A,\*; NOVAIS,V.R.; QUAGLIATTO, P.S.; SOARES, C.J.; NOBILO, M.A.A.; SIMAMTO JÚNIOR, P.C.; UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Anorexia nervosa and bulimia nervosa are eating disorders that can be, in some cases, first detected by dentist through clinical oral signs and characteristcs. In this way, it is important that dentist have basic knowledge about eating disorders to do correct diagnosis and refer the patient for treatment assist with dentist, medical, psychiatric. The anorexia nervosa is characterized by the image disturbance, with intense fear of gaining weight or becoming fat, althougt they have weight below of the minimal normal in accordance to their age and heigt. Bulimia nervosa is characterized by binge eating, with rapid consumption of a large amount of food in a discrete period of time, followed by the use of compensatory methods to avoid gaining weight. On the other hand, the self-induced vomiting is a from of weight-control behaviour from patients with eating disorders, causing chronic regurgitation, and the acid gastric content causes degradation of dental structures. Then, the purpose of this article was to review the main features of eating disorders, as well as oral and dental complications of these disorders through clinical case report of the patient with bulimia nervosa. Key words: tooth erosion, anorexia nervosa, bulimia nervosa, eating disorder.

## 81. POINT NUMBER QUANTIFICATION OF MEASUREMENTS IN THE MARGINAL ADAPTATION OF INDIRECT RESTORATIONS.

SOARES, J.V.\*; PEREIRA, C. A.; CASTRO, C.G.; FONSECA, R.B; SOARES, P.V.; SOARES, C.J. FACULDADE DE ODONTOLOGIA - UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Mechanical properties and restorative techniques influence on clinical behavior of tooth-restoration complex. This work evaluated the influence of material type [IPS Empress (IPS) and SR. Adoro (SR)] and number of measurements by dental surface on the marginal adaptation values. 20 premolars received MOD cavities and were restored with ceramic or composite. The marginal adaptation was measured in the occlusal (o), proximal (p) and gingival (g) surfaces varying the distance between the gauge points (0.3; 0.6; 0.9 or 1.8mm). The number of points for each gauge distance was (n=10): 0.3mm = 30 points in the O, 45 in P and 20 in G; 0.6mm = 15 points in the O, 23 in P and 10 in G; 0.9mm = 10 points in the O, 15 in P and 7 in G; 1.8mm = 5 points in the O, 8 in P and 4 in G. Data were submitted to ANOVA, Tukey test and Mann-Whitney (a=0.05). The results (µm) were: 0.3mm: 220(a) 168(a), 233(a) and 220(a), 178(a), 245(a); 0.6mm: 225(a), 168(a), 235(a) and 217(a), 178(a), 243(a); 0.9mm: 223(a), 173(a), 234(a) and 226(a), 188(a), 237(a) and 1.8mm: 241(a), 178(a), 238(a) and 212(a), 186(a) and 233(a). There wasn't statistic difference for both performed comparisons (p>0.05). There are no differences in the number of measurement points analyzed. It can be defined a protocol with least gauge number during measurements. This work concluded that 5 points per face are sufficient for marginal adaptation measurement of inlays.

## 83. SUBSTITUTION OF AMALGAM BY COMPOSITE RESIN, IN POSTERIOR TEETH.

FREITAS, M.F.A.\*; SILVA, B.M.A.H.; FREITAS, C.A.; TOLEDO, F.L.; NISHIYAMA, C.M.A. FACULDADE DE ODONTOLOGIA DE BAURU - USP

It is a permanent job the searching for restorative odontological materials with adequate abrasion strength, marginal adaptation, natural reproduction of tooth color and strength to masticatory forces. Composite resin nowadays present satisfactory wear strength. At this paper, is presented a clinical case where defective amalgams were substituted by composite resin. At the local Posgraduation Clinic, after clinical/radiographic verification and anamnesis of a patient, it was detected that amalgam in teeth 24 and 25 (presenting fractures, high corrosion degree and marginal gaps) would be substituted by composite resin. So, were made color selection, absolute isolation and cavity preparation, with application of calcium hydroxide cement and glass ionomer, followed by phosphoric acid, cleaning and drying. The adhesive system used was photopolymerized. After the polyester individual matrix be adapted and immobilized with a wood piece, little portions of resin were inserted in cavity and photopolymerizated. Gross material excesses were eliminated after remotion of isolating apparatus. A more delicate occlusal checking, finishing and polishing were realized 1 week later. In conclusion, an amalgam could be substituted by composite resin, since advantages be clear.

### 80. INFLUENCE OF THE CROSSHEAD SPEED ON THE FRACTURE RESISTANCE AND FAILURE PATTERN OF PRE-MOLARS.

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The aim of this study was to evaluate the influence of the speed of load application on the fracture resistance and failure mode of maxillary human pre-molar restored with composite resin. Fifty maxillary human premolars were selected and insert in polystyrene resin plus polyether, simulating the periodontal ligament. The teeth were prepared with a diamond bur resulting on a MOD cavity preparation that was restored with micro-hybrid composite (Filtek Z-250, 3M-Espe). The mechanical test had been submitted the axial of compression-load at five different speeds, until the fracture: G1- 0.5mm/mir, G2- 1.0mm/min; G3- 2.5mm/min; G4- 5.0mm/min; G5- 10.0mm/min. The failure mode was classified in 4 levels. The fracture resistance data had been submitted to the analysis of variance and Tukey's test (p<0.05). The results were (N): G1: 769.42±174.78; G2: 645.17±115.07; G4: 614.25±126.01; G3: 609.25±208.05; G5: 432.40±136.81. For way of this methodology and data analysis can be concluded that crosshead speeds under 5.0 mm/min not influenced on the fracture resistance of restored maxillary pre molars, review studies have to consider this point in comparative studies of fracture resistance

### **82.** BLEACHING IN TEETH ENDODONTICALLY TREATED – A CLINICAL CASE.

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Dental bleaching is a routine procedure in the odontologic clinic. However, the cervical root resorption, is known that's one deleterious effect for teeth and structures of support, being most serious described in literature. In order to prevent it, a cervical barrier is previously confectioned to the rank of the bleaching agents, thus being able, to prevent the infiltration of this product to the pulp chamber. A patient looked for Posgaduation Clinic of the FOB-USP, with the intention to bleach teeth 11 and 12, both with endodontic treatment. After anamnesis, clinical and radiographic examination and color selection were opted initially to the mediate technique, with 35% sodium perborate mixed with distilled water. It was carried through absolute isolation, coronary opening, removal of gutta percha, cleanness of the region, confection of cervical barrier with glass ionomer, application of the 37% phosphoric acid and the bleaching agent mix. This procedure was repeated for 3 sessions. In 4th session, the external bleaching enhanced with LASER was used to complete the treatment. After that, a calcium hydroxide paste to alkaline the cervical region was applied. A satisfactory result was achieved. The bleaching treatment is an effective and safe procedure, since that correctly indicated and carried through.

#### 84. EFFECT OF CORTICAL BONE AND PERIODONTAL LIGA-MENT SIMULATION ON STRESS DISTRIBUTION BY FINITE ELEMENT ANALYSIS

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The finite elements method (FEM) is usually used to evaluate mechanical effect in bone alterations and dental fracture in different types of models. This study hypothesized that internal cortical bone (CI) and external (CE) and periodontal ligament (LP) simulation influence on stress distribution analyses by FEM. Maxillary incisor and bone structures model were generated from anatomical plate in software CAD and exported to software Ansys, varying the model configuration with: 1- CI, CE and LP; 2- CI and CE; 3- CE and LP; 4-CE; 5-LP; 6- without CE, CI and LP. The structures were considered elastic, isotropic, homogeneous and linear and the mechanical properties were defined from literature. Tangential load of 10N was applied with an angulation of 45° to the tooth longitudinal axis at level of the palatal surface of the crown. The stress results were recorded by von Mises criteria. The LP simulation results in better stress distribution as in tooth as in bone, and its absence results in cervical concentration. The cortical bone absence increases the stress distribution in the tooth buccal surface. The bone stress distribution was modified only when both cortical bone was not simulated. It concludes that structures simulated in the models influence on stress distribution, indicating the internal and external cortical bone and periodontal ligament in FEM analysis.

### 85. KNOOP MICROHARDNESS EVALUATION OF RESIN CE-MENT POLYMERAZED WITH HALOGEN LIGHT AND LED IN DIFFERENT DEPTHS

MACHADO, M.N.\*; SILVA, A.L.F.; OZAKI, J.; ARIAS, V.G.; PAULILLO, L.A.M.S. UNICAMP

The aim of the present study was to evaluate the microhardness of Enforce (Dentsply) resin cement polymerized with visible halogen light (Degulux - Degussa) and LED (LD13-GG Dent) in different depths. Sixty especimens were prepared from a metallic mold (12x4x1mm) and randomly allocated in 6 groups, according to the light-curing device (Halogen-H; LED-L) and depths (1mm-I, 6mm-II and 11mm-III from the surface). After 48h, the microhardness test (25g/5s) was performed. The statistical analysis (Anova/Tukey Test, Alpha=5%) showed the following results (KHN): HI=48,86±4,13(a); HII= 27,32±3,98(c); HIII=24,02±4,82(c); LI=52,78±1,34(a); LII=37,83±2,09(b); LIII=35,08±1,39(b). In lower deepness (I), both light-curing units, Halogen and LED, showed similar polymerization ability. In higher deepness (II and III), they presented lower microhardness values and the Halogen Light always presented hardness values lower than LED. The light-curing devices showed better polymerization effectiveness in lower depth. In higher deepness, LED light always presented better polymerization ability.

### **86.** AESTHETIC RESTORATION IN PULPLESS TOOTH

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Frequently, is necessary to dentist makes aesthetics procedures in operative dentistry, principally on maxillary endodontically treated teeth. In that case, specials cares are essential, because the significantly decrease of tooth strength. This work presents a clinical sequence treatment with a pulpless maxillary lateral incisor, which had showing color modification. The immediately dental bleaching was done with a 35% hydrogen peroxide and 2% sodium hypochlorite. Then, a root preparation to glass fiber post was carried out to receive that because the great lost of dental structures. The chemically resin modified glass ionomer cement was used to glass fiber post cementation. A composite resin restoration was done to conclude the treatment. Was observed favorable results with a restoration protocol. Aesthetic and function was achieved with treatment.

### 87. EFFECT OF BLEACHING AGENTS ACTIVATED BY HALO-GEN LIGHT AND LED/LASER ON DENTAL ENAMEL SUBMIT-TED TO CARIOGENIC CHALLENGE

KARASAWA, L.\*; PINTO, C. F.; PAES-LEME, A. L.; CAVALLI, V.; MALERBA, M.; GIANNINI, M. FOP/INICAMP

This study evaluated the dental enamel microhardness (EM) with caries lesions (CL), submitted to treatment with 35% hydrogen peroxide. Fragments of bovine teeth with CL were selected after analyses of EM and randomly divided to 6 groups (n=10): (1) Whiteness HP Maxx (W-FGM)+without light activation (WL); (2)W+halogen light activation (HL); (3)W+LED/diode laser activation (LD); (4)Easy White (EW-Delta Med)+WL; (5)EW+HL; (6)EW+LD. All groups were submitted to pH cycling (pHC) for 12 days, which consists of cariogenic challenge (2h/day); immersion in remineralized solution (22h/day); and application of fluoride dentifrice (3x/day). Specimens were submitted to bleaching treatments (W and EW) at days 1, 6 and 12 of pHC. After 12 days of pHC, EM was re-evaluated and the results were analyzed by ANOVA and Tukey's test (p<0.05). The EM mean ( $\pm$ SD) of specimens with CL before pHC were: (1)113.9(27.6); (2)97.0(30.6); (3)115.1(22.3); (4)122.9(26.2); (5)125.1(26.1); (6)126.6(28.7); and after pHC: (1)93.0(29.3); (2)92.2(22.6); (3)100.8(22.9); (4)96.5(28.7); (5)88.7(21.3); (6)93.8 (22.4). The EW bleaching agent decreased the EM, independently of the mode of activation. The results suggest that EM with CL was not influenced by the mode of activation during bleaching treatment, but by the type of bleaching agent used.

# 89. INFLUENCE OF CANAL ROOT PREPARED DIFFERENTS LENGTHS ON THE TENSILE RESISTENCE OF GLASS FIBER POST

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The clinical success of prefabricated posts bond luting is related with the polymerization ability of luting agents in the deepest region of the root canal. The purpose of this study was to evaluate the tensile bond strength of glass-fiber post cemented in different positions of root canal. Twenty-seven bovine roots with 16mm length were used. After the endodontic treatment, samples were randomly assigned in 3 groups (n=9), according to the root canal length: (G1- 12mm; G2-8mm, G3- 4mm). For all roots, the glass-fiber post (Reforpost – Angelus) was cemented with Enforce (Dentsply) and adhesive agent (Prime-Bond 2.1). All groups were stored for 7 days in 100% relative humidity and they were submitted to the tensile strength test (Instron universal machine) with 1.0mm/min crosshead speed until the post was dislodged from the root. The results (kgf) were submitted to the statistical analyses ANOVA and Tukey test (p=0.001). The means were G2= 33.19(±11.15)a, G1= 32.68(±12.68)a e G3=21.07 (±1.66)b. The highest tensile strength means was obtained when the post was cemented until the medium third of the canal root (G1 and G2).

# 88. A NEW OXALATE-BASED MATERIAL FOR DENTINAL HYPERSENSIBILITY TREATMENT – A CLINICAL CASE REPORT.

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The hydrodynamic theory suggests two basic solutions to dentin hypersensitivity: occluding patent tubules to reduce stimulus-evoked fluid flow, or reducing pulpal excitability so that the nerves do not respond to this stimulation. Oxalate-based dentin desensitizers are specifically formulated to prevent intra-tubular fluid movement, being clinically more convenient and have an immediate effect. After previous acid etching, this new desensitizer (Bisblock) provides formation of oxalate crystals deeper, within the tubules. After desensitizer application, two coats of a non-acidic adhesive system are applied to allow the adhesive to enter the tubules, surrounding the calcium oxalate crystals, and forming plugs upon polymerization. The synergic action of oxalate crystals and adhesive plugs avoids displacement of the crystals internally formed, preventing the movement of dentinal fluid, reducing or eliminating sensitivity, with a long-lasting pain relief. The main advantage of this technique is that, since the oxalate crystallizes deep within the dentinal tubules, this property resists dislodging caused by toothbrush abrasion while still providing excellent bond strength. A clinical case to be presented describes two indications of this material (as desensitizer alone and associated with direct restorations).

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LIBERTI, M.S.; METTENBURG, D.; ARRAIS C.A.; RUEGGEBERG F.; GIANNINI M. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Introduction: Some bonding agents contain filler particles to improve the quality of the hybridization process; however, the effects of filler adition on the mechanical properties of light-cured adhesives are unknow. Objective: The purpose of this study was to evaluate the effects of filler adition on the biaxial flexural strength an modulus of two adhesive systems after 1 week. Material and methods: The tested adhesive systems were Nano Bond and Bond 1 (Pentron Corp.). The adhesive resins were dropped into silicon molds to create resin discs ( 0,5 mm thick and 6 mm in diameter). (n=13). The adhesive solutions were light - activated with XL 3000 (3M/ESPE) for 20 s. The discs were stored dry for one week before the test (1.27 mm/min - Instron 5844). Data were statistically analyzed by one-way ANOVA and Tukey's post-hoc test (5%). Results: Nano Bond showed superior modulus and biaxial flexural strenght than Bond 1. Conclusion: Results suggested that filler addition in the composition of bonding agents can increase the biaxial flexural strenght and modulus of the tested adhesives.

# 91. CLINICAL CASE REPORT USE OF ANATOMIC POST FOR RECONSTRUCTING AN ENDODONTICALLY TREATED TEETH

PRIETO, L.T.\*; MENEZES, M.S.; SOARES, P.V.; MARTINS, L.R.M.; PAULILLO, L.A.M.S.; SOARES, C.J.; FOUFU E FOP-UNICAMP

The technological evolution has enabled manufacturers today to provide fiber posts that offers superior esthetic and mechanical properties. It is likely that a further significant improvement in fiber post adaptation and retention will be achieved with the so-called anatomic post. This is a fiber post covered by a layer of light-curing resin, which allows for an individual, anatomical shaping of the post through its insertion into the canal, with the aim of achieving a better fit than is possible with any prefabricated post.6,As a result of its precise adaptation to the root canal space, the individualized post is surrounded by a thin and uniform layer of resin cement, which creates ideal conditions for post retention. This study aimed, by literature review and clinic case presentation, demonstrate anatomic post confection. The clinical procedure is simple, and a superior fit to the root canal walls is achieved, thus reducing the amount of cement needed. The luting procedure described can be proposed as a clinical technique for routine use when the prepared root canal is too wide or not perfectly round.

# 93. CLINICAL CASE EVALUATION OF TETRACYCLINE STAINED TEETH AFTER BLEACHING: 12-MONTHS POST TREATMENT.

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Use of tetracycline during mineralization phase of tooth formation causes intrinsic staining. The discoloration caused by the cyclines ranges from yellow to black. The intensity and color distribution vary depending on the amount and duration of antibiotic administration. Ther are several teatment regimens to improve the appearence of dicolored tooth, however the bleaching procedure has become the first choice once is a conservative treatment. This case report describes a treatment of a patient with mild tetracycline stained teeth. The treatment plan consisted of one session of in office bleaching with 35% hydrogen peroxide (Whiteness HP-FGM) combined with 16% carbamide peroxide used at home (Whiteness Perfect 16%-FGM). After 15 days of bleaching home, the patient was very satisfied whit the result obtained. The patient did not report any sensitivity after the bleaching treatments. The 12-months post bleaching revealed no color reversal. The result of combined bleaching treatment for this case was very positive and after 12-months a shade stability was observed.

## 95. BOND STRENGTH OF ADHESIVE SYSTEMS AT THE WALLS OF A MOD CAVITY PREPARATION

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Dentin bonding might be influenced by different factors. The present study evaluated the bond strength of adhesive systems at cavity walls of a MOD preparation. 36 human third molars received MOD cavity preparations and were allocated in three groups acording to the cavity wall (axial, occlusal or gingival). Flat surfaces of the wall evaluated were obtained by cutting away the adjacent walls. Flat surfaces were distributed into 3 groups (n=4) according to the adhesive system used (Single Bond 2, Clearfil SE Bond, Adper Prompt). Composite blocks (Filtek Z250) were built over the surfaces. For the bond strength test, specimens were sectioned according to the respective cavity wall (3 slabs/wall), and the adhesive interface was trimmed to an hour-glass shape (1mm2). The morphology of the bonded interface was evaluated in a scanning electron microscope. Statistical analysis (2-Way ANOVA/Duncan, alfa=5%) did not demonstrate a significant interaction among cavity walls and bonding systems. The effect of cavity walls was not significant as well; however, adhesive systems were statistically different and higher means were presented by Single Bond 2. The etch&rinse system demonstrated superior dentin bonding compared to self-etch systems.

### 92. INFLUENCE TRANSLUCENCY OF POST ON THE DEGREE OF CONVERSION OF ONE RESIN CEMENT.

SILVA, A.L.F; MENEZES, M.S.; SOARES, P.V.; ARIAS, V.G.; SOARES, L.E.S.; MARTIN, A.A.; MARTINS, L.R.M FOP - UNICAMP

This study evaluated the degree of conversion (DC) of one dual-cured resin cement used to lute fiber posts with different translucency. Ten fiber posts #3, five Aestheti-Post (AP) and five Light-Post (LP), were ground to expose a flat surface in the middle of the fiber posts. After wards, the fiber posts were luted with RelyX ARC into simulated root canals made by polyvinylsiloxane impression materials. The resin cement was light-cured for 40s and the specimens were stored in the dark for one week. The spectra of the cured cement resin were obtained using FT-Raman Spectrometer. Spectra were acquired at three different depths, cervical (C), medium (M) and apical (A), and DC was calculated. Statistical analysis was performed by one-way repeated measure ANOVA, followed by post-hoc Tukey's test at 95% confidence level. The DC means (%) were: LPC = 69,8 (4,4)a, LPM = 56,0 (5,5)a, APC = 55,2 (4,2)a, LPA = 36,4 (10,0)b, APM = 36,0 (6,1)b e APA = 29,0 (5,1)b. The LP groups exhibited higher DC than the AP ones only at medium depth. For LP groups, the apical region showed the lowest DC and no significant differences were found between DC means at medium and cervical regions. For AP groups, the cervical region presented the highest DC and no significant differences were observed between DC means from medium and apical regions.

### 94. EFFECT OF METAL PRIMERS ON BOND STRENGTH OF RESIN CEMENTS TO TITANIUM ALLOY

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Objectives: The purpose of this study was to evaluate the effect of metal primers on bond strength of resin cements to titanium alloy.

on bond strength of resin cements to titanium alloy. Materials and Methods: Plates with 10x5x1mm were casted with titanium alloy (Tritan) and divided into 10 experimental groups (n=5): G1::AlloyPrimer + PanaviaF (Kuraray), G2:PanaviaF, G3:MetalPrimer + LinkMax (CG Corp), G4:LinkMax, G5:Metaltite + BistiteIIDC (Tokuyama), G6:BistiteIIDC, G7:CeramicPrimer + RelyX Unicem (3M ESPE), G8:Unicem, G9:CeramicPrimer + RelyX (3M ESPE), G10:RelyX ARC. The metal surfaces were sandblasted with Al2O3 (50µm) and the metal primers and cements were used as recommended by the manufacturers. Three cylinders of cements (dia 0.5mmx0.75mm) were applied to each primed metal surface or not, using tygon tubing mold. After water storage for 24h, specimens were subjected to micro-shear testing. Data were statistically analyzed by two-way ANOVA and Tukey's test (5%). Results: The results showed that the use of Metal Primer/Link Max and Unicem/Ceramic Primer systems can increase the bond strength to titanium alloy test. For other luting systems, the use of the primers did not alter the bond strength. Conclusions: Most of primers did not improve the bond strength of resin cements to titanium alloy. The use of Metal Primer, and Ceramic Primer before Unicem, seems to yield higher bond strengths of titanium alloy. Supported by SAEPEX/UNICAMP proc.:1186/05

# **96.** EVALUATION OF ETCHING TECHNIQUES ON AREA AND DENSITY OF DENTINAL TUBULES AT CROWN AND ROOT REGIONS

ROCHA LIMA,A.C.M.\*; GOES M.F.; SOUZA-FILHO,F., UNICAMP-FOP

The study aimed to evaluate density and dentine tubule area of the root and crown, after etching with 32% phosphoric acid (PA) and the etching primer (P) of the bonding system Clearfill Protect Bond. Five human premolars were fixed in 25% glutaraldehyde. Deep crown and root dentine sections were obtained by cleavage and treated as follows: G1- crown dentine + no treatment; G2- crown dentine + PA; G3-Crown dentine + P; G4- root dentine + no treatment; G5- root dentine + PA; G6- root dentine + P. Sections etched with P were immersed in ethanol and acetone. All groups were dehydrated in increasing alcohol concentration and HMDS, and visualized by SEM. A 1500X magnification was used to calculate density per mm2 (D) and tubule transversal cross-section area per μm2 (A), using the program Leica IM50. Results were submitted to ANOVA statistical analysis (p< 0.05). Average D for root and crown dentines were 42,627 and 37,190, and this difference was statistically significant. The average A for tubules in G1 and G4 presented statistical differences (2.9µm2 and 1.97µm2). No significant differences were found for G2 and G5 (9.8µm2 and  $8.1\mu m2$ ) or G3 and G6 ( $5.8\mu m2$  and  $5.6\mu m2$ ). Root dentine presented a greater number and cross- section area of tubules, when no etching treatment was applied then in deep crown. Without smear layer formation, PA and P promoted similar surface treatments of the root and deep crown dentines.

## 97. A THERAPEUTIC PROTOCOL SUGGESTED FOR ROOT CANAL DRESSING OF TRAUMATIC TEETH

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FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Dental trauma affects a wide range of the population, with the pulp necrosis and root resorptions as some of the most frequent consequences. Therefore, the root canal dressing is necessary between appointments. The aim of the present study was to assess clinical and radiographicaly a new therapeutic protocol, which uses Calcium hydroxide associated with 2% chlorhexidine gel for treating traumatic teeth. Seventeen patients were evaluated, 14 male and 3 female, with ages ranging between 7 and 16 years old. These patients were directed to the Dental Traumatism service of the Dental School of Piracicaba and 30 traumatic teeth were treated with 3 types of root canal dressings: Calcium hydroxide + 2% chlorhexidine gel; Calcium hydroxide + 2% chlorhexidine gel + iodoform; Calcium hydroxide + 2% chlorhexidine gel + zinc oxide. The pH of each one was measured in vitro in different periods. The in vitro results showed that the association with radiopacifiers did not change the pH of the medicaments in the different periods evaluated. However, there are contradictions between in vitro and in vivo due to the aspects involved. It was concluded that periodic controls in traumatic teeth with long-term antimicrobial root canal dressing are extremely important. Future studies applying this new protocol shell present excellent results

# 99. EFFECTIVENESS OF INTRA-CANAL MEDICAMENTS IN THE EXTERNAL ROOT SURFACE AGAINST SELECTED MICROORGANISMS.

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The aim of this work was to assess in vitro the antimicrobial action of different intracanal medicaments in the external root surface. Two hundred and eighty eight extracted human upper canines roots were divided into two groups, with and without cementum. The root canal instrumentation was performed followed by smear layer removal and sterilization. Samples with root cracks were excluded. After the placement of the intracanal medicaments, the coronal and apical openings were sealed with dental wax. The microorganisms used in this experiment were Enterococcus faecalis, Candida albicans, Actinomyces viscosus and Porphyromonas gingivalis (all isolated from clinical trials). Each microbial strain was evaluated against intracanal dressings: 2% chlorhexidine gel (2%CHX); 2% chlorhexidine gel + calcium hydroxide (1:1) (2%CHX+CH); 2% chlorhexidine gel + zinc oxide + calcium hydroxide (1:1:1) (2%CHX+ZnO+CH); sterile saline + calcium hydroxide (SS+CH); sterile saline (positive control group). Zones of inhibition of microbial growth were measured and recorded after the incubation period. The antimicrobial effects of the medicaments could be ranked from strongest to weakest as follows: 2% CHX, 2% CHX+CH, 2% CHX+ZnO+CH, SS+CH. Actinomyces viscosus was the more susceptible (2.85mm), followed by E. faecalis(1.84mm), C. albicans (0.95mm) and by the anaerobic Porphyromonas gingivalis (0.82mm). No differences among groups were verified in the presence or absence of cementum. It was concluded that 2%CHX containing medicaments were able to diffuse into the dentin and reach the outer surface, exerting their antimicrobial action.

# 101. IDENTIFICATION OF MICROORGANISMS RELATED TO THE SALIVA, THE CROWN AND THE ROOT CANAL OF TREATED TEETH WITH PERIRADICULAR LESIONS

DELBONI, M.G.\*; GOMES, B.P.F.A.; ZAIA, A.A.; SOUZA-FILHO, F.J. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

A total of 45 samples were colleted from saliva (n=15), crown (n=15) and root canal (n=15) of failed endodontically treated teeth from 15 patients. The samples were placed in the VMGA III, serially diluted and cultured on specific medium. Selective media for identification of enterococci, enterobacteria and Candida spp. were also used. Microbial growth was subcultured to obtain pure isolates, which were identified by routine microbiological techniques and commercial biochemical test. Microorganisms were detected in 100% of the root canals. From the 56 microorganisms isolated, 16 belonged to different genera, 85.7% were Gram-positive and 14.3% Gram-negatives organisms. The most frequently bacterial genera recovered from the root canals were: Enterococcus (46.7%), Actinomyces (40%), Propionibacterium, Gemella (26.7%), Bifidobacterium, Eubacterium, Streptococcus, Serratia (20%). Enterococci, enterobacteriaceae and Candida spp. were isolated in 46.7%, 20% and 6.7% of the canals, in 33.3%, 20% and 13.3% of the crown and in 40%, 46.7%, and 66.6% of saliva, respectively. It was concluded that root canals that failed endodontic therapy comprise facultative anaerobic Gram-positive microorganisms. Moreover, enterococci, enterobacteriaceae and Candida spp. can also be detected in both saliva and crown.

## 98. BIREFRINGENCE ALTERATIONS OF DENTIN COLLAGEN TREATED WITH DIFFERENT CHEMICAL AUXILIARY SUBSTANCES

MOREIRA, D.M.\*; LINE, S.R.P.; GOMES, BPFA; SOUZA-FILHO, F.J.; ZAIA, A.A. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Birefringence consists in an anisotropic property caused by the difference in the refraction index of an object. One of the applications of the birefringence research is to solve organization problems and physiology of the collagen bundles. Collagen is the most important organic component of the dentin, so alterations on its structure can induce interferences in adhesion between dentin and restorative materials. This study evaluated the alterations on the collagen birefringence after treatment with different chemical auxiliary substances. 70 bovine incisors were divided in 7 groups: Group I – 5,25% NaOCl + 17% EDTA, group II – 2% Chlorhexidine Gel, group III – 5,25% NaOCl, group IV – 17% EDTA, group V – 2% Chlorhexidine Gel + 17% EDTA, group VI – saline, group VII - control. The samples had their crowns cut, their dental pulps extirpated and were irrigated according to the group they belonged with a total volume of 10ml for each sample, except for the 2\% chlorhexidine gel groups, in which 2ml of total volume for each sample was used. After instrumentation, the chemical auxiliary substances were maintained for 30 minutes in the root canal. Each solution was changed every 3 minutes. The 17% EDTA groups were maintained for 5 minutes, changed once. The samples were evaluated through the polarized light microscopy. The results demonstrated birefringence alterations on the groups I and III. Therefore, the occurrence of variations in the collagen organization after treatment with 5,25% NaOCl could be observed.

## 100. Therapeutic conduct in young traumatized permanent teeth- clinical case report.

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Dental Trauma is common in young patients, and therefore involves teeth with incomplete apexes. The present study aims to present a clinical case of an 8 year-old child that attended the dental trauma Service of FOP-UNICAMP one month after the accident. The anterior teeth presented chromatic alteration and the radiographic examination indicated that the apexes were incomplete. The therapeutic conduct included gengivectomy of the central incisors, dentine protection of element 11 and pulpotomy of element 21. However, during pulpotomy, it was observed that the pulp tissue of the root canals was initiating necrosis. The remaining tissue was collected and histologically processed with hematoxiciline and eosine. During histological analysis, an intense fibrosis with total absence of cells was observed, concurring with the clinical diagnosis. Hence, the apexfication treatment was initiated, using an intra-canal dressing of 2% clorexidine gel and calcium hydroxide. The complete formation of the apex was observed after 8 months. At the end of the treatment, the teeth were restored with composite resin, concluding the case with the recuperation of the patient's function and esthetics.

# 102. ENDODONTIC THERAPY WITH CALCIUM HIDROXIDE ASSOCIATED WITH CHLORHEXIDINE GEL FOR APEXIFICATION CASES: REPORT OF A CLINICAL CASE

BERNARDINO, L., SOARES, A.J., GOMES, B.P.F.A., ZAIA, A.A., SOUZA-FILHO, F.J.

FACULDADE DE ODONTOLOGIA DE PIRACICABA – UNICAMP

Dental traumas in teeth with incomplete rhyzogenisis happen quite often in childhood, which makes the endodontic procedures harder to be accomplished. The aim of this study was to report the endodontic treatment of a clinical case related to a tooth with incomplete rhyzogenesis and necrotic dental pulp after suffering a trauma. Description of the clinical case: The 07 years old male patient RMA, suffered a bicycle accident that resulted in avulsion of the element 21, which was replanted around 3 hours after the accident. The patient attended the Dental Traumatism service of the Dental School of Piracicaba - UNICAMP 10 days after replantation. Clinically the element did not show signs of mobility, presence of fistula or alteration on the shade of the crown. Radiographicaly, there was no radiolucent image and the apex was not completely formed. During this period, a clinical and radiographic control was required. After 9 months, the crown of the element 21 was slightly darker and the dental pulp was necrotic. Therefore, a treatment to induce the apex obliteration was indicated, i.e. apexification through changes of Calcium hydroxide associated with chlorhexidine gel every 3 months until the formation of an apical barrier. During 15 months the tooth was followed up by clinical and radiographic controls until the definitive root canal filling. In conclusion, the dental replantation followed by an adequate treatment and follow up is the most effective way to preserve avulsed teeth.

### 103. MULTIDISCIPLINARY CONDUCT FOR THE RESOLUTION OF A CLINICAL CASE

SEMENCIO, K.A.P.\*; SOARES, A.J.; CASARIN, R.C.V.; ALEXANDRE, R.S.; GOMES, B.P.F.A.; SOUZA-FILHO, F.J. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Due to the high incidences of dental traumatisms it is very important that an integration of many specialties exist, in search for the most adequate treatment. Restorative Dentistry, together with Periodontics and Dental Surgery are areas that most commonly interact with Endodontics when there is the necessity to reconstruct fractured elements. The present work describes a clinical case of an 11 year-old male patient, that fell in a pool and attended the Dental Trauma Service of FOP-UNICAMP, 2 months after the incident complaining of pain at the TMA region. Clinically it was possible to observe the presence of extrusion of the elements 11 and 21, and subluxation of elements 12 and 22. Tooth 21 also presented a crownroot fracture. A multidisciplinary therapeutic conduct was planned. The patient was firstly submitted to a surgical evaluation followed by the endodontic treatment. This was initiated with the use of intra-canal medication in the elements 11 and 21 due to the presence of root resorptions. During this period the patient was submitted to periodontal treatment to reestablish the dimensions of the biological space of tooth 21 followed by its permanent restoration with composite resin. Elements 12 and 22 have been clinically and radiographically evaluated during one year. It is extremely important to maintain a multidisciplinary conduct towards our patients to offer them a favorable clinical planning.

# 105. Evaluation of antimicrobial activity of different auxiliary chemical substances irrigation and dressing protocols used in the healing process of dog teeth with apical periodontitis

RACHED, G.A.\*; CINTRA, L.T.A.; MARTINHO, F.C.; FERRAZ, C.C.R; ZAIA, A.A.; SOUZA-FILHO, F.J.; GOMES, B.P.F.A. FOP-UNICAMP

The aim of this study was to evaluate the influence of 2,5% sodium hypoclorite (NaOCL), 2% clorexidine gel and liquid (CHX) combined or not with calcium hydroxide paste as root canal dressings in dog's teeth with apical periodontitis. 100 roots from 5 adult mongrel dogs remained open to the oral environment for 6 months to induce apical periodontitis. The root canals were prepared by crow-down technique applied by FOP-UNICAMP and treated with different auxiliary chemical substances, according to the following groups: I) sterile saline solution; II) natrosol gel; III) 2,5% NaOCL; IV) 2% CHX gel IV) 2% CHX solution. Root canals were completely filled with CHP (calcium hydroxide calcium powder plus saline) of 14 days. Microbial growth was evaluated by turbidity of medium and serial dilutions were plate in nutrients broth, incubated in aerobe and anaerobe environment. Colonies were count (UFC). Data were subjected to statistical analyses using krukal-wallis, Miler test (p< 0.05). Results revealed that all chemical auxiliary substances tested reduced in almost 100% bacterial load in infected root canals. There was significant statistical difference between 2, 5%NaOCL, 2% CHX gel and other auxiliary substances. Moreover, no statistical difference was detected in bacterial load ratio after chemo-mechanical preparation and intracanal dressing.

# 107. EPIDEMIOLOGICAL OF THE TRAUMATIC DENTAL INJURIES TREATMENT CENTER, AT THE PIRACICABA DENTAL COLLEGE (UNICAMP) OF 2002 -2005

NASCIMENTO, F.P.\*; SOARES, A.J.; GOMES, B.P.F.A.; ZAIA, A.A; SOUZA-FILHO, F.J., MARTINIANO, V. FACULDADE DE ODONTOLOGIA – UNICAMP

Traumatic dental injuries undertake a considerable share of the population and might lead to teeth loss in some cases, whether at the time of the accident or during the treatment, or even years later. Studies show that half of the children suffer from dental injury, especially between 8 and 12 years old. The aim of the research was to accomplish an epidemiological study about the number of people with those conditions that were treated at the Traumatic Dental Injuries Treatment Center, in the Endodontics area, of the Piracicaba Dental College (UNICAMP), during the period of 2002 to 2005. The research also considered gender, age, the teeth involved and etiology of the trauma. The present work evidenced 754 dental injuries. The number of teeth involved was 683 in 286 patients. The results showed that the higher occurrences happened between the ages of 7 to 14 and 15 to 25 year old. It was shown that the most frequent etiological factors were bike accidents and falls. It was realized that there were no statistically significant differences concerning gender, and there were statistically significant differences considering ages. It was verified that the higher occurrence cases were the crown fractures followed by avulsions. As shown, one might ascertain the high occurrence of dental traumas and, therefore, the importance of an urgency attendance service for those cases

# 104. MORPHOMETRIC MEASUREMENT ON THE MESIAL ROOT OF MANDIBULAR FIRST MOLARS WITH DIFFERENT LEGTHS.

SAUÁIA\*, TS;VALDRIGHI, L;GOMES, BPFA;ZAIA, AA;FERRAZ, CCR;SOUZA-FILHO, FJ. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

This work has made, in vitro, morphometric measures on the mesial root of mandibular first molars, with different lengths. It was obtained three study groups: Group I: long teeth (25), Group II: medium teeth (28) and Group III: short teeth (39). The included teeth in resin were sectioned at 2 mm below the bifurcation and the images, obtained in stereoscopic loupe, were analyzed by the Imagelab software. Realized measures: smaller dentin thickness between the canals and the distal surface, distance between the canals, depth of the concavity, distances between the vestibular and lingual and mesial and distal surfaces. After statistical analisys by the F test and Tukey test the results were: Group I showed significance in distances between the mesio-buccal canal and the distal surface, in the depth measurement of the distal surface and between the vestibular and lingual surfaces (p≤5%). Group III showed statistical difference in the distance between the mesial canals (p ≤ 5%). Conclusion: the thickness of the dentin wall on the risk zone is thinner in Group I than Group III; the depth of the concavity is bigger in Group I than in Group III; the distance between the canals is shorter in Group III than in Groups I and II; the distance between the vestibular and lingual surfaces is bigger in Group I than the two other groups. (Supported by: FAPESP: O5/51653-8, 05/5379-1) & CNPq: 304282/2003-0/SISNEP: 050/2003.

### 106. INTERDISCIPLINARITY IN DENTAL TRAUMA: PRESENTATION OF A CLINICAL CASE

MONTEIRO-OLIVEIRA, M.P. \*; SOARES, A.J.; RACHED, G.P.C.A.; GOMES, B.P.F.A.; ZAIA A.A.; SOUZA-FILHO, F.J. FOP - UNICAMP

The interaction between specialties is of great importance in cases of dental trauma, as it enables a complete treatment plan for the patient. The aim of the present study was to present a clinical case of a 9 years old male child, who attended the Dental traumatism service of the Dental School of Piracicaba, 1 month after having and accident that resulted in dental trauma. The tutor reported that the element 21 had been completely avulsed and then, replanted 3 hours after the accident. The region of the TMJ was symptomatic. Extrusive luxation of the elements 11 and 22 was also observed. Firstly, the endodontic treatment with use of an intracanal dressing was planned for the elements 21 and 22. During clinical and radiographic control and extended root resorption was observed on the element 21. The therapeutic conduct accomplished in association with the areas of Dental Surgery and Pediatric Dentistry involved extraction of the element 21 and prosthetic rehabilitation with a space maintainer associated with an interocclusal muscle relaxing plaque, due to the muscular pain related by the patient. After 2 months, another space maintainer was manufactured. The root of the element 21 was observed under scanning electron microscopy. It was concluded that a multidisciplinary interaction in cases of dental trauma is paramount for achieving and adequate plan of treatment.

# 108. THE IMPORTANCE OF INTERDISCIPLINARY DOCUMENTATION ON THE DIAGNOSIS OF DENTAL TRAUMATIC LESIONS

SOARES AJ \*, CASARIN RCV; GOMES BPFA, ZAIA AA, SOUZA-FILHO FJ

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Traumatic lesions of the permanent dentition are pointed as one of the most serious problems on the oral health. The correct diagnosis might be difficult, as the clinician generally does not know the wide range of injuries that can be associated with original position of the teeth previously to the trauma is unknown, which might lead to an incorrect diagnosis. Another factor to be taken into account is the importance clinical and radiographic exams. The objective of this report is to present a clinical case of a patient that attended the Dental Traumatism service of the Dental School of Piracicaba - UNICAMP with history of dental trauma. Clinical case: A 11 years old male patient who fell on the swimming pool came to us reporting pain on the TMJ region. Clinically, extrusive luxation was observed on the elements 11 and 21. Besides, the element 21 also showed a fracture crown-root. The elements 12 and 22 had a subluxation. For this case an interdisciplinary therapy was planned. The patient was directed to an evaluation on the discipline of surgery and then the treatment on the areas of Endodontics, Periodontics and Dentistry began. Therefore, a clinical and radiographic documentation was observed all therapeutic procedures accomplished by all areas. It was concluded that the interdisciplinary documentation is of great importance as it shows the significance of the treatment, making the therapy more adequate.

# 109. PREVALENCE OF DENTAL AVULSION CASES OF PATIENTS HANDED ON DENTAL TRAUMATOLOGY SERVICE OF FOP-UNICAMP

MARTINIANO ,V.B.G.\*; SOARES A.J.; NASCIMENTO F.P.; GOMES B.P.F.A.; ZAIA A.A.; SOUZA-FILHO F.J. FACULDADE DE ODONTOLOGIA-UNICAMP

Dental traumatic observed in children and adolescents, especially those that involve the anterior teeth have unfavorable effects on both function and esthetics, affecting their self-esteem. The major incidence occures in children and adolescents, which becomes adults less affected. Dental avulsion is a traumatic lesion characterized by the completed displacement of the tooth from it is place. The urgency treatment has a great importance, because the knownless and immediate care by dental-surgeon turns the prognostic desfavorable in most times. The purpose of this study was to evaluate the cases of dental avulsion prevalence at the Center of Dental Traumatism of the Dental School of Piracicaba, State University of Campinas, Piracicaba, SP, during the period of 2003-2005. Eigthy-five patients were examined, between the ages of 7 and 50, representing a total of 170 teeth involved. It was possible to observe that 65 of the 105 teeth traumatized were unble to be reimplanted. There was also no statistical difference between the distributions of teeth traumatized during the studied period. According to results, it is possible to conclude that there is a high in incidence of dental avulsions and a center of dental trauma is of great importance for importance for the treatment of such accidents.

# 111. ANTIBACTERIAL ACTIVITY OF ZINC-OXIDE-CALCIUM HIDROXYDE INTRACANAL MEDICAMENTS AGAINST SELECTED ENDODONTIC PATHOGENS

ALMEIDA, G.C\*; MONTAGNER, F.; BERBER, V.B.; ZAIA, A.A.; SOUZA-FILHO, F.J.; GOMES, B.P.F.A FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The aim of this study was to evaluate the immediate pH and antimicrobial activity of zinc oxide-calcium hydroxide pastes against endodontic pathogens. The microorganisms used in this experiment were E. faecalis, C. albicans, A. naeslundii and P. gingivalis (isolated from clinical trials). Each microbial strain was evaluated against the following intracanal dressings: Ca(OH)2 + saline solution (1:1), Ca(OH)2 + 2.0% CHX gel (1:1), Ca(OH)2 + 2.0% CHX gel (2:1), Ca(OH)2 + 2.0% CHX gel (1:2), ZnO + saline solution (1:1), ZnO + 2.0% CHX gel (1:1), ZnO + 2.0% CHX gel + Ca(OH)2 (1:1:1), ZnO + 2.0% CHX gel + Ca(OH)2 (2:1:1), ZnO + 2.0% CHX gel + Ca(OH)2 (1:2:1), ZnO + 2.0% CHX g 2.0% CHX gel + Ca(OH)2 (1:1:2), ZnO + 2.0% CHX gel + saline solution (1:1:1). The immediate pH of the pastes was measured with a pHmeter. Antimicrobial activity was determined by the agar diffusion method. Stainless cylinders were placed on each inoculated agar medium. The tested medicaments and their controls were placed inside the cylinders. The zones of growth inhibition were measured and recorded after incubation for each plate and the results were analyzed statistically (Kruskall-Wallis). The different amounts of the medicaments did not alter the pH of the pastes, however greater inhibition zones were observed when the quantity of Ca(OH)2 and CHX gel was increased. Zinc oxide in high proportion reduced the inhibition zones for all tested microorganisms.

# 113. EVALUATION OF THE ABILITY OF SMEAR LAYER REMOVAL FROM ROOT CANALS WALLS BY DIFFERENT CHEMICALS SUBSTANCES

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This work investigated the smear layer removal ability of different chemical substances after chemo-mechanical preparation of the root canals. 54 single-root extracted teeth were divided into 6 groups according to the substances used: D5.25% NaOCL+ 17% EDTA + saline solution (SS); II) SS; III) 2% Chlorhexidine gel (CHX)in neutral pH + SS; IV) 2% CHX in neutral pH + SS+17%EDTA; V)2% CHX in acid pH +SS; VI)2% CHX in acid pH +SS+17%EDTA. After chemo-mechanical preparation, the root canal walls specimens were examined by scanning electron microscopy in each third of the canal, in 4 different areas. The region photographed were evaluated according to the rating system developed by Gaberoglio & Becce (1994). Data were analyzed using Mann-Whitney test to determine whether there was any significant difference in the ability of the substances to remove the smear layer. 2% CHX gel acid pH + 17% EDTA and 5.25% NaOCL+ 17% EDTA+ SS were effective in removing smear layer. 5.25% NaOCL+ 17% EDTA+ SS presented better results, when compared with other substances (p<0.05), in all thirds of the root canals. It was concluded that all irrigants, except saline solution, were effective in removing the smear layer. Better results were shown in gropus presenting 17% EDTA when removing the smear layer. (Supported by FAPESP 04/05743-2, 05/51653-8 and CNPq 304282/2003-0)

### 110. THE USE OF COMPUTED TOMOGRAPHY FOR DIAGNOSIS IN RADICULAR VERTICAL FRACTURES

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Dental damages occurred by accidents have been causing serious risks to dental elements and the periodontum. The prognostic in this cases are linked to a correct diagnosis. In certain situations when root fracture occurs, this procedure is based on detection and visualization of the fracture line. The most usual method to observe this latch is the periapical x-rays, however in some cases, their visualization even in well processed x-rays are very difficult. Based on that, the aim of the project was to evaluate the use of computed tomography as an option to diagnose vertical root fracture. The experiment used ten extracted human teeth. Vertical root fracture where prepared in all specimens without fragments disclosure. Each tooth was positioned in a socket of a dry skull and periapical radiographs were taken using parallelism technique. The same tooth was examinated under computed tomography. To compare both techniques, periapical radiograph were analyzed by three endodontist and one radiologist in order to detect root fractures. Tomography exams had their results analyzed by the radiologist responsible for those tests. Results showed that that no root fractures were observed in the evaluation of periapical radiograph analysed by the endodontist. The radiologist detected only one root fracture. The tomography exams detected fractures in all teeth. After the analyzing the results it could conclude that homographic exam showed solid results about detecting the vertical root fracture without fragment separation.

## 112. INTERNAL ROOT CANAL ANATOMY KNOWLEGDE VERSUS OPERATORY ACCIDENT - CASE REPORT

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The knowledge of internal dental morfology is essential for the correct execution of the root canal healing and modeling process. Lots of factors can make the treatment fail, such as fracture of instruments in the root canal and perforations. The endodontic instrumental fracture can be an obstacle to the treatment's continuation, or even put in risk the treatment's conclusion, like the root perforation in witch is done and artificial openning communicating the pulpar chamber or root canals with periapical tissues, usually related to the lack of dental anatomy observation. The analisis of the pulpar chamber is complex, the endodontisty, with the avaiable resourses interprets the image of a tridimensional plan in only one dimension. Therefore, it is extremily important the meticulous knowledge of internal tooth anatomy, witch could reduce the incidence of fails that lead to tooth loss. The endodontic treatment failure frequently represents the lack of observation in one of the initial operatories steps. Case report of two endodontic instrumental fracture in the root canal and root perforation that induced treatment failure

# 114. COMPERISON IN VIVO BETWEEN THREE ELETRONIC APEX LOCATOR AND RADIOGRAPHIC METHODS FOR MESUREMENT OF TEETH WORKING LENGHT.

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Electronic methods for the determination of the apical level have often been used by endodontists. The purpose of this study in vivo was to compare the electronic apex locators and radiographic methods for measurement of teeth working length as well as to compare the number of radiographs taken in these two different methods. Thirty single-root from the Endodontic Clinic of the Brazilian Central Naval Clinic. Were divided in 3 groups: Group 1- Root ZX;, Group 2- Endex; and Group 3- Novapex. The teeth were accessed, cervical prepared with Gates-glidden drills, and the canals were irrigated with 5,25% sodium hipochlorite. Based on the initial radiograph, using the Ingle method, the working length of each tooth was set. Results were compared as soon as the working length by using electronic apex locators was performed. Comparing to the radiographic method, there were not any statistically significant differences among Root ZX (p=0,394), Endex (p=0,193) and Novapex (p=0,394). Root ZX has showed 50% efficiency to locate the apical constriction, while Novapex showed 70% and Endex 80%. The other result was the significant decrease in the number of radiographs when using the electronic apex locators (p=0,000). In conclusion, Root ZX, Endex and Novapex may be safety used for root canal lenght measurements and that the use of electronic apex locators can reduce the number of radiographs to determine working length.

# 115. EVALUATION OF ROOT CANAL THERAPY AT THE ENDODONTIC COURSE OF THE BRAZILIAN NAVAL DENTAL CLINIC IN YEARS 2003/2004

MEKDEC,C.S\*; QUADROS, I; RABANG, H.R.C.; MAGGIONI, A.R.; GOMES, B.P.F.A.; SOUZA-FILHO,F.J. ODONTOCLÍNICA CENTRAL DA MARINHA

Quality and prognosis of root canal therapy has been evaluated on clinical studies at Dental Schools and Endodontic Clinics. The purpose of this study was to establish the success rate of endodontic treatment according to clinical pulp condition, periapical condition and type of treatment; and the return rate of 444 patients treated by endodontic students in the Brazilian Naval Dental Clinic, during the years 2003 and 2004. On recall, symptoms and signs, type of restoration after endodontic treatment and perirradicular aspects were observed. Only 130 patients attended the recall: 99 (27,8%) from 2004 and 31 (11%) from 2003. After 1 year, 76% of the teeth were definitely restored, while 87,5% was like this after 2 years. The success rate after 1 year, in vital teeth was 66,7%, in necrotic teeth 43% and with periapical lesion 42,5%; after 2 years it was of 88,8%, 72,7% and 50%, respectively. The percentage of success of conventional treatment was 48,4% after 1 year and 82,8% after 2 years, while for retreatment it was 29,6% after 1 year and 58,8% after 2 years. Data was statistically analyzed (Pearson's Chi-Square and Fisher's exact tests). Significant statistical differences were found between all the results (p<0,05). In conclusion, the return rate percentage was low and the least success rate was observed in retreatment, teeth with periapical lesions previous to the endodontic treatment and necrotic teeth.

# 117. MICROBIAL ANALYSIS FROM SALIVA AND INFECTED ROOT CANALS WITH PULP NECROSIS AND PERIAPICAL LESIONS.

MARTINHO F.C.\*, ZAIA AA, SOUZA-FILHO F.J., GOMES BPFA FOP-UNICAMP

Microbial samples were taken from 16 root canals with necrotic pulp tissues and saliva aiming to investigate the microbiota in primary endodontic infection and from the saliva. Strict anaerobic techniques were used for serial dilution, plating, incubation and identification of microorganisms. Selective media for Enterococcos, Enterobacteria and Candida spp. isolation were also used. Strict anaerobic microorganisms were detected in 100% and a total of 109 microorganisms were recovered from the root canals, being 65%/35% Gram-positive/negative, 46% strict anaerobes, 54% facultatives. The most frequently microorganisms recovered from the root canals were: P. intermedia (68.8%), P. micros (68.8%), S. mitis (37.5%), P. acnes (37.5%), A. naeslundii (31.3%) and A. viscosus (31.3%). Candida spp detected in one case from root canal. In contrast 37.5% of the saliva samples were positive for Candida albicans, Enterococcus spp. (25%)-(18.8 %-E. faecalis) and Enterobacteria spp. (6.3%). It was concluded that the root canal microbiota of primary endodontic infection with periapical lesions was found to be mixed, comprised proportional by aerobic and strict anaerobic microorganims and mainly by Gram-positives. Candida and Enterococcus spp. were more frequently isolated from the saliva than enterobacteria. (Supported by FAPESP 04/05743-2, 05/51653-8)

# 119. IMMUNOHISTOCHEMICAL IDENTIFICATION OF IMMUNOCOMPETENT AND INFLAMMATORY CELLS IN HEALTHY AND INFLAMED DENTAL PULPS

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The aim of this study was to identify by immunohistochemical technique T4,

T8 e B lymphocytes, macrophages and mast cells in normal and inflamed human dental pulps and correlate the presence of these cells to the signals and symptoms presented by the patients. After the clinical diagnoses, 24 normal dental pulps and 18 inflamed dental pulps were collected from extract teeth or by extirpation during endodontic procedures. After histological procedures, the dental pulp sections were stained with hematoxylin and eosin and used to immunohistochemical analyses. The slides were analyzed by light microscopy. Five fields with more intensive immunostaining were captured, measured and the positive cells were counted. In normal pulps, T8 lymphocytes presented more positive cells followed by T4 lymphocytes, macrophages, B lympho-

Five fields with more intensive immunostaining were captured, measured and the positive cells were counted. In normal pulps, T8 lymphocytes presented more positive cells followed by T4 lymphocytes, macrophages, B lymphocytes and mast cells. Statistical significance was founded with more T8 lymphocytes than B lymphocytes and mast cells (p< 0.05). In inflamed dental pulps, macrophages presented more positive cells, followed by T8, T4, B lymphocytes and mast cells. These data were not statistically significant (p> 0.05). T4, T8 and B lymphocytes, macrophages and mast cells could be identified with different rates in normal and inflamed dental pulps. However, no correlation was detected between the symptomatology and these cells increase in all symptomatic dental pulps.

### 116. ENDODONTIC TREATMENT IN A DOWN'S SYNDROME PATIENT – CASE REPORT

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Down's Syndrome is also known as trisomy of chromosome 21, presents an incidence of 1/800. Generalized muscular flaccidness, congenital cardiac alterations and various degrees of compromised intellect are some of the physical characteristics that influence dental treatment in the Down's Syndrome patient. Although it is a well known syndrome with well developed rehabilitation processes, these patients still find it difficult to obtain dental treatment, and therefore, it is common for them to present precarious oral health. This work relates the clinical case of a 12-year-old Down's Syndrome patient, presenting with extensive caries lesions and an endodontically compromised of tooth 46. This patient was slightly intellectually compromised, which enabled him to understand the need to cooperate to have all the stages of endodontic treatment and restoration of tooth 46 performed, without the need for antibiotic prophylaxis, as the patient did not present congenital cardiac alteration. It was important to isolate the operating field completely to prevent interference from the tongue. The same principles, techniques and instruments are used in the dental treatment of a patient with Down's Syndrome; the difference lies in the need for some knowledge about the syndrome, and requires patience, understanding and skill by the professional to modify the habitual way of thinking.

# 118. AN IN VITRO ASSESSMENT OF MORPHOLOGY, POSITION AND INCIDENCE OF ISTHMUS LOCATED IN THE ROOT CANALS OF HUMAN PERMANENT MOLARS.

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The aim of this work was to assess in vitro the incidence, position and morphology of isthmus in human permanent molars. All the roots of thirty-eight upper first molars, 34 upper second molars, 30 lower first molars and 26 lower second molars were sectioned at 1.0, 2.5, 4.0, 5.5 and 7.0 mm from the apex and examined in stereomicroscope. The data were submitted to qui-square statistical test, in a 5% level of significance. Upper mesiobuccal roots and all lower roots presented flattening. Isthmus were found in the mesiobuccal roots of upper molars in a ratio of 53.3%, distobuccal roots at 3.7%; and at 74% of mesial roots and 26,4% of distal roots of lower molars. The greatest isthmus incidence occurred at 7.0 mm from the root apex, except for the distal roots of lower first molars (at 5.5 mm). The smallest account of isthmus occurred at 1.0 mm from the apex. It was found a high frequency of isthmus in lower molars also in the segments of 2.5 to 5.5 mm from the apex. The most common morphological type of isthmus was Hsu's type V. According to the results, isthmus was widely found in flat roots, with a low percentage in areas closed to the apex. (Supported by FAPESP 05/51653-8, 05/5379-1 e CNPQ 304282/2003).

## 120. RADIOPACITY EVALUATION OF NEW ROOT CANAL FILLING MATERIALS BY THE DIGITALIZATION OF IMAGES

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The ideal root canal filling material should have sufficient radiopacity to its radiographic observation and differentiation from adjacent anatomical structures. This study evaluated the radiopacity of 5 root canal filling materials: Acroseal, Sealapex and Sealer 26 (based on calcium hidroxide), Intrafill (based on ZOE) and Active GP Sealer (based on glass ionomer). Following the ISO 6876/2001, 5 circular specimens (10X1mm) were made for each material. The specimens were placed in stove at 37°C for 48h to final reaction of the root canal filling materials. Then, the radiographs of the specimens were made using occlusal film with a graduate aluminium stepwedge with depth from 2 to 16mm. The dental X-ray unit (GE 1000) was set at 50Kvp, 10mA, 18 pulses/s and distance of 33.5 cm. The radiographs were digitalized and the radiopacity compared with the aluminium stepwedge, using a software WIXWIN-2000 (Gendex). The results were obtained in millimeters of aluminium (mm Al). After statistical analysis (ANOVA), the results demonstrated that the Intrafill and Sealer 26 were the most radiopaques sealers followed by Sealapex and Acroseal. Active GP presented the lowest radiopacity. In conclusion, although the root canal filling materials evaluated demonstrated different radiopacities, they presented values above the minimum according to ISO, except for the sealer based on glass ionomer.

### 121. MICROBIOLOGICAL ANALYSIS OF TEETH WITH ENDO-PERIO LESIONS.

BERBER, V. B.\*; ZAIA, A. A.; SOUZA-FILHO, F. J.; GOMES, B.P.F.A. FOP-UNICAMP

It has long been recognized that an anatomical relationship exists between the dental pulp and the surrounding periodontium. The aim of this study was to investigate the presence and similarities of microorganisms from infected root canals and periodontal pockets of teeth involved by both diseases by microbiological culture. Of the 85 study teeth with deep periodontal pocket (> 8mm), only 8 presented necrotic pulp. Microbial samples were taken from root canals and periodontal pockets (> 6 mm) of 08 teeth. Transport, culture media and specific incubation were used to allow growth of strict anaerobic and facultative anaerobic microorganisms. The microorganisms were characterized according to their Gram stain characteristic, ability to produce catalase, gaseous requirements, colony fluorescence under UV light and commercial biochemical kits identification. A total of 107 cultivable isolates (68-BP, 39-CR) were recovered from 47 different microbial species (35-BP, 29-CR) being 52% G- (50%-BP, 50,9%-CR) and 48% G+ (50%-BP, 41.1%-CR). The most frequently anaerobic bacteria found were Prevotella intermedia, in the root canal and periodontal pocket (85.7%-BP, 57.1%-CR). Conclusion: There are similarities between endodontic and periodontal microbiota in teeth with both pulp and periodontal diseases, with predominance of strict anaerobic microorganisms. Supported by FAPESP: 04/13234-0, 05/51653-8, 05/5379-1, CNPq: 304282/2003-0.

# $123.\ \text{sem}$ evaluetion of the influence or endodontic irrigants on bonding of dentine to clearfil se bond and single bond $_2$

FERNANDES, ABP; DAMETTO, FR; RABANG, HRC; GOMES, BPFA; JACINTO, RC; SOUZA-FILHO, FJ.

Chemical irrigants and medications used in endodontic therapy may have an adverse effect on bonding to pulp chamber dentin. The aim of this study was to evaluate in vitro the influence of two different endodontic irrigants on bonding of pulp chamber dentin to clearfil SE Bond e Single Bond 2 adhesive systems. Thirty human maxilar central incisors were used. The root canal orifice was cleaned and sealed with temporary restorative material. The specimens were divided into six experimental groups, according to the irrigant: solution used: G1- NaOCl 5,25% + Single Bond 2, G2- NaOCl 5,25 % + EDTA 17% + Single Bond 2, G3- NaCl 0,9% + Single Bond 2, G4- NaOCl 5,25% + Clearfil SE Bond, G5- NaOCl 5,25% + EDTA 17% + Clearfil SE Bond, G6- NaCl 0,9% + Clearfil SE Bond. Each irrigant solution was used for 30 minutes in contact with pulp chamber dentin, except for EDTA, which remained for 5 minutes. After irrigation, teeth were washed with distilled water and dried and the adhesive systems were applied according to manufacturer's instructions, followed by Filtek Z250 resin composite, applied in incremental layers. After 24h storage in 37°C distilled water, the specimes were cut and polished, prepared and examined by SEM.In conclusion: Interference was observed in all four groups tested.

## 125. ANTINOCICEPTIVE ACTION OF FRACTIONS OBTAINED FROM PTERODON PUBESCENS SEED'S EXTRACT.

SPINDOLA, HM \*; FERNANDES, AT; TAMINATO, RL; MOREIRA, A; CARVALHO, JE; FOLGIO, MA. FOP-UNICAMP; CPQBA-UNICAMP

Int: Folk medicine has employed Pterodon pubescens Benth for pain relieve, analgesic (sorethroat, back pain), anti-inflammatory, tonic and depurative. Studies had beginning in 1966. We identify two fractions (HS3 and HS6) with antinociceptive activity, gotten from crude dicholometane P. pubescens extracts (EB). Obj: Analyze the antinociception profile of resultant fractions HS3 and HS6. Mat and Met: EB obtained from seeds of P.pubescens was purified resulting on fractions HS3 and HS6 tested in nociception models in mice. We evaluate the antinociceptive activity in three pharmacological assays (induced abdominal contriction by acetid acid, capsaicin test and hot plate test. Each model determines a nociceptive response. Res: Constrictions- in the dose of 300mg/kg, reduced in 62% (EB), 30% (HS3) and 63% (HS6) the number of abdominal constrictions (indometacin 67%). Fraction HS6 with independent action compared with HS3 fraction and EB. Possible synergic action. Capsaicin-fractions HS3 and HS6 reduced in 65 and 82% the animals reaction time, respectively. (neurogenic pain). Hot-plate test: the pre-treatment with naloxone chloride, did not revert the antinociceptive effect (neurogenic) of HS3 and HS6, fractions, suggesting that the action mechanism is not related to the system opióide. Concl: This work demonstrated the antinociceptive activity of EB, and fractions HS3 and HS6 obtained from Pterodon pubescens Benth., and the previously action mechanism study.

# 122. A SEM EVALUATION OF THE ROOT DENTIN PERMEABILITY UNDER ACTION OF DIFFERENT ENDODONTIC IRRIGANTS.

DAVID\*, AD; RABANG, HRC; DAMETTO, FR; JACINTO, RC; GOMES, BPFA; SOUZA-FILHO, FJ. FACULDADE DE ODONTOLOGIA DE PIRACICABA

This study was to evaluate in vitro, using SEM, the permeability of the root dentin after instrumentation and irrigation of the root canals with different endodontic irrigations. It was used thirty human teeth, divided into six groups. The root canals were prepared with one of the following irrigation regimens: 2% chlorhexidine digluconate gel; 5, 25% NaOCl; 5, 25% NaOCl + 17% EDTA; 2% chlorhexidine digluconate gel + 17% EDTA; urea peroxide + EDTA gel 15% and destilled water. The permeability of the root dentin was observed on coronal, middle and apical thirds, and was evaluated using scores. The results showed that the best permeability index considering 1/3 of the roots was obtained by the GV, followed by the GIV and GIII. The latter group results were destiled water, similar to GI. The best permeability into the apical third, a critical zone for disinfection, was obtained by GV, followed by GIII and IV. The control group and GII, obtained the worst scores taking into consideration the 3 thirds of the roots. All of the groups studied showed the best cleanness were observed in coronal and medium thirds, with worst results on the apical third. In conclusion, all the irrigation substances tested were capable of some degree of dentin permeability, such that the urea peroxide + EDTA 15% presented the best results.

# 124. IN VITRO EVALUATION OF FILLING IN LATERAL CANALS COMPARING SCHILDER AND TAGGER'S HYBRIDS WITH TWO ENDODONTIC SEALERS.

DA-COSTA, ERP\*; RABANG HRC; JACINTO RC; GOMES BPFA; ZAIA AA; SOUZA-FILHO FJ. FOP-UNICAMP

The aim of this in vitro study was to evaluate the filling quality of simulated lateral canals in the apical and middle third, comparing Schilder's and Tagger's Hybrid techniques, with variation of Sealer 26® and Pulp Canal Sealer EWT. Seventy- six human canines were used and divided into four groups. After cleared, images captured by a stereomicroscope loupe and measurements taken in Imagelab software. ANOVA and KRUSKAL WALLIS statistical tests were applied. There was no statistically significant difference between the groups. In conclusion, the two techniques were capable to promote sealing in simulated lateral canals.

## 126. conscious sedation with midazolam in dental practice

MOREIRA, A.\*; ANDRADE, E.A.; TAMINATO, R.L.; SPINDOLA, H.M. FOP/ UNICAMP

Despite the scientific and technological advances, dental procedures are not pleasant for anybody, what it takes many patients to present different degrees of anxiety and phobia. The main reason is frequently related to previous experiences, but many times they do not show any apparent cause, it is certainty that some of these patients still are taken by true panic when seating in the dental chair. Even though those that if say "courageous" and confident in the capacity of the professional, they can present unpleasant reactions during the intervention, making it difficult or making impracticable the execution of the dental procedure. The benzodiazepines are the drugs of first choice for the conscious sedation in dentistry, for its effectiveness and safety. Midazolam's quick onset and short duration of action, coupled with its ideal properties of sedation and amnesia, offers a viable alternative for treating the anxious, uncooperative dental patient. Thus, the pharmacological properties of midazolam, pharmaceutical forms and administration routes, as well as the dosages used in adults and children, are presented and discussed in this study.

### 127. PHARMACOTHERAPY OF RALOXIPHENE IN BONE REPAIR OF MALE RATS WITH OSTEOPENIA

ALVES, L.A.C.\*; MARSI, C.L.; MORAES, M.E.L.; ROCHA, R.F.; CARVALHO, V.A.P.

UNESP - FAC. DE ODONTOLOGIA DE SÃO JOSÉ DOS CAMPOS

Male osteoporosis has been increasing lately. Some substances have been used in the hormonal replacement therapy of male patients and raloxiphene has been shown as an important clinical resource for the therapy of osteoporosis. The aim of this work was to compare the effects of two different dosages of raloxiphene in bone repair of male rats with osteopenia. 40 animals were used and treated in different groups: (I) SHAM, (II) castrated rats, (III) castrated rats and treated with raloxiphene (1 mg/kg/day), (IV) castrated rats and treated with raloxiphene (3 mg/kg/day). One month after, a bone defect (3 mm diameter) was made in the right tibia of the animals. Each group was treated according to the description above. After 7 and 28 days of treatment, the animals were sacrificed in groups of 5, and the tibias were removed for radiographic optical density analysis by the digital system RVG Trophy and the Image Programme Tool 2.03. The left tibias were weighed after dehydration and the results were analyzed by ANOVA and the Tukey's Test (p<=0.05). The results showed that at 7 days of bone repair, groups III and IV had greater and statistically significant values of radiographic optical density compared to groups I and II. At 28 days of bone repair, groups I and IV showed greater and statistically significant values of radiographic optical density, when compared to all the other groups. In addition, the analysis of dry mass of tibias from group IV, showed a gain in bone mass in the period in between 7 and 28 days. It may be concluded that 3 mg/kg/day of raloxiphene has a significant efficiency in bone repair of male rats with Osteopenia, showing a dose-dependent relation.

## 129. THE IMPORTANCE OF THE SURGEON-DENTIST TO KNOW TO INTERPRET A COAGULOGRAM

TAMINATO, R.L.\*; MOREIRA, A.; SPINDOLA, H.M.; BRANCO, F.P.; SANTOS, S.F.R.; ANDRADE, E.D. FOP - UNICAMP

The coagulogram is a hematological examination that evaluates the conditions of the blood coagulation system, since the primary hemostasis until the consolidation of the clot and subsequent fibrinolytic activity, being valuable for the planning dental procedures that cause odontological bleed. The coagulogram allows the evaluation of the number and function of the platelets, bleed time and of blood coagulation time, Prothrombin Time, Activated Partial Thromboplastin Time (aPTT or PTT) and International Normalized Ratio (INR). With base in those parameters, the dentist can change information with the cardiologist, to institute the necessary cares in the dental procedures of patients with alterations in the process of blood coagulation, as the hemophilia, vonWillebrand disease, bearers of hepatic disturbances or platelets dysfunctions, among others. Besides, the coagulogram allows to evaluate the patients current state that make use of platelets antiaggregation or anticoagulants medicines for prevention of certain diseases of the cardiovascular system, that can interfere in the normal hemostasis (Ardekian et al. 2000; Maffei, 2002; Andrade et al., 2004). The aim of this study is to show as it is interpreted a coagulogram and to present a protocol of dental procedures for these groups of patient.

### 131. CASUAL BLOOD GLUCOSE LEVELS OF PATIENTS UNDER URGENCY DENTAL TREATMENT.

BERTOLDO, M.S.\*; TOFOLI, G.R.; RAMACCIATO, J.C.; GROPPO, F.C.; VOLPATO, M.C.; RANALI, J. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Advances in medicine and dentistry led to an increase in the number of individuals with systemic disease who undergo dental treatment. The majority of diabetic are not aware of the disease and the possible complications of untreated or uncontrolled diabetes mellitus (DM). This study evaluated the casual blood glucose levels of patients who sought for urgency dental treatment at FOP/UNICAMP. Blood glucose was determined with a blood glucose meter (Accu-Chek AdvantageO); values up to 200 mg/dl were considered normal. Patients with blood glucose exceeding 200mg/dL were referred to medical care. Three hundred patients (21-64 years old; 74% women) were evaluated: 147 had never been tested before; 3.7% presented blood glucose levels higher than 200mg/dL and 36.4% of them were not aware of their condition and didn't report any diabetic symptoms (poliphagia, polydipsia, polyuria and asthenia); 5.7% declared themselves as diabetics, and 41.2% of these were untreated or poorly controlled, besides the use of insulin or hypoglycemic drugs. Altered blood glucose levels were seen in 4.3% of the women and 1.3% of the men. These results along with the possible consequences of dental treatment in patients with uncontrolled diabetes show the importance of the blood glucose test, and the role of the dentist as health care professional that can contribute for the diagnosis and control of this disease. Supported by SAE/UNICAMP.

# 128. A COMPARATIVE STUDY OF THE EFFECTS OF RALOXIPHENE AND RISEDRONATE IN BONE REPAIR OF FEMALE RATS WITH OSTEOPENIA

SOUSA, AGV\*; ALVES, LAC; MORAES, MEL; ROCHA, RF; CARVALHO VAP UNIVERSIDADE ESTADUAL PAULISTA

The senescence pathologies like osteoporosis leads to the loss of bone mass. The Pharmacotherapy with raloxiphene and risedronate has shown positive effects on the prevention of bone loss of osteoporotic people. The aim of this study was to compare the effects of these medicines in bone repair of female rats with osteopenia. 40 animals were separated in groups: (I) SHAM, (II) ovariectomised control rats, (III) ovariectomised rats treated with risedronate (1mg/kg/day), (IV) ovariectomised rats treated with raloxiphene (1mg/kg/day). One month after ovariectomy, a bone defect was made (3 mm diameter) in the right tibia of the animals. Each group was treated according to the description above. After 7 and 28 days of treatment, the animals were sacrificed in groups of 5, and the tibias were removed and analyzed in terms of radiographic optical density by the digital system RVG Trophy and the Image Programme Tool 2.03. The left tibias were weighed and all data collection was analyzed by ANOVA and the Tukey's Test (p<=0.05). The results showed that after 28 days of bone repair, groups (III) and (IV) had greater and statistically significant values of radiographic optical density compared to group II and similar values when compared to group (I). In addition, the analysis of dry mass of the tibias showed a gain in bone mass in the period in between 7 and 28 days for groups (III) and (IV); however, it was not of great statistic significance. It may be concluded that raloxiphene and risedronate, when administrated according to the studied dosages, accelerates bone repair and this effect is similar to group (I)

# 130. CLINICAL EFFICACY AND PAINFUL SENSIBILITY OF SUPRAPERIOSTEAL AND SUBPERIOSTEAL INFILTRATION TECHNIQUES

POMPIANI, M.C.\*; BRANCO, F.P.; AMBROSANO, G.M.B.; RANALI, J.; VOLPATO, M.C. FOP/UNICAMP

There are controversies about the efficacy of infiltration anesthesia techniques, supraperiosteal and subperiosteal. This double blind crossover study compared in 31 health volunteers the pain at the injection and after anesthesia and the onset and duration of pulpal and soft tissue anesthesia of supraperiosteal and subperiosteal techniques. The volunteers received a cartridge (1.8ml) of 2% lidocaine with 1:100,000 epinephrine in the upper left canine region as an infiltration by each of the techniques, randomly distributed in 2 sessions. The onset and duration of pulpal anesthesia of the upper left lateral incisor, canine and first premolar were evaluated by electric stimulus (pulp tester). Painful sensibility was evaluated by Visual Analogue Scale (VAS) and 11-point box scale (PBS-11) in the 2 sessions after the injection and after the return to normal sensation in the soft tissue. No differences were observed (p>0.05; paired Wilcoxon test) between the techniques with the exception of a faster (p=0.001) onset of pulpal anesthesia in the first premolar and a higher success rate (p=0.0001; Q Cochran test) in all the evaluated teeth with the use of subperiosteal infiltration. It is concluded that subperiosteal is the best infiltration techique for use in dentistry, concerning its highest anesthesia success rate and, for some teeth, its faster onset. Supported by PIBIQ/CNPq.

# 132. EVALUATION OF THE STABILITY OF THE EXTRACT OF PRÓPOLIS IN RELATION TO ITS CHEMICAL AND BIOLOGICAL PROFILE

SILVA, B.B.\*, ALENCAR, S.M.; KOO, H.; CURY, J.A.; ROSALEN, P.L. FOP-UNICAMP

The própolis, a resin produced fby ApisMellifera and used for diverse therapeutical ends, possesss antibiotic activity particularly against mutans estreptococci. The solution of the etanolic extract of própolis (SEEP) is the pharmaceutical form (FF) more produced and used of this product, whose stated period of validity (5 years) was determined empirically. Thus, the objective of this work was to study the sped up stability (EEAc) of the SEEP, by means of tests recommended for the ANVISA, using as markers the chemical evaluation of flavonóides and the antibiotic activity in vitro against microrganism. In the EEAc, the SEEP was stored  $40^{\circ}\text{C}$ , 75% of relative humidity (UR), for 6 months and analyzed in times 0, 1, 2, 3, 4, 5 and 6 months, simulating the aging in ambient conditions during 30 months. The SEEPs had been analyzed how much: to the drift of flavonóides total (FT); to the chromatographic chemical profile, for HPLC/FR; minimum inibitory Concentration (CIM) and minimum bactericid concentration (CBM) using itself S. mutans Ingbritt 1600, A. naeslundii ATCC 12104 and S. aureus ATCC 25923. SEEP was considered steady by 10 months, therefore it had reduction of the antibiotic activity (CIM 400 for 800 or 1600µg/mL and CBM 1600 for 3200µg/mL) from 2 months, although FT has remained inside of the legal standards. In such a way, is concluded that the S-EEP is steady for 10 months, keeping its antibiotic activity, however the FF and the Brazilian legislation will have to be reviewed in order to assure the control of the biological activity of the própolis.

# 133. EVALUATION OF THE EFECTS OF LOCALANESTHETIC SOLUTIONS STORED IN DIFFERENT CONDITIONS-STUDY IN RATS.

BERTO, L.A.\*; RAMACCIATO, J.C.; TÓFOLI, G.R.; RANALI, J.; GROPPO, F.C.; MOTTA, R.H.L.; NOVAES, P.D.; FRANCO, G.N. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Acid or deteriorated local anesthetic solution (DLAS) stimulates reactions such as burn sensation and tissue inflammation. The aim of this study was to compare the inflammatory reaction in the rat oral mucosa caused by DLAS submitted to different storage methods. 0.1 mL of 2% lidocaine with epinephrine 1:100.000 (LA) was injected on the first up-right molar mucosa of the 24 rats. LA was stored in the following conditions: (1)- in refrigerator (5oC±0.2) inside the original box; (2)- at room temperature inside the original box; (3)exposed to room light and temperature (outside the original box); (4)- recently acquired solution. 0.1mL of NaCl 0.9% was injected in the opposite side. After 6 and 24 hours, three animals of each group were killed and the maxillary piece, with the soft tissue adhered, were removed. The samples were submitted to qualitative analysis (HE slides), which evaluated the intensity of leucocitary infiltrated and the necrosis region. Results showed that all LA tested induced inflammation. Group 3 showed the highest scores of inflammation and necrosis (p<0.05). We concluded that the storage method could affect inflammatory reaction induced by LA.

### 135, PERIPHERAL MECHANISMS INVOLVED IN ESTROGEN-MEDIATED ANALGESIA IN THE RAT TMJ

MOREIRA, NCF; FISCHER, L; TORRES-CHÁVEZ, KE; TAMBELI, CH. FACULDADE DE ODONTOLOGIA DE PIRACICABA – FOP, UNICAMP.

We have previously demonstrated that estrogen decreases formalin-induces temporomandibular joint (TMJ) pain in female rats. The aim of this study was to evaluate if this effect is mediated by a membrane-associated estrogen receptor and endogenous GMPc. Ovariectomized (OVX) Wistar rats were used. Saline or Formalin (1.5%) was co-administered in the TMJ with estrogen, estrogen coupled to serum albumin (E-BSA) or its vehicle and with the estrogenic receptor antagonist ICI 182-780 (6µg) or the guanilato cyclase inhibitor (ODQ, 80µg). The formalin-induced nociceptive behavior was quantified for 45 min and used as a quantitative nociceptive behavior measure (Pain, 94: 185, 2001). Data were analyzed by ANOVA and Tukey tests (p < 0.05). Administration of estrogen (200.5 + 32.0, n=8) or E-BSA (205.3 + 22.81, n=6) administration into the TMJ significantly reduced formalin-induced TMJ nociception compared with its vehicle (390.2 + 53.1, n=7). Since albumin does not diffuse through the plasma membrane, the conjugate estrogen-albumin has a restrict action in membrane-associated estrogen receptors. The antinociceptive effect of estrogen was completely blocked by ICI 182-780 (408.6 + 71.2, n=7) and by ODQ (366,8  38,5, n=6). These findings suggest that activation of membrane-associated estrogen receptors into the TMJ region decreases TMJ pain trough a GMPc mediated mechanism.

#### 137. P2X7 RECEPTOR: EXPRESSION ON TRIGEMINAL GAN-GLIA AND INVOLVEMENT ON TMJ NOCICEPTION

TEIXEIRA, J.M.\*; OLIVEIRA, M.C.; NOCITI, F.H. JR; PARADA, C.A.; TAMBELI, C.H. FOP/UNICAMP; FMRP/USP

Evidence is accumulating that supports a role for P2X7 receptors (P2X7r) in pain. To investigate whether these receptors play a role in temporomandibular (TMJ) pain, we studied the presence of functional P2X7r in rat TMJ by examining the nociceptive behavioral response to the injection of the P2X7r agonist BzATP into the rat's TMJ. Involvement of these receptors in the development of TMJ inflammatory hyperalgesia was also determined by evaluating the effect of the P2X7r antagonist Oxidized ATP (oATP) on carrageenan (Cg)-induced TMJ hyperalgesia. The expression of mRNA of P2X7r on trigeminal ganglia was evaluated by RT-PCR. Injection of BzATP (225ug) into the TMJ induced a significant nociceptive response that was significantly reduced (70%) by the co-injection of QX-314 2% or by oATP (63%) (n=6, p<0.05 Tukey test). Co-injection of oATP (2.0, 18 or 162ug) with Cg (100ug) into the TMJ did not affect inflammatory hyperalgesia (p>0.05, ANOVA, n=6). The RT-PCR analysis indicate that the mRNA of P2X7r is expressed in the trigeminal ganglia of rats treated with NaCl (mean±SEM: 0.03±0.01, n=8), but the inflammatory response induced by the TMJ injection of Cg does not significantly (p>0.05, T test) increase its expression (0.04±0.01, n=8). The results suggest that functional P2X7 receptors are expressed on nociceptive afferent nerve terminals of the TMJ and that P2X7 receptors contribute to non-inflammatory TMJ pain

### 134. THE PROTECTIVE ROLE OF TESTOSTERONE IN TMJ PAIN DEVELOPMENT IN MALE RATS

FISCHER, L; CLEMENTE, JT; TORRES-CHÁVEZ, KE; TAMBELI, CH LABORATÓRIO DE DOR OROFACIAL, DEPARTAMENTO DE FISIOLOGIA, FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The higher prevalence and severity of temporomandibular joint (TMJ) pain conditions in women than in men suggests that sex hormones modulate TMJ pain. The aim of this study was to test the hypothesis that testosterone protects males by decreasing their risk of developing TMJ pain or by decreasing TMJ pain. Female and male Wistar rats were used, males were orquidectomized (ORX) or kept intact. Formalin (0.5% and 1.5%) or its vehicle (0.9% NaCl) was injected into the TMJ. Formalin-induced nociceptive behavior was quantified for 45 min and used as a quantitative nociceptive behavior measure (Pain, 94: 185, 2001). Data were analyzed by ANOVA and Tukey post-hoc tests (p < 0.05). The dose of 0.5% formalin did not induce TMJ pain in intact males (86.86 + 8.26), but it did in ORX males (172.00 + 16.92, compared with vehicle 45.97 + 6.51) and in females (114.98 + 20.44, compared with vehicle 34.64 + 10.25). The dose of 1.5% formalin induced similar nociceptive response in ORX (287.16 + 30.68) and intact males (281.50 + 25.55). We conclude that testosterone protects males by decreasing their risk of developing TMJ pain, but does not decrease installed TMJ pain, experimentally produced by the TMJ injection of 1.5% formalin.

## 136. INVOLVEMENT OF NUCLEUS ACCUMBENS IN THE MODULATION OF PERSISTENT HYPERALGESIA IN RATS.

KAWASHITA, P.T.\*; OLIVEIRA, M.C.; TAMBELI, C.H.; PELEGRINI-DA-SILVA, A. FACULDADE DE ODONTOLOGIA DE PIRACICABA, UNICAMP

The nucleus accumbens (NAcc) is known as an important component of the mesolimbic system and plays a role in acute pain modulation (Gear et al, 1999). The aim of this study was to evaluate the involvement of the NAcc in the modulation of persistent hyperalgesia in rats. Daily ipl injection of PGE2 for 14 days (Ferreira et al, 1990) induces hyperalgesia that remained for 30 days. The intensity of allodynia and mechanical hyperalgesia was assessed by Von Frey and Randall-Selitto Test respectively, 4 days after the discontinuation of injections. For NAcc injection, guide cannula was stereotaxically positioned. Data was expressed as the mean ± SEM for Von Frey and basal mean − after drug mean ± SEM for Randall-Selitto Test. The PGE2 ipl injection produced dose-dependent increase in mechanical allodynia [400ng (7.28±1.29, p<0.05) and 1000ng (5.63±1.63, p<0.01) Dunn's test]. Daily ipl injection of PGE2 400ng produced significant time-dependent increase in allodynia compared to the group treated with saline. (p=0.03, Mann-Whitney test). The Nacc bilateral injection of QX314 2% produced significant reduction of allodynia (49  $\pm$  6.96, p=0.02, Dunn test) and hyperalgesia (-70  $\pm$  9.29, Tukey test) compared to animals that received intra-Acc saline injection. These results indicate that the descending activity of NAcc exerts a facilitatory influence on the ongoing hyperalgesia intensity. Supported by Fapesp and CNPq.

### 138. ENAMEL SUPRA-STRUCTURAL ORGANIZATION ANALYSIS OF RAT INCISOR

MOFATTO, L.S.\*; LINE, S.R.P. FOP - UNICAMP

Enamel biosynthesis is initiated by the secretion of a organic matrix, which is processed, resulting in a organized highly supramolecular structure. Not much is known about quimical transformations occurred on this phase. The aim of this work is to study the polarity changes of protein components enamel organic matrix during the components polimerization. 6 Wistar rats were anesthetized with ketamin and perfused with 2% paraformaldehyde/0.5% glutaraldehyde in 0.2 M phosphate-buffered saline (PBS), pH 7.2. Hemimandibles were removed and immersed in the fixative solution for 24 h. After this, decalcification was performed for 45 days in 5% EDTA. Pieces were dehydrated in ethanol crescent baths, treated with xylene and they were embedded in paraffin. Samples were cut into 5-µm-thick sections, removed of the paraffin, hydrated and analysed by polarized light microscopy. Samples were treated with a 8-anilino-1-naphthalene sulphonic (ANS). ANS is a fluorescent reagent which reacted on hydrophobics radicals, allowing their identification on tissues. Analysis showed birefringence sections strongly reacted with ANS. As result, enamel organic matrix molecular ordered is following of physical-quimical changes on its structures.

# 139. OSTEOCYTES HISTOMORPHOMETRIC ANALYSIS ON RABBIT TIBIA FRAGMENTS STORED IN DIFFERENT STORAGE MEDIAS

RAMOS, L.M.A.; MOURA, C.C.G.; VIEIRA A.E.\*; DECHICHI, P. INSTITUTO DE CIÊNCIAS BIOMÉDICAS DA UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Bone cell preservation is important to favor osteogenic properties of autogenous bone grafts. At surgical intervention, during the trasference of bone grafts from donor site to receptor site, its common that grafts are kept in storage media. The aim of this study was to perform osteocytes histomorphometric analysis on rabbit tibia fragments stored in different storage medias. It was used 10 rabbits. two bone fragments of each tibia were removed using a 5mm diameter burr. One fragment was harvested and immediately fixed (control). The others fragments were kept in PPP (Platelet Poor Plasma) during 30 minutes, saline solution or dry, before fixation. Fragments were demineralized and processed for paraffin inclusion. Sections of near 5m were stained and were assessed on LM. Ostocytes were morphologically classified on normal, changed, and empty lacunae and a differential counting of them was performed on microscopic fields. Results were treated by ANOVA (p<0,05) and Tuckey's (p<0,05) tests. There was a morphologically normal osteocytes number decrease on dry group when compared to control, PPP and saline solution groups (p<0,001). A statistic significant difference was not found between groups stored in PPP or saline solution related to control group (p>0,05). The study suggests that both saline solution and Platelet Poor Plasma are accurate medias for osteocyte preservation during 30 minutes of time

### 141. THERMAL EXPANSION OF HUMAN AND BOVINE TEETH HARD TISSUES.

LOPES, M.B.\*; ZHUOQUN, Y.; SINHORETI, M.A.C.; CORRERSOBRINHO, L.; CONSANI, S.; MCCABE, J.F. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP, BRASIL; UNIVERSITY OF NEWCASTLE, UK

To evaluate the thermal expansion behaviour of human and bovine tooth hard tissues. 15 human third molars and 15 bovine incisors were cut from freshly extracted teeth and divided into three groups (G1, G2, G3) of dentine (6×5×2 mm). The thermal expansion behaviour of G1 was determined in dry conditions and G2 in wet conditions. Group 3 was stored in a desiccator at 100°C for 3 days and then measured under dry conditions. Linear thermal expansion of specimens was measured with a thermo-mechanical analyser in the temperature range 20 to 100 at 15 min-1. The specimens were weighed before and after the heating process. Results in % of dimensional and weight change was obtained. Fresh dentine contracted on heating under dry (Human(H)= -0.49±0.27/Bovine(B)= -0.22±0.16) condition. Under wet conditions only human teeth showed contraction (H=- $0.05\pm0.04$ /B=  $0.00\pm0.03$ ). The contraction was significantly greater under dry conditions. Contraction of human and bovine wet specimens was accompanied by a significantly (p<0.05) lower weight loss (H=- $1.87\pm0.67/B= 2.12\pm0.38$ ) than dry specimens (H=-0.35±0.15/B=-0.45±0.20). The desiccated dentine (H=  $0.02\pm0.01$ /B=  $0.01\pm0.02$ ) expanded on heating without obvious weight changes (H=0.00, B=0.00). Fresh tooth structures contracted on heating so that the coefficient of thermal expansion (CTE) is not a suitable parameter to describe the thermal behaviour of tooth tissue. CAPES - BEX #3427/04-8

# $143.\ \ Dye\ staining\ gap\ test;\ an\ alternative\ method\ for\ assessing\ marginal\ gap\ formation\ in\ composite\ restorations\ -\ validating\ the\ method\$

ALONSO, R.C.B.\*; CORRER, G.M.; CUNHA, L.G.; BRUSCHIALONSO, R.C.; PUPPIN-RONTANI, R.M.; SINHORETI, M.A.C. FOP/UNICAMP

The aim of this study was to evaluate and compare marginal adaptation of composite restorations assessed by a dye staining method and by a SEM analysis. Twenty bovine incisors were selected and ground flat to expose dentin. Two circular cavities were prepared on the flattened surfaces. Single Bond was applied and the cavities were filled with Filtek Z250 or Filtek Flow. The specimens were polished and replicas were obtained in epoxy resin. Replicas were observed by SEM for marginal quality/quantity evaluation. Caries Detector was applied on each specimen for 5s to verify marginal adaptation. Images of the stained gaps were transferred to a computer measurement program to determine gap length. The length of the gap was expressed as the percentage of total length of the margins observed. Data were submitted to two-way ANOVA and Pearson correlation. Filtek flow showed 35.54% and 33.52% and Filtek Z250 26.68% and 29.11% of gap in the margins, when evaluated by SEM analysis and by dye staining test, respectively. There was no difference between the composites, regardless the evaluation technique. There was a strong positive correlation (r=0.83) between the results obtained in the tested methods to assess marginal gap. The method of dye staining the gaps can be used to evaluate the gap formation in composite restorations with reliability of result confidence

### 140. DENTIN PIN INSERTION INFLUENCE IN DENTAL STRUCTURE DEFORMATION.

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Dentin pins are widely used in restorative dentistry to retain dental restorations in teeth with extensive coronal destruction as a way of rehabilitation. The aim of this study was to evaluate the influence of the insertion of dentin pins and, after this, amalgam condensation on human dental structure deformation, varying the localization of the pin inside the enamel-dentin junction (EDJ) (0,5mm; 1,0mm; 1,5mm) by strain gauge method. Twelve human third molars were included in polysthyren resin to simulate periodontal membrane and MOD designs were conducted removing the mesio-bucal cuspid, simulating extensively coronal loss. The samples were randomly divided into four groups (n=3): G1 - Control group without pin insertion; G2 - Pin 0,5 mm from EDJ; G3 - 1,0 mm from EDJ; G4 - 1,5 mm from EDJ. A Strain Gauge was fixed in the mesio-bucal angle of the cementenamel junction of each sample. Deformation was measured during pin screwing and amalgam condensation. The results obtained in micro-strains (μs) were: G1 - Amalgam Restoration (AR):10; G2 - Pin insertion (PI):31,5, AR:200; G3 - PI:27, AR:100; G4 - PI:17,5, AR:50. It was concluded that closer is dentin screw pin from enamel an increase of the fracture risk occurs on the more rigid substratum.

# 142. CONFOCAL LASER SCANNING MICROSCOPY: A NON-INVASIVE STUDY OF BIOFILMS ON DENTAL MATERIALS AND DENTAL SUBSTRATE

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Traditionally, electronic microscopy has been the method of choice for studying biofilm composition and structure due to its high resolution. However, the specimens analyzed this way need to be dehydrated, fixed, embedded and staining, leading to important distortions on biofilm structure and on relationship among biofilm components. Confocal Laser Scanning Microscopy (CLSM), in spite of lower resolution than electron microscopy, has eliminated or reduced that proceedings on specimens, becoming possible the study of natural and hydrated biofilms. Besides, CLSM promotes the study of thick biofilms, because of its optical sectioning properties at increasing depths, and the acquisition of tri-dimensional information when these digitized data (sections) are assembled. In addition, the identification of specific component from biofilms becomes viable by CLSM used in combination with specific fluorescent dyes. Digital images from CLSM represent suitable data for qualitative analysis, like architecture of biofilm, bacterial viability spatial distribution and mass transport mechanism, and for quantitative analysis, when associated to adequate software. It is interesting that CLSM, recently used for dental biofilm on restorative materials and dental substrate analysis, offers new information to effective control of its damages on adjacent substrates.

# 144. EFFECT OF POWER DENSITY ON BOND STRENGTH AND PHYSICAL PROPERTIES OF A RESIN COMPOSITE IRRADIATED USING LED LIGHT SOURCE

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The aim of this study was to evaluate the maximum contraction stress and degree of conversion of a restorative composite, and the bond strength of composite restorations cured using a LED light source on three different power densities. For the stress test, the composite (0.84 mm thick) was applied between two 5-mm diameter glass rods, mounted in a universal testing machine (n=5). Degree of conversion was measured in a glass cavity bulk filled with the restorative composite, by Fourier Transform Infrared Spectroscopy (n=3). Bond strength test was performed using push-out test (n=10). In all tests, the composite used was Filtek Z250, and the C-factor was 3.0. The energy density was 16 J/cm2, and the power densities evaluated were: 900 (G1), 550 (G2), and 200 mW/cm2 (G3), using the light source Freelight II. Results were analyzed by ANOVA and Tukey's test. Stress values were 10.44 MPa (G1), 10.46 MPa (G2), and 10.25 MPa (G3). DC values were 52.5% (G1), 53.1% (G2), and 54.6% (G3). In both tests, no statistical difference was observed among groups. Bond strength values were 24.6 MPa (G1), 29.2 MPa (G2), and 29.3 MPa (G3). The use of 200 e 550 mW/cm2 significantly increased the bond strength when compared to 900 mW/cm2. Reduced power densities can increase the bond strength, with no damage to the degree of conversion of the restorative composite. Max contraction stress was not affect by power density.

# 145. ULTIMATE MICROTENSILE COHESIVE STRENGTH OF ENAMELAND DENTIN OF HUMAN AND BOVINE TEETH, VARYING BOVINE TEETH AGE.

FONSECA, R.B.\*; CARLO, H.L.; SINHORETI, M.A.C.; CORRERSOBRINHO, L.; CONSANI, S.; SOARES, C.J. FOP/UNICAMP E UFU

This study compared the ultimate microtensile cohesive strength of enamel and dentin of human and bovine teeth, varying bovine teeth age and the direction of the applied force in relation to enamel prisms or dentin tubules. Five groups of teeth were studied: human (H) third molars from young adults and bovine teeth with 20 (B20), 30 (B30), 38 (B38) and 48 (B48) months of age. Hourglass shaped enamel (E) and dentin (D) samples were tested parallel (PA) and perpendicular (PE) to enamel prisms and dentin tubules, with a crosshead speed of 0,5mm/min in a testing machine. Data were recorded in MPa and statistically analyzed by ANOVA following Tukey (p<0,05) test showing (different letters = statistical significant differences): E-PA (B48:30.99a; H:26.39ab;B38:23.34b;B30:22.61b;B20:21.49b), E-PE (H:17.27a,B20:8.74b,B48:8.0b,B30:7.31b,B38:6.27b), D-PA (H:71.44a;B48:54.39ab,B38:39.34b;B30:38.1b;B20:33.89b), and D-PE (B20:84.24a;B30:83.48a;H:77.03ab;B48:65.92b; B38;65.52b). Perpendicular tested enamel fractures more easily than parallel; perpendicular tested bovine enamel is weaker than human one irrespective of teeth age but parallel tested bovine enamel is similar to human one. Parallel tested bovine dentin is similar to human one just in teeth with 48 months of age. Perpendicular tested bovine dentin is similar to human one. Bovine teeth age seems to be an important factor for dentistry research.

# 147. INFLUENCE OF THE TYPE OF SPECIMEN USED IN BOND STRENGTH MEASUREMENTS TO ROOT DENTIN - ANALYSIS FOR FINITE ELEMENTS.

SANTANA, F.R. \*; SANTOS-FILHO, P.C.F.; SOARES, P.V.; SOARES, C.J. FOUFU

In measurement of bond strength to root dentin high concentrations of tensions not uniforms can be developed in not ideal specimen areas. This study tested the hypothesis of that the distribution of tensions measured by finite elements 3D is influenced by the type of specimen constructed for tests of microtensile with hourglass-shaped specimens(H) and beamshaped specimens(B) and micropush-out(MP) used to evaluate the bond strength to dentin. From samples used in tests of microtensile and micropushout for glass fiber posts luted inside root canals models 3D homogeneous and elastic were generated. The model was meshed, the area of null displacement was defined and was applied load of 10N-compression for MP, traction for H and B. The analysis of the results was qualitative using criterion of von Mises. In the hourglass-shaped specimens-H concentration of tensions in the dentin and the edges of the constriction was verified. In the beam-shaped specimens-B verified concentration of tensions in the dentin and the lateral limit of the dentin constriction, however the distribution was more uniform that in the hourglass. In the test of micropushout it had more homogeneous distribution of tensions concentrating in the adhesive interface. It can be concluded that to evaluate the bond strength of posts to dentin the test that allows distribution of tensions more homogeneous and uniform is the test of micropush-out.

### 149. INFLUENCE OF THE COMPOSITION IN THE RADIODENSITY OF DIFFERENT MATERIALS OF MOLDING.

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The radiodensity of molding materials is a property that facilitates the detention of residues by means of radiographic examinations. The objective of this study was to compare the radiodensity of different materials, varying composition and type. It was studied: alginate, polysulfide, polyether, silicone for addition and condensation. Five samples of each material and tissue (thickness:1mm,diameter:5mm), had been located in plate of match of digital system (Digora) getting 3 images for exposition of 0,2s with 70Kvp and 10mA. The radiodensity (in pixels) was evaluated in Digora software will be Windows 2.0. The data had been compared by the test of Kruskal Wallis (a=0,05) demonstrating (equal letters demonstrate similarity between materials, p<0,05): Permlastic-Light (365,20a), Permlastic-Regular (355,8a), Adsil-Heavy (328,2b), Speedex (311,9b), Adsil-Regular (301,53c), Silon-Dense (278,3cd), Perfil-Dense (266,4d), Oranwash (263,53d), Hidrogum (235,47e), Xantopren (227,83e), Adsil-Light (210,1e), Virtual (209,13e), Jeltrate Plus (201,97f), Express (153,13g), Exact-Krom (152,47g), Aquasil-Light (146,4g), Silon-Light (145,03g), Perfil-Fluid (127,27gh), Jeltrate-Cromático (108,23h), Jeltrate-Comum (79,87i), Aquasil-Extralight (64,63i), Reprosil-Heavy (55,97ij), Optosil (43,43j), Impregum (37,8j) e Reprosil-Regular (30,4j). One concludes that the composition and amount of load of the material are basic factors in the resultant radiodensity.

## 146. EFFECT OF SIMULATED GASTRIC JUICE ON SUPERFICIAL SOLUBILITY OF DENTISTRY CERAMICS. IN VITRO STUDY.

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Gastroesophagic juice may affect restorative dental materials surface and its proprieties. Thus, this paper aims to evaluate solubility and microhardness of feldspatic ceramics after in vitro exposure to simulated gastric juice free from enzymes. 100 discs measuring 8x2 mm were made from the following materials: Vitadur Alfa (I), Vita Omega 900 (II) Finesse All-Ceramic (III), IPS dSign (IV) e Carmen (V), then divided in 3 groups according gastric juice exposure: no exposure (A); 24 hours (B), 7 days (C). Solubility and microharness were evaluated by means of digital weight measurement (M.Toledo) of mass loss and by a microdurometer FM-700 (Future Tech), respectively. Results shown mass loss (%) from B, compared to A, of: 0,1280(I), 0,2143(II), 0,0485(III), 0,1377(IV), 0,0824(V); and from C of: 0,1182(I), 0,2305(II), 0,0773(III), 0,1653(IV), 0,3256(V). Microhardness from A: 527,53(I), 531,67(II), 519,85(III), 544,72(IV), 523,72(V); from B: 505,38(I), 529,63(II), 478,60(III), 514,91(IV); 504,97; and C: 484,96(I), 495,61(II), 493,5(III), 482,76(IV), 488,22(V). ANOVA Test (p<0,05), has shown alterations on ceramics concerning to both tests. So, after exposure to simulated gastric juice free from enzymes, tested ceramics may be susceptible to degradation and decrease of superficial microhardness

# 148. ACTION OF A FLUORIDE MEDIUM WITH PH CONTROLLED IN MECHANICAL RESISTENCE OF C.P. TI. IMPLANT/ABUTMENT SETS

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The titanium used as biomaterial have good mechanical resistence and appreciable ductibility. The aim of this work was to asses the mechanical resitence of c.p. Ti implant/abutment set, submitted to a fluoride medium, by fatigue and fractography. Twenty eight implant/abutment sets from two trademarks (Neodent®, 3i®) were used. They were divided in two groups: test group, submerged in a fluoride solution (1500ppmNaF, pH 5,3) for 184 hours, simulating 5 years of fluoride exposition, and a control group, submitted to destilated water for the same time. After this period, the samples were submitted to fatigue cycles performed in a servohydraulic machine, Material Test System-810, set to a frequency of 15 Hz with 100.000 cycles and 150N, simulating the use in the oral environment for 5 years. After the fatigue, no sample showed set fracture or slackening of both groups. By fractography, no cracks or gaps were verified in the sets surfaces in the studied conditions. It was concluded that the fluor concentration and the solution pH didn't have influence in the fatigue resistence of the c.p. Ti. implant/abutment sets.

## $150 \boldsymbol{.}$ porcelain firing cycle influence on the fracture of cast grade 2 cp ti

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Titanium has been used to make metal-ceramic crowns due to its excellent biocompatibility and favorable resistance, however, information about the influence of porcelain firing cycle on the tensile strength and fracture analysis are scarce. The aim of this study was to assess the porcelain firing cycle influence on the fracture of cast grade 2 cp Ti, after been submitted to the tension test. Five experimental groups (n=10), named I (without firing cycle), II (bonder cycle), III (bonder + opaque cycles), IV (bonder + opaque + dentin cycles), V (bonder + opaque + dentin + glaze cycles), were submitted to hardness and resistance tests. The results were subjected to analysis of variance and Tukey test set at 5% probability level. The failure analysis was made by macroscopic visualization and characterization by SEM. No statistical difference amongst the groups in the resistance analysis was verified, but it was verified between group I and the others during the hardness test, been the group I with the lower hardness value, showing a plastic deformation. Ductile fracture was predominant in all groups with dimples presence, mainly in the group I due, probably, to its lower hardness and bigger permanent deformation. It was concluded that the ductile fracture was predominant in all groups studied.

### 151. ENAMEL CALCIUM LOSS AFTER 35% HYDROGEN PER-OXIDE TREATMENT.

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Some studies if have worried about the adverse effect produced by the bleaching agents. To evaluate enamel calcium (Ca) loss through atomic absorption spectrometry (AAS) analysis after 35% hydrogen peroxide bleaching activated with different light sources. One hundred enamel blocks (4x3x3mm) obtained from 50 molars extracted for orthodontic reasons (Ethics committee - FOP/Unicamp 112/2005) were randomly divided in 10 groups (n=10), according to the bleaching agent used: Whitness HP Maxx/FGM (W); Pola Office/SDI (P) and Opalescence Xtra/Ultradent (O) and the light sources: no light activation (N) halogen light - XL2500/3M-ESPE (LH) and LED/Diode laser/Ultradent (LL). A control group (CG) comprised no bleaching treatment and no light irradiation. Bleaching agents were applied to enamel 3 times of 10 minutes each application. Halogen light irradiation was performed during 4.5 minutes whereas LED/Diode laser was of 7.5 minutes. After bleaching, Ca content was measured in the gel rinsing water by means of AAS analysis (Analyst 300 flame atomic). The data was converted in µg/mL and submitted to Kruskal-Wallis test (p<0.05). Mean calcium content were: CG (0,85A), W-N (0,32A), P-N(1,58B), O-N(1,50B), W-LH(1,69B), P-LH(1,24B), O-LH(1,01AB), W-LL(1,10AB), P-LL(1,2B), O-LL(1,6B). Enamel submitted to 35% hydrogen peroxide may loose calcium content, regardless the light activation mode used to fasten

# 153. PROBLEMS INVOLVING ALTERATION OF ADA SPECIFICATION, TURNED SIMILAR TO ISO, IN RELATION TO DIMENSIONS OF SPECIMENS USED IN COMPRESSIVE STRENGTH ASSAYS

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Among other aspects, longevity of a prothesis cemented to dental structure depends from strength of cementing agents to axial compression. At pertinent assays, the American Dental Associaton (ADA) Specification, until 2000, established that the cylindrical specimen should be 12 mm high x 6 mm in diameter, what implied in a 2:1 relation. At the similar Specification from International Organization for Standards (ISO), this specimen always was 6 mm high x 4 mm in diameter, with a 1,5:1 relation. The purpose at this study was verify if exist difference between rupture stress in axial compressive resistance assays involving cylindrical samples with different height/diameter relations. So, two groups (with 2:1 and 1,5:1 relations) with ten zinc phosphate cement specimens each were composed. Any specimen was imersed in deyonized water at 37?C during 24 hours, until the assay performed in a universal assays machine (EMIC), regulated to 0,5 mm/s velocity and coupled with a 200 kgf loading cell. Statistically, it was detected significant difference between stress rupture values of the studied groups, with 441,37 kgf/cm2 to that with 2:1 relation and 548,54 kgf/cm2 to that with 1,5:1, what indicated that results of works employing different height/diameter relations cannot be comparated.

#### 155. INFLUENCE OF CERAMIC EMPRESS 1 THICKNESS ON RESIN CEMENT KNOOP HARDNESS OF THE RESIN CEMENT VARIOLINK II

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The aim of this study was to evaluate the influence of 3 thickness of the ceramic  $Empress\ 1\ (Ivoclar/Vivadent)\ in\ the\ Knoop\ hardness\ of\ the\ resin\ cement\ Variolink$ II (Ívoclar/Vivadent), in the immediate time and 24 hours after polymerization. 5 specimens of the resin cement were made in the teflon mould with 5.0mm in diameter x 1.0mm height for each thickness ceramic and 5 for control group (without ceramic) in each stored time. The fotoactivation was realized with XL 2500 curing unit (3M/ESPE) for 40 seconds. The Knoop hardness was executed in the HMV 2 microhardness tester, with a load of 50g applied for 15s, immediately and after storage at 37°C for 24 hours and in each specimen were made 9 measurements. The data were submitted to ANOVA and Tukey's test (5%). The hardness number of the control and for each thickness ceramic (0.7; 1.4 and 2.0mm) were for the periods: immediate= 34.13; 30.09; 27.68 e 27.72 KHN, with statistical difference between control and ceramic with 1.4 and 2.0mm thickness and 24 hours= 54.22; 43.43; 42.69 and 38.95 KHN, with statistical difference between control and 0.7; 1.4 and 2.0mm thickness. Significantly statistically difference was found between the periods immediate and 24 hours for the control group and for 0.7; 1.4 and 2.0mm thickness ceramic. The Knoop hardness of the Variolink II decreased with the increase thickness ceramic and increased 24 hours after polymerization.

### 152. DENTINE AND COMPOSITE THICKNESS EFFECT ON THE HEAT DEVELOPMENT DURING THE PHOTOACTI-VATION.

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This study evaluated the effect of dentine and composite thickness on the outflow heat during Filtek Z250 and Z100 photoactivation. The variance of temperature was mensured with a type-K thermocouple connected to a digital thermometer Iopetherm 46 (IOPE, São Paulo) with accuracy of 0.1°C. An acrylic resin base was made to guide the thermocouple and to support the dentin discs (0.5, 1.0 and 1.5mm-thickness), which were obtained from bovine teeth. The discs simulate the remainder dentin of a cavity preparation. The silicone discs with 1.0 or 2.0mm heights and a central hole of 4mm-diameter were adapted on the dentin, and the composite placed. The composite Z250 (20 seconds) and Z100 (40 seconds) were light activated with XL 2500. Each group had 10 specimens (n=10). Results (°C) for Z250 (0.5mm-dentin: 1mm-resin= 3.87 and 2mm-resin= 1.97; 1mm-dentin: 1mm-resin= 2.56 and 2mm-resin= 1.34; 1.5mm-dentin: 1mm-resin= 1.81 and 2mm-resin= 1.26) and Z100 (0.5mmdentin: 1mm-resin= 5.01 and 2mm-resin= 2.95; 1mm-dentin: 1mm-resin= 4.24 and 2mm-resin= 2.10; 1.5mm-dentin: 1mm-resin= 2.85 and 2mm-resin= 1.97) were submitted to ANOVA and Tukey's test (5%).

Increase in the dentin thickness or composite layer thickness decreased the temperature mensured by the thermocouple. Z100 polymerization temperature was greater than Z250 in all procedures.

## 154. The influence of the surface treatment on ceramic roughness

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The aim of this study was to evaluate the influence of surface treatment on surface roughness of four dental enamel ceramics, after four surface treatments. Forty enamel ceramic disks with 8mm in diameter and 2mm thickness were made for each ceramic (IPS Empress 2, IPS Eris E2, DSIGN e Vision Esthetic) on a metallic mould. After the sinterization, the specimens were submitted to a simulation of occlusal adjustment and divided into four groups (n=10): 1 - Glaze; 2 - Shofu polishing system; 3 -Polishing system + Glaze; and, 4 - Polishing system + diamond paste. After surface treatments, three roughness measurements were made on a Surf-Corder machine (Ra). The data were submitted to ANOVA and Tukey test (5%) and showed that, in groups 1 and 3, the ceramic Vision Esthetic (0,691 and 0.667µm) showed values of roughness surface statistically higher than IPS Empress 2 (0.427 and 0.205 $\mu$ m), IPS Eris E2 (0.366 and 0.454 $\mu$ m) e DSIGN (0.412 and 0.318 $\mu$ m). No statistical difference was observed among four ceramics of the Group 2 (0.485; 0.486; 0.424 and 0.483µm) and group 4 (0.133; 0.122; 0.142 and 0.197µm). The comparison of the four surface treatments for each ceramic showed that the lowest values of the surface roughness was obtained for the condition polishing system + diamond paste, with difference statistical higher than three other surface conditions of the ceramics.

# 156. INFLUENCE OF GAMMA COBALT 60 RADIATION ON ULTIMATE COHESIVE STRENGHT OF TOOTH STRUCTURES-MICROTENSILE ANALYSIS

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The use of radiation for patients with head and neck cancer results in severe systemic complications, including tooth structure alterations. This study evaluated the influence of gamma cobalt 60 radiation on ultimate cohesive strengh of enamel (E), coronal dentine (CD) and radicular dentine (RD) tested in the parallel (PA) and perpendicular (PE) directions in relation to prims and tubules orientation. Forty human third molars wer4e selected and divided into two groups (n=20): NI, not irradiated; I, irradiated with 60 Gy gamma cobalt, divided into 1,8Gy dairy during 6 weeks. Yhe analyzed regions and directions resulted in 6 subgroups: 1-EPA,2-EPE,3-CDPA,4-CDPE,5-DRPA,6-DRPE. aN 4mm-thick occlusal restoration was confectioed and teeth were serial cutted into 1mm-thick slices. A central constriction was created in each slices resulting in a testing area of 1mm2. The samples were submitted to microtensile testing in a universal testing machine with a crosshead speed of 0,5mm/min. Data were submitted to ANOVA and Tukey test (p<0,05):  $\dot{E}PA-NI:42,0\pm16,4Aa;EPA-I:25,4\pm7,9Ba;EPE-NI:17,6\pm5,7Ab;EPE-II0,9\pm3,9Bb;CDPE-NI:86,5\pm20,2Aa;CDPE-NI:80,2Aa;CDPE-$ I:51,3±16,9Ba;CDPA-NI:54,2±19,5Ab;CDPA-I:39,8±13,4Ba;RDPE-NI:64,7±14,7Aa;RDPE-I:43,7±15,4Ba;RDPA-NI:49,8±13,9Ab;RDPA-I:30,2±12,0Ba(lower case letters compare orientation of tooth structures and upper case letters the presence of irradiation). Enamel prims and dentin tubules strctural orientation has a different influence on cohesive strength of tooth tissues but irrespective of the tooth structure radiation significantly reduces cohesive strength.

# 157. DETERMINATION OF INORGANIC PARTICLE CONTENT, ELASTIC RECOVERY AND STRAIN IN COMPRESSION OF CONDENSATION AND ADDITION SILICON.

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This work evaluated the content of inorganic particles (CP), elastic recovery (ER) and strain in compression (SC) in six brands of condensation or addition silicons: Flexitime Easy Putty (FP), Flexitime Correct Flow (FF), Reprosil A+ Putty (RD), Reprosil A+ Regular (RR), Silon 2 APS Putty (SD), Silon 2 APS Fluid (SF), Clonage Putty (CD), Clonage Fluid (CF), Perfil Putty (PD), Perfil Fluid (PF), Optosil P Comfort (THE) and Xantopren VL Plus (X). The amount of particle (%) was obtained weighing the samples before and after it was burned in oven for 550°C. The elastic recovery (%) and strain in compression (%) were appraised according to ISO 4823:2000. The results (α=0.05) were submitted to ANOVA and Tukey Test (particle), Kruskal-Wallis (strain and recovery) and Pearson's correlation test. The results (average and category) for inorganic particles were: FP (71.35a); CD (65.48a), SD (54.08b), RD (45.65c), FF (44.65cd), FD (42.76cd), RR (40.65d), SF (34.73e), CF (34.70e), PF (31.26f), O (29.29f), X (24.70g); for recovery: FF (99.8a), RD (99.77a), RR (99.75a), X (99.68ab), SF (99.64ab), PF (99.54b), FP (99.52b), CF (99.5b), PD (99.15cd), SD (97.89d), O (97.81d) and for strain: SF (21.12a), PF (11.47b), CF (10.93b), RR (8.34b), X (6.0c), FF(5.98c), SD (2.14d), FP (2.08d), PD (2.07d), O (1.73e), CD (1.59e), RD (1.19f). There was not significant correlation between CP and SC and between ER and SC (p>0.05).

# 159. EVALUATION OF THE SURFACE TOPOGRAPHY OF HUMAN AND BOVINE DENTAL ENAMEL TREATED WITH DIFFERENT ACID- ETCHING PROTOCOLS.

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This study compared the surface topography of bovine and human enamel after treatment with two protocols of acid etching. Sixty teeth, 30 human and 30 bovine, were included into resin, flattened with # 600,1200 and 1500 sandpapers, polished with 6,3,1 and 1/4µm diamond abrasive pastes and analyzed by Perfilometer (SJ-301, Mitutoyo) 20profiles/sample. Then were divided into 4 groups of 15 teeth: G1-bovine and G2-human acid-etched 37% for 15s and water rinsed for 15s; G3-bovine and G4-human: self-etching adhesive for 20s, water rinsed for 20s and put into ultrasonic bath for 120m. New analysis was performed. Roughness parameters analyzed were: Ra, Rq, Rsk (skewness) and Rku (kurtosis).Results were submitted to ANOVA, Tukey's test and Students's t test (p<0,05) . All groups were statistically different at Ra/Rq. G1before(0,0747 $\pm$ 0,0612/0,0974 $\pm$ 0,0562) - G1after(0,266 $\pm$ 0,1025/0,3322 $\pm$ 0,1334), G2before(0,1203 $\pm$ 0,0443/0,1517 $\pm$ 0,0569) - $\begin{array}{lll} G2after(0,2928\pm0,0923/0,369\pm0,1219), \ G3before(0,0656\pm0,0302/0,0830\pm0,0378) & - \ G3after(0,1259\pm0,0491/0,1602\pm0,0669), \end{array}$ G4before( $0.0952\pm0.0354/0.122\pm0.0478$ ) - G4after( $0.135\pm0.0444/0.122\pm0.0478$ ) 0,1723±0,0561). According to the Rku frequencies G1 and G2 hat their surfaces roughened while G3 and G4 were flattened. Majority of peaks (rsk) was observed in all groups, increasing more after etching in G1 and G2 than in G3 and G4. Bovine enamel is similar to human only after self-etching adhesive application.

# 161. EVALUATION OF RESINOUS CEMENT STRAIN OF CHEMICAL AND DUAL ACTIVATION USING THE STRAIN-GAUGE METHOD.

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This study measured the resinous cement strain of chemical and dual activation using the strain-gauge method. A strain gauge was positioned inside of cavity prepare of 4.5 mm of width and thickness and 1 mm of depth, after that, a type of resinous cement(RC) was inserted(n=3); chemical activation: Cement-post(CP) (Ângelus), Multilink(ML)(Ivoclar/vivadent) or dual activation: Nexus(NX)(sds Kerr), RelyX Arc(RA) (3M/Espe). The strain of the resinous cement in function of its activation was measured by ADS500 system (Lynx) for 24 hours. The acquisition of the data was carried through by AqDados 7.02 (Lynx). The periods of 1minute(T1), 5minutes(T2), 10minutes(T3), 1hour(T4), 12hours(T5) and 24 hours(T6) had been considered. The means in micro-strain (μs) mas: T1: CP: 9. ML: 8. NX: 63. RA: 385; T2: CP: 177. ML: 21. NX: 287. RA: 745; T3: CP: 704. ML: 67. NX: 411. RA: 585; T4: CP: 493. ML: 531. NX: 502. RA: 1270; T5: CP: 494. ML: 404. NX: 326. RA: 343; T6: CP: 442. ML: 267. NX: 289. RA: 442. In the first five minutes of polymerization, the dual RC had presented higher strain than chemical. Independent of the RC, the deformation after 24 hours was lower than that one presented in the first hour. It is concluded that the dual RC presents great strain in function of its initial polymerization, however, the residual deformation after 24 hours is resembled with that one presented by cements of chemical activation.

# 158. SURFACE HARDNESS OF GLASS IONOMER CEMENTS INDICATED FOR ATRAUMATIC RESTORATIVE TREATMENT (ART)

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The aim of this study was to evaluate the surface hardness of glass ionomer cements indicated for Atraumatic Restorative Treatment (ART). 3 glass ionomer cements for ART were used as experimental groups: GE1- Magic Glass (Vigodent), GE2-Vitro Molar (DFL) ê GE3-Ketac Molar Easymix (3M/ESPE) e 1 glass ionomer cement for restoration as control group: GC- Vidrion R (SS WHITE). The cements were dosed and mixed according with the manufacture's instructions, being made 10 specimens with 5mm of diameter x 1mm of height in the teflon mold for each group and after 10 minutes the specimens were stored in lubricant at 37°C for 24 hours. The surfaces of the specimens were polished with silicon carbide sandpaper (1200/2000). The Knoop hardness was determined by universal indenter tester HMV-2 (Shimadzu, Tokyo, Japan), using a load of 25g for 30s and in each specimen five indentations were realized in the largest diameter of the surface flat. The data were submitted to ANOVA and at Tukey's test (5%). The mean Knoop hardness of the GC was of 49.93 and of the experimental groups were of GE1: 32.48; GE2: 40.61 and GE3: 58.44. There was statistically significant difference among the GC and the experimental groups, so that surface hardness values GE1 and GE2 were significant lower and of the GE3 were significant higher when compared with the GC. It was concluded that the G3 presented a superior surface hardness at G1 e G2.

# 160. EFFECT OF LIGHT-CURING METHODS AND INDIRECT VENEERING MATERIALS IN A RESIN CEMENT KNOOP HARDNESS

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The aim of this study was to evaluate the effect of veneering materials and lightcuring units on Knoop hardness of Rely-X dual resin cement. One bovine incisor had its buccal face was ground to expose a flat dentin area, which was covered with a PVC film, where a mold (1mm height X 5mm diameter) was seated. After manipulation, the cement was light-cured through a disc of 0.8mm height of the veneering materials HeraCeram or Artglass. Light-curing was performed with: Halogen light-HL (XL2500)/40s; LED (Ultrablue Is)/40s or Xenon plasma arc-XPA (Apollo 95E)/3s. The control group was obtained by chemical activation solely. After storage in an incubator (24h/37°C), samples (n=5) were sectioned to expose the resin cement for hardness measurements (15 per sample) in a microhardness tester machine. Data were submitted to ANOVA and to Tukey's test(5%). The Knoop hardness mean (KHN) for HeraCeram, Artglass were: HL-(32.9; 31.7); LED-(37.7; 41.2); XPA-(30; 30.6); and for control (28.4). It was observed ad that LED produced the highest hardness mean values for both materials. QTH and APX produced similar hardness mean values for Artglass, while APX produced the smallest hardness mean values for HeraCeram. Control group showed hardness mean values similar to groups activated either with QTH or APX. It can be concluded that Knoop hardness can be influenced by the light-curing units as well by the veneering material.

# 162. Influence of different shades of resin cement on knoop hardness in the immediate time and 24 hours

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The aim of this study was to evaluate the Knoop hardness number of different shades of the resin cement, in the immediate time and 24 hours. The specimens with 5.0 mm in diameter and 1.0 mm thickness of the Variolink II, in shades XL, A1, A3 and white opaque were made in the teflon mould, covered with a mylar strip and fledspatic ceramic disc in the thickness 2.0 mm and fotoativated for 40s with LED Ultralume IS (DMC), with 650 mW/cm2. The Knoop hardness were made using HMV 2 microhardness tester, with a load of 50g applied for 15s, immediately and after storage at 37o C. Ten measurements were made for each specimen, being that five specimens were made for each shades of cement in each stored time. The data were submitted to ANOVA and Tukey's test (5%). The Knoop hardness of the shades XL, A1, A3 and opaque were for the periods: immediate = 40.18; 35.57; 34.33 and 27.77 KHN, with statistical difference between opaque and A3 in relation XL and A1; 24 hours =53.34; 49.57; 47.48 and 46.48 KHN, with statistical difference between shade opaque, and shades XL, A1 and A3. Significantly statistically difference was found between the periods immediate and 24 hours, in the shades XL, A1, A3 and opaque. The Knoop hardness in the 24 hours was stronger than immediate for the different shades of the resin cement. The Knoop hardness of the shade opaque resin cement decreased significantly in relation shades XL, A2 and A3.

### 163. FRACTURE RESISTANCE OF HUMAN AND BOVINE TEETH RESTORED WITH DIFFERENT POSTS

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This study evaluated the fracture resistance of bovine (BR) and human (HB) dental roots restored with different post systems. Twenty BR (incisors) and 20 HB (single root) were, randomly divided into 4 groups (n=10): A-BR + CPC (cast post and core); B- BR + GFP (glass-fiber post and resin-composite core); C-HR + CPC and D-HR + GFP (D). All posts were fixed with resin cement. The fracture test was performed in test machine with tangential load at speed of 0.5mm/min at failure was recorded mode of fracture was noted by visual inspection for all specimens. Data were submitted to two-way ANOVA following Tukey HSD test (p<0.05). Also, the stress distribution was accessed by means of finite element analyses (FEA). The fracture resistances were: A: 85.9  $\pm$  19.5; B: 45.0  $\pm$  10.3; C: 82.3  $\pm$  13.0 and D: 53.0  $\pm$  11.6. The two different post systems presented differences in stress distribution and those fiber-glass posts stress distribution along the radicular surface was more uniform, with areas of reduced stress concentration. Bovine teeth proved to be suitable substitute for human teeth in fracture resistance tests. Teeth restored with glass-fiber post and composite core presented lower fracture resistance than cast post and core, however they presented only fracture involved composite core. Mechanical results showed a clear correlation with FEA observations.

# 165. THE EFFECT OF INDIRECT RESIN SURFACE TREATMENT AND WATER STORAGE ON BON STRENGTH USING SEL-ADHESIVE LUTING SYSTEM

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Recently, a new resin-based cement has been marketed. This material claimed to eliminate the need for pre-treatment, based on direct adhesion at tooth surface. To evaluate the effect of different treatments on the indirect resin surface and the water storage effect on the bond strength of self-adhesive luting cement.40 cylindrical blocks (4X10mm) of indirect resin MZ100 were obtained. Each pair of 2 blocks was cemented together with RelyX Unicem. 20 samples were divided in 5 groups: G1(control)- without surface treatment; G2-Sandblasted with Al2O3; G3-Alloy Primer; G4-Al2O3+Alloy Primer; G5-Al2O3+Silane. After 24h of the luting step the samples were cut to obtain beams and placed in distilled water at 37°C for 24h or 40 days. 20 beams per group (n=20) were submitted to tensile test (µBS) at 0,5mm/min crosshead speed in a universal testing machine. The values in MPa were submitted to ANOVA and Tukey test (p=0.05). The means of resin bond strength (48hs) were: G1= 45,48; G2= 47,17; G3= 36,16; G4= 41,68; G5= 45,84. After 40 days: G1= 48,07; G2= 42,56; G3= 37,84; G4= 34,17; G5= 45,59. The water storage decreases the bond strength in G4, while in the other four groups no statistical difference was found. The bond strength of self-adhesive luting cement was higher when the MZ100 surface didn't receive any treatment, although without statistical difference.

## 167. MARGINAL ADAPTATION OF INDIRECT RESTORATIONS USING RESIN-COATING TECHNIQUE AFTER THERMOCYCLING

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The aim was to evaluate the marginal adaptation of restorations, using combinations of Resin Coat Technique (RCT) after thermocycling (TC). 20 molars were used. In each tooth, 2 cavities were created, on the mesial face (margins in enamel-ME) and on the distal face (margin in dentine-MD), which were divided into 4 groups: G1ME and G2MD- a combination of adhesive+low viscosity resin (Clearfil SE Bond+Clearfil Protect LinerF- Kuraray); G3ME and G4MDadhesive+hydrophobic monomer (SingleBond+Bond-Scotchbond-3M). After applying the RCT, the cavities were molded with a impression material and then poured with a stone plaster. Fillings were confectioned using Sinfony system and cemented with Rely X. The teeth were submitted to TC (2000 cycles/5-55°C) followed by the application of Caries Detector-Kuraray upon all restoration margins and its wash for 30 s. Images were captured and evaluated using the software Image Tool 3.0 for the measurement of dye penetration. The results were submitted to ANOVA and Tukey's test(p<0,05). The mean values(%) were: G1ME=12.07; G2MD=13.54; G3ME=1.86; G4MD=2.10. It can be concluded that the RCT, when used associating Adhesive+Hidrofobic Monomer revealed a better marginal adaptation, then when a combination of Adhesive+Low Resin viscosity was used. There was no statistically significant difference, between the adaptation of the restoration with margins in enamel or dentine after TC

# 164. EFFECT OF 2% CHLORHEXIDINE ON THE BOND STRENGTH OF ETCH-AND-RINSE ADHESIVES TO NORMAL DENTIN

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To test the hypothesis that the application of 2% chlorhexidine to acidetched dentin does not affect the bond strength of etch-and-rinse adhesives to normal dentin. Twenty third molars were included in this study. The occlusal surface was flatted, using a diamond saw under water-cooling, in order to expose a substrate. Teeth were randomly divided into 2 groups. The dentin surfaces of G1: were acid-etched with phosphoric acid gel (15 s), bonded with one of the etch-and-rinse adhesives, Single Bond 2 (SB2), under the moist-bonding technique, and restored incrementally with a hybrid resin composite. G2: received similar treatment, except that before applying adhesive, they were primed with 2 wt% chlorhexidine digluconate (CHX) solution. Excess CHX solution was blot-dried after a dwell time of 60 s, prior the application of adhesive and resin composite. After storage in water (37°C for 7 days) the teeth were sectioned to produce a series of 0.8 mm2 beams for microtensile test. G1 (23,37 MPa±12,13) and G2 (23,19 MPa±10,77) expressed similar bond strength values (p>0.05). Chlorhexidine application after acid etching does not have any marked effect on bond strength to normal dentin. This supports the use CHX as a potential MMP inhibitor, as well as a promoter of the longevity of resin-dentin bonds.

### 166. THE EFFECT OF CIMENTATION MATERIALS IN ATTACHMENT STRENGHT OF CERAMIC DISCS WITH BOVIN DENTIN

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The aim of this study was to evaluate the shear strength of ceramic discs with dentin bovin, fixed with resin ciments (G1-Enforce fotoativado; G2-Enforce dual; G3-Rely-X) or composites (G4-Tetric flow; G5-Filtek Z250). There were made 50 ceramic discs feldspadic HeraCeram (Heraeus Kulzer) -. the discs where primed with primer porcelain Dentsply (2min) and washed with water for 1 minute. After dried the samples were silanized. Fifty bovin incisors had their root cuted and the remnat crown were included in polyestiren resin(Piraglass). The vestibular side were eroded with SiC (Carborundum) granulation of 200, 400 e 600 emery paper until get a dentin surface of 25mm2. Fifty bovine incisors (5 groups;) had their buccal face ground to expose a flat dentin area. The bovin dentin was treated with phosporic acid 37% (Dentsply) - 15s, washed with water jet, the excess water were removed with absorbent paper and Prime&Bond NT adhesive system were aplicated in the samples, they where a mold (1mm height X 5mm diameter) was seated. After manipulation, the cement was inserted into the mold and light-cured directly (control groups) or through veneering materials discs (HeraCeram or Artglass) of 1.5mm height, simulating the presence of an indirect restoration. The groups where light- cured by XL 2500 (3M/ESPE), with 820mW/cm intensity for 40s. After cimentation, the samples were stored in an incubator (24h/37oC) and were submitted to the test of shear in the universal test machine Instron, under the speed of 0,5mm/min. Data were submitted to variance Tukey's test (α=0.05).. For all groups tested, there were no statistically differences among them. The results where G1-10,00MPa; G2-8,47MPa; G3-7,37MPa; G4-8,96MPa e G5-7,73MPa. Cimentation- ceramic-shear

## 168. RADIODENSITY OF BASE, LINER AND LUTING DENTAL MATERIALS

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The aim of this study was to determine the radiodensity of base, liner and luting dental materials and to compare them with human enamel and dentin. Four classes of materials were examined: conventional glass ionomers (CG) - Vitro Cem, Ketac Bond, Vidrion F, Vidrion C; resin-modified glass ionomers (RMGI) - Fuji II LC, Vitrebond; resinous cement (RC) - Rely-X ARC; and zinc phosphate cement (ZP) - Cimento LS. Five 2-mm-thick standard samples of each material were produced and also five 2-mm-thick enamel and dentin samples. An aluminum step served as control. Samples were positioned over a phosphor plate of Digora digital system, exposed to the x-ray and the radiodensity obtained in the software Digora for Windows 2.0. Data were submitted to Kruskal-Wallis and Dunnett Multiple Comparisons Test (=0.05). According to the statistical analysis the following sequence in degree of radiodensity could be seen among the groups: Cimento LS (202.592.34) > Vitro Cem (149.6011.16) = Fuji II LC (147.4312.06) = Rely-X ARC (142.863.32) = Vitrebond (139.8110.36) > Ketac Bond (128.077.58) > Enamel (104.454.88) = Vidrion F (103.991.58) > Vidrion C (88.855.88) = Dentin (80.7816.03). The presence of radiopaque fillers such as zinc, strontum, zirconium, barium and lanthanium rather than material type seems to be the most important factor when analyzing materials radiodensity.

### 169. INFLUENCE OF DIFFERENT SHADES OF RESIN CEMENT VARIOLINK II ON KNOOP HARDNESS IN DIFFERENT STOR-

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The purpose of this study was to evaluate the Knoop hardness number of different shades of the resin cement, in the immediate time and 24 hours. The specimens with 5.0 mm in diameter and 1.0 mm thickness of the resin cement Variolink II, in shades XL, A1, A3 and white opaque were made in the teflon mould, covered with a mylar strip and feldspatic ceramic disc in the thickness 2.0 mm and fotoativated for 40 seconds with XL 2500 (3M), with 650 mW/ cm2. The Knoop hardness number were made using HMV 2 microhardness tester with a load of 50g applied for 15s, immediately and after storage at 37o C. Ten measurements were made for each specimen, being that five specimens were made for each shades in each stored time. The data were submitted to ANOVA and Tukey's test (5%). The Knoop hardness number of the shades XL, A1, A3 and opaque were for the periods:immediate = 41.77; 39.48; 38.34 and 34.78 KHN; 24 hours=59.46; 55.58; 58.29 and 45.52 KHN, with statistical difference between shade opaque, and XL, A1 and A3. Significantly statistically difference was found between the periods immediate and 24 hours in the shades XL, A1, A3 and opaque. The Knoop hardness in the 24 hours was stronger than immediate for the different shades of the resin cement. The Knoop hardness of the shade opaque resin cement base decreased significantly in relation shades XL, A2 and A3

### 171. TRANSCRIPTIONAL ANALYSIS OF GTFB, GTFC AND GBPB AND THEIR PUTATIVE RESPONSE REGULATORS IN SEVERAL GENOTYPES OF STREPTOCOCCUS MUTANS.

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Glucosyltransferases B/C catalyzes the synthesis of glucan that are essential for bacteria accumulation in the dental biofilm, probably through the interaction with Glucan-binding protein B (GbpB). The expression of gtfB, gtfC and gbpB genes and their putative response regulators (RR) was analyzed in nine clinical genotypes and in the lab strains UA159 and LT11, during planktonic growth curves obtained in BHI Broth (45ml). The total cDNAs were obtained from 12 ng of RNA in reverse transcription reactions with arbitrary primers. Semiquantitative PCR was then performed with specific primers for gtfB, gtfC, gbpB and the RR genes vicR, comE, rr11 and ciaR. Housekeeping genes analyzed as control were recA, ldh and RNAr16S. Amounts of the amplicons were quantified densitometrically. Expression of RNAr16S was constant in all studied conditions and it was used as reference gene. The levels of gtfB and gtfC transcripts were coordinated during specific phases of growth, but divergences in the curves expression of the same ones happened in a large part of the genotypes, while gbpB assumed an independent pattern. The results indicate that the patterns of transcription of the structural genes (gtfB, gtfC and gbpB) and response regulators are strain-specific and that gtfB and gtfC are regulated by independent systems, which seem to be activated in different phases of growth. FAPESP 02/07156-1; 04/03242-6.

### 173. DEVELOPMENT OF CANDIDA SPP. BIOFILMS ON ORAL STREPTOCOCCI PERFORMED BIOFILMS

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Candida spp. frequently isolated from oral lesion associated to biomaterials are C. albicans, C. tropicalis e C. glabrata. They adhesion to these materials can be by non specific forces or by the previously bacterial adhesion, specifically by the Streptococcus spp. The aim of this research was to evaluate the development of Candida spp. biofilm on Streptococcus spp. preformed biofilm. S. mutans, S. sanguinis, S. oralis, S. mitis. and Candida spp strains were cultured in BHIY. 80 µl Streptococci aliquots were inoculated on acrylic, titanium and nylon discs and preincubated for 120 minutes, and put into 24-well tissue culture plates for 48 hours in BHIY medium. After that, Candida spp. aliquots were applied in the Streptococcus spp. preformed biofilm discs and maintained into the plaque for 48 hours in BHIY medium. After 48 hours the discs were washed with PBS and submitted to UFC and SEM. The results show that C. albicans and C. tropicalis produce biofilm on S. mutans compared with the controls, but not with the other streptococcus species. C. glabrata do not produce biofilm, significantly, with the streptococcus species. Conclusion: S. mutans biofilms can be considerate an aggregation factor to promote the development of C. albicans and C. tropicalis species.

### 170. EFFECT OF RESTORATIVE TECHNIQUE AND THERMAL/ MECHANICAL TREATMENT ON COMPRESSIVE STRENGTH IN AESTHETIC RESTORATIONS.

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The purpose of this study was to evaluate the compressive strength of composite onlay restorations, using indirect or direct techniques, after thermal and mechanical cycling. Onlay standardize cavities were prepared in fifty permanent molars and restored with Z-250 composite resin using indirect or direct techniques and submitted or not to thermal (500 cycles, 5 to 550 C) and mechanical cycling (50.000 cycles, 70N). The teeth were distributed in five groups (n=10): G1indirect restorative technique/thermal and mechanical cycling; G2- indirect restorative technique/ no cycling; G3 - direct restorative technique/thermal and mechanical cycling; G4 - direct restorative technique/no cycling and G5 - control group - sound teeth. All groups were submitted to compression test in a universal test machine INSTRON at 1mm/min cross-head speed. The data were submitted to ANOVA and Tukey statistical tests (p<0,05). Considering the compression resistance (CR), there was no statistically difference among the restorative techniques used in this study. Thermal/mechanical cycling did not exerted significant influence to CR. However, the experimental groups had lower compression resistance (p<0,05) when compared to control group. This way, it can be concluded that onlay restorations prepared both indirect and direct techniques had similar compressive resistance, regardless thermal/mechanical treatment, although they have recovered partially the compressive strength.

#### 172. ACTIVITY OF THE LEAVES' EXTRACTS OF COPAIFERA LANGSDORFFII SUBMITTED TO TWO DRYING PROCESSES ON THE CULTURE OF STREPTOCOCCUS MUTANS.

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Clorexidina is the antiseptic used for Streptococcus mutans control, but it possesses side effects. An alternative would be the use of products made with vegetable extracts. The extract of the leaves of Copaifera langsdorffii presents activity on the culture S.mutans the months of July, August and September, turning necessary the drying of the leaves, more common treatment for the conservation of them. The aim of this research was to evaluate the inhibitory activity of the leaves' extracts of Copaifera langsdorffii submitted to two drying processes and the influence of the period of storage of the leaves of Copaifera. Thus, sterilized cylinders were placed in Brain Heart Agar medium contained S.mutans and afterwards, ethanolic extracts of dry leaves prepared were deposited inside them. The medium was keeping at 37°C, under low oxygen atmosphere. After 24 h, it was observed that the leaves droughts in the greenhouse produce smaller matter volume dries in smaller time of drying. The prepared extract with leaves stored after 150 days presented a reduction of the activity close of 15%. Therefore both drying processes are suitable for the conservation of the activity of the leaves of Copaifera langsdorff.

### 174. MUTANS STREPTOCOCCI AND LACTOBACILLI IN DENTAL BIOFILM FORMED IN SITU IN THE PRESENCE OF SUCROSE OR GLUCOSE + FRUCTOSE

RICOMINI FILHO, A.P.\*; TENUTA, L.M.A.; DEL BEL CURY, A.A; CURY, J.A.

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 $Mutans\ streptococci\ (MS)\ and\ lactobacilli\ (LB)\ are\ aciduric\ bacteria\ whose\ growth\ in\ dental\ biofilm\ is\ facilitated\ by\ sugar\ fermentation\ but\ sucrose,\ besides\ being\ fermentable\ is\ a\ substrate$ bothim is facilitated by sugar fermentation but sucrose, besides being fermentable is a substrate for extracellular polysaccharide (EPS) synthesis, mainly by MS. This double-blind, crossover study aimed to evaluate the effect of sucrose (acidogenic + EPS inductor) or glucose + fructose (acidogenic) on the populations of MS and LB in dental biofilm formed in situ. Sixteen volunteers, with low MS salivary counts (from 250 to 8.3 x 105 per mL, mean 1.8 x 105 per mL) and moderate LB salivary counts (from <50 to  $3.5 \times 105$  per mL, mean  $6.2 \times 104$  per mL), wore palatal appliances containing 4 human enamel blocks covered by a plastic mesh, which were exposed 8 times/day for 13 days to: distilled-deionized water (DDW), 10% glucose + 10% fructose solution or 20% sucrose solution. At the end of each phase, biofilm formed was collected for determination of insoluble EPS and enumeration of MS (MSB agar, 10% CO2, 48 h), lected for determination of insoluble EPS and enumeration of MS (MSB agar, 10% CO2, 48 n), LB (Rogosa SL agar, 10% CO2, 24-48 n) and total bacteria (blood agar, anaerobiosis, 72 h). The counts of total bacteria (around  $7.4 \times 106$  per mg of biofilm), MS counts (around  $3.9 \times 102$  per mg biofilm) and % MS in relation to total bacteria were not different among the treatments (p > 0.05). LB counts (mean  $\pm$  SD,  $\times 106$  per mg biofilm) and percentage of total bacteria were significantly higher in the biofilm formed in the presence of glucose + fructose ( $1.6 \pm 2.6$ , 24.8%) and sucrose ( $3.2 \pm 5.2$ , 39.7%) when compared to DDW ( $0.0002 \pm 0.0005$ , 0.009%). The biofilm formed in the presence of sucrose presented significantly more insoluble EPS (p<0.05) than the other two treatments. The data suggest that exposure to sugar is more relevant for the predominance of LB in the dental biofilm formed than for MS and this does not depend on EPS synthesis. Supported by FAPESP, Proc. 04/06625-3 and FUNCAMP, Conv. 2849.

## 175. IN VITRO ANTIMICROBIAL SUSCEPTIBILITY OF CANDIDA SPP AGAINST MENTHA PIPERITA EXTRACT.

ANIBAL, P.C.\*; OBANDO-PEREDA, G.A.; FURLETTI, V.F.; GONÇALVES, R.B.; HÖFLING, J.F. FACULDADE DE ODONTOLOGIA DE PIRACICABA/UNICAMP

A complex microorganisms community has been found in the oral cavity, most are commensal and a few of them cause opportunistic infections. Species of Candida are constantly isolated from this site. Antifungal resistance is getting high and the use of medicinal plants is an important source of new biological active components and has antimicrobial activity. The aim of this study was to evaluate the antimicrobial action of methanolic crude extract of Mentha piperita on strains of Candida albicans (CBS 562), C. glabrata (B. 07), C. dubliniensis (CBS 7987) e C. tropicalis (CBS 94). The strains were diluted in 2,5x103 UCF/mL and 100μL was added in to 96 well plates with variates concentration of the crude extract dilution to determine the minimum inhibitory concentration (MIC), resulting in a final volume of 200μL and incubated at 37°C by 48hours, followed by reading of the plates. The results showed that M. piperita inhibited the growth of these strains, suggesting the antimicrobial potential of these substances, as antifungal agent. Researches in this area may contribute to amplify our knowledge about these mechanisms, justifying the use in health area.

## $177.\ \text{AGE}$ prediction using dental mineralization stage – a case report

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Among several age prediction methods, dental exam is the one that most comes close to a person's real age. This exam is even more precise when the estimative is performed in children or teenagers, since in those phases dental changes are more peculiar and noticeable in each age. The chronologic eruption exam and dental mineralization can be used in legal matters and this presentation reports an age prediction case of a child that was living in an orphanage located in the city of Serra - ES (Brazil). This child did not have a birth certificate and therefore could not have legal rights as a Brazilian citizen, concerning Federal law the child did not even exist, so a request for an expertise evaluation was made. Using an X-ray exams made in Mach, 28 2006, the mineralization stage was recorded and the data analyzed according to the tables from Nicodemo, Moraes and Médici Filho (1974) and a software named Cronothus developed in 1999. Results showed that the child age range from 72 (06 years old) to 75 months (06 years and three months old). The average was 06 years and 15 days and the probable birth date would range from January to March 2000. The child had the age predicted, making possible to be registered and granted all legal rights as a human being.

## 179. ADVERTISEMENT IN DENTISTRY – WHAT HAS CHANGED ACCORDING TO RESOLUTION 071/2006?

CAPUTO, I.G.C.\*; MARTINS, E.C.; INADA, M.; DARUGE JÚNIOR, E.; PEREIRA, S.D.R.; SILVA, R.F. FOP/UNICAMP

Publicity and advertisement are common ways that clinicians in Dentistry use to attract new clients and increase their income. Nevertheless, all Brazilian clinicians are classified as product and service providers according to the Consumer Protection Code, they must follow certain ethics conduct related to publicity in order to keep a correct standard practice. Those orientations are establish by the Brazilian Dentistry Federal Board and they can be found in Dentistry Ethical Code chapter XIV, which presents what is allowed when dealing with advertising the price, form of payment and other issues. The Dentistry Federal Board approved the Resolution 042 in 2003 which is the latest Ethical Code, but the chapter concerning advertisement was recently reformulated in 2006 (Resolution 071), therefore this presentation intents show what are the main changes concerning publicity and advertisement in Dentistry, showing as well the legal implications that may happen when those orientations are not followed. The knowledge of those changes would allow clinicians to adapt their conduct toward the correct advertisement, increasing their income and avoiding ethical lawsuits.

### 176. OBJECT SWALLOWING DURING DENTAL TREATMENT - CLINICAL AND LEGAL CONDUCT

SILVA, R.F.\*; PEREIRA, S.D.R.; MIRANDA, G.F.; MENDES, S.D.S.C.; FARAH, G.J.; DARUGE JÚNIOR, E. FOP-UNICAMP/DOD-UEM

Strange objects through oral pharynx as well other odd situations during dental treatment immediate rise several questions. Those situations lead the involved clinician to a double nature concern: one clinical and the other legal. Was the object swallowed or aspirated? Should the clinician try to remove the object or take the patient to a hospital? Who should be responsible for medical expenses? Could the clinician be sued by the patient because of this accident? Because of those and other questions this presentation aims to guide the clinicians about those situations and in order to do so, it is reported a case of a cast metal core swallowing. It is presented what conduct must be immediately taken when an object disappear into the mouth, it also shows some ways to prevent this type of accident as well shows possible legal consequences. There is no way that the clinician can retrieve from either clinical or legal responsibility when such accident happens. Depending on how the clinician reacts at first (clinical), what he/she does or not do, the legal consequences may be catastrophic.

### 178. THE IMPORTANCE OF THE LEGAL ODONTOLOGIA IN THE EXAMINATIONS OF BODY OF THE OFFENSE.

ROSA, E.C. FOP-UNICAMP

The injuries provoked or generated in the human being, they need an examination called examination of body of the offense. This aims at to supply to Police authority eor Judicial information on the gravity or not of a case. If the injury to acometer the estomatognático device, this must be carried through by a connoisseur Odonto-Legal expert. It must also be detached that it has an increasing number of cases of aggressions that acometem the diverse segments of the maxilo-face complex, causing injuries that can occur in such a way in the fabric soft as in the fabric ósseo generating the most diverse degrees of comprometimento of the dental elements and its structures of support, being able still in the dependence of other factors to provoke luxações I teethe alveolar until breaking of the tooth or the alveolar process and in the ósseo skeleton properly said where the injuries if reveal under the form of breakings and skullface disjunctions. The professional most qualified for the evaluation of a damage the level of the estomatognático device is that one with odontológica formation and legal in such a way Odonto-Legal expert is the professional indicated for the examination of body of the offense in the Legal Justinian codes Medical, therefore the examination of body of the offense is the set of sensible elements of the criminal fact, being able still to be said that they are principles that can affect the directions, that is being able to be perceived by the vision, for the hearing, for the tato, for the gustação and the olfato.

# 180. SIMPLIFICATION OF BIOMARKER FOR IDENTIFICATION HUMAN BEING BY MEANS OF THE PALATINA RUGOSCOPIA.

MARTINS-FILHO, I.E.; MACIEL, S.P.; SALES-PERES, S.H. DE C. FACULDADE DE ODONTOLOGIA DE BAURU - FOB/USP

The identification human being is something that comes being studied since century XIV and to each day it comes if perfecting more. The objective of this study was to simplify the method of identification through the palatal rugae, involving papila incisive, rafe medium, the form of the arc and absence or tooth presence. The sample was constituted of 20 plaster models and respective handbooks. Three appraisers had participated of the research, so that the study he was blind: appraiser 1 was responsible for the election of the initial models; appraiser 2 made the copies in scanner (creation of the data base); e appraiser 3 re-numbered the models so that they were overlapped by appraiser 2 and in the sequence the coincidence of points was analyzed, for the possible identification. The models had been digitalized and analyzed by means of the program Photoshop 7.0.1. The results, found by means of analysis of agreement of not coincident points, had allowed to a percentage of 100% of rightness in the identification, being possible the identification of all the individuals by means of the methodology proposal. One concluded that: that she is possible to carry through the identification human being by means of palatal rugae, since that has a previous data base; it is a safe method of identification, for allowing to analysis relating 5 criteria, what she excluded the possibilities of errors, therefore no model was coincident in no point with another one.

# 181. THE RESPONSABILITY OF THE DENTIST-SURGEON REGARDING CLINICAL DOCUMENTATION AND PATIENT FOLLOW-UP.

MARTINS, E.C.\*; INADA, M.;OLIVEIRA, W.J.;CAPUTO, I.G.C.; SILVA, R.F.;DARUGE JÚNIOR, E. FOP - UNICAMP

Lately, legal processes characterized by medical error are in evidence, a phenomenon that has also been witnessed in odontological consultancies. The odontological class has yet to develop legal documentation pertinent to treatment; documents that could aid the professional in defending themselves against possible legal action. The creation of a good medical record with terms of consent (TFIC) and a contract for services provided, are simple measures and necessary for providing the professional with the legal ambit for treatment and greater tranquility before, during and after completing the required treatment. According to the Consumer Defense Code, which describes the Dentist-Surgeon as service providers, the consumer has a right to pertinent information, and according to the Odontological Code of Ethics (CEO), chapter V, section I, article 7, clause IV, the Dentist-Surgeon has a duty to explain the proposals, risks, costs and alternative treatments to their patients. In this work, we underline the importance of the realization of a Term of Free Informed Consent (TFIC) and a Term of Treatment (TT) with the patient and, consequently, the acquired obligation and responsibility of the Dentist-Surgeon in realizing follow-up of the treatment performed by them or others in the face of possible recidiva.

### 183. HUMAN IDENTIFICATION BY THE TEETH

AGOSTINI, R\*; BARBIERI, A.A.; DARUGE JÚNIOR, E.; FRANCESQUINI JÚNIOR, L.; MORAES, Z.M.; SHIRAISHI, M.C. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Human identification tries through several processes to identify the subject determining firstly the species, the gender, the race, the age and height. When this first step gets the end it's tried to stabilish the human identity. This can be obtained by the teeth signalment and, if the dental documentation is absent and the month is completely distructed, the DNA exam should be used. In this study, we can stabilish the subject identification from two human bone pieces respectively, the lower and upper jaws. Forensic dentistry (exams and detailed notes about the dental events found in the body's lower and upper jaws and the dental documentation sent by the dentist where can be found registries before death) was used to make it. These procedures allowed the identification from found pieces. Should be concluded by the dental documentation importance that the human identification must be done by a post-graduated in forensic dentistry, because this is the only professional legally able to make it.

## 182. Importance of dentistry's handbook in the human identification

INADA, M.\*; CAPUTO, I.G.C.; MARTINS, E.C.; OLIVEIRA, W.J.; SILVA, R.F.; DARUGE JÚNIOR, E. FOP/UNICAMP

In agreement with Ethic Dentistry's Code, article 5°, clause VIII, is to owe of the Dentist to elaborate and to maintain updated the patients' handbooks, conserving them in own file.

In the present days, where it is witnessed accidents of great proportions, several crimes and lawsuits against the Dentists, a largest concern appears on the part of the category in the sense of improving the information technician-professionals' registration on the dentistry procedures made in the patients.

An appropriate and discerning completion of the handbook associated to the correct guard of x-rays, models and other exams, it can subsidize the so much of Dentistry mistake elucidation of cases significantly as of human identification (charred bodies or in advanced decomposition state), through the analysis of the dental arches. In this context, the objective of the present work is to stand out, through a report of clinical case, the Dentist's legal importance to make their patients' handbooks appropriately, where this document aided in a relevant way in the human identification of a charred body.

## 184. HUMAN IDENTIFICATION USING THE FRONTAL SINUS REGION RADIOGRAPHIC

MAROTE,I.A.A\*; SCHMIDT,C.M.;SPADÁCIO,C.;CASTRO,H.A.L.; RESENDE,L.A.L.; DARUGE JÚNIOR,E. FOP-UNICAMP

The comparison of pre- and postmortem radiographs as a method of identification is well established in the forensic and radiologic literature. In this work, the frontal sinus region were examined and were possible to get a negative identification. The use of computer technology for radiographic comparison greatly facilitated the process.

# 185. LABOUR DENTISTRY: ORAL HEALTH PROFILE IN EMPLOYEE AND POSSIBLE RELATIONSHIPS WITH THE LABOUR ACTIVITY.

KOMATI, M.J.B.\*; QUELUZ, D.P. FOP-UNICAMP

The aim of this study was to evaluate the oral health profile in employee and possible relationships with the labour activity of a company in São Paulo/BR. The collection of data was accomplished through 150 dental clinic handbooks. The employee's occupation in the company was classified in agreement with the great groups of the Brazilian Classification of Occupation (CBO) and the oral manifestations were contained according to the affected area. The data were tabulated in Epi-Info, and the results presented through relative frequency (p<0.005): 34.7% female and 65.3% male; age group from 18 to 66 years of age, being the group from 40 to 49 years the one of larger frequency (31.33%) following for the group from 30 to 39 years with 30.67%; in the requirement occupation the group 3 of CBO (technicians in medium level) it presented 24% following for the group 2 (professionals of the sciences and of the arts) with 8.67%; in the requirement lesion more present it was the one of the type 2 (tooth disease, of the pulp and of the periapice) in all of the groups, following by the type 1 (periodontal disease). These results indicate that the need of deepened investigations of some occupations with the lesions presented by the workers. Being applied a clinical dentistry in the company, the accomplished study suggests then, the need to promote the worker's integral health, improving his working power.

### 186. DORT IN DENTISTRY

QUELUZ,D.P.\* FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The dentist is a worker that uses and depends every day more of the technique, besides having a job market competition. The aim of this study is to become aware the dentist for the importance of occupational diseases such as DORT, focusing: symptoms, risk factors and prevention. National and international data were used. DORT (related osteo-muscular disorder to work), include several pathologies, being the more acquaintances the tendinopathy and bursitis, among another that reach thousands of workers. Alterations and symptoms of several intensity levels in the structures osteo-muscular (tendons, articulations, nerves, muscles), besides alteration of the system modulator of the pain. That clinical case is due to the excess of use of the system osteo-muscular in the work. DORT reach the worker in the productivity peak and professional experience. The conclusion is that to improve the quality of life of the dentist/worker, becoming aware them to prevent DORT and demanding improvements of the work conditions offered by the employer.

# 187. EPIDEMIOLOGICAL PROFILE OF DENTAL CARIES IN TEENAGERS IN SOUTHWEST AREA OF SAO PAULO STATE, BRAZIL.

CARVALHO,F.S.\*;CARVALHO,C.A.P.;PERES,S.H.C.S.;BASTOS,J.R.M. APCD-BAURU;FACULDADE DE ODONTOLOGIA DE BAURU-USP

The oral health in the most of Brazilians cities is a challenge to National Health System (SUS). This study aim to analyze the prevalence of dental caries (DMFT index), Significant Caries Index (SiC) and the percentages of caries-free in adolescents in Itaí–SP – Brazil in 2006. The methodology used are in agreement with WHO criteria. The study sample was composed by 178 teenagers. This number corresponds to 46% of the 12-years-old adolescents that reside in the city. The sample was collected by a randomized manner. Kappa test was calculated intra-examiner and it was obtained agreement values of 0.95. Analysis of accumulated disease frequency in relation to the population showed that 34% of adolescents presented 70% of all the tooth diseases. The DMFT index was 2.45, the SiC index was 5.08, and the frequency of caries-free adolescents was 30%. These distributions demonstrate the phenomenon of polarization in the sample studied. The data obtained show the decrease of dental caries in 12-years-old adolescents, but this was not uniform. The problems are concentrated in a small portion of the population.

## 189. THE IMPORTANCE OF HEALTH EDUCATION ON THE MAINTENANCE OF TRAUMATIZED TOOTH

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The knowledge about the attitudes and practices of population with respect to care related to traumatized tooth can aid the health managers in planning health strategies to prevent its occurrence, as well as, the definition of management protocols for each case. Therefore, the aim of this study was to evaluate the strategies used by a group of people about traumatic injuries. A cross-sectional survey was conducted with 140 subjects aged between 10 and 45 years old in Cascavel, PR, Brazil. A questionnaire was prepared for the sample asking about the occurrence and management of accidents related with oral structures. It was verified that 11.9% of the sample suffered some kind of accident with the lost of tooth (avulsion) and 70.6% of these occurred in ages below 15 years old. The conduct utilized by 35.3% of traumatized ones was to pick up the tooth and take to the dentist office and 41.2% of them transported the tooth in a recipient with water. None of the interviewee maintained the tooth in milk and 11.8% wrap up the tooth in paper or cloth to transportation it. The results demonstrated the importance of permanent educational programs for the maintenance of traumatized tooth with purpose of prevent its occurrence, as well as, improve the prognosis of each

# 191. PREVALENCE OF THE PSYCHOLOGICAL FACTORS IN THE SELF EVALUATION OF THE MOUTH CONDITIONS IN AGING PEOPLE.

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The Index of Gohai was applied in order to identify the prevalence of the psychological factors in the self-evaluation of the mouth conditions of 54 aging people. The index received is of 30,01, what shows that the aged ones self-evaluate themselves with "good" mouth condition. The three factors reached a total of 1583 points. Out of this total, 35.69% are about the factors related to pain and the discomfort, 30.39% to the psychological and 33.92% to the physical. Out of the 565 points given to the factors related to pain, 78.05% of them are related to have "never" had any suffering and 21.95% to "always and sometimes". The physical ones had got 537 points and out of these 70.39% are related to "never" limit foods and only 21.61% to the alternatives "always" and "to sometimes". The lesser amount of points was given to the psychological ones (481 points, 30.39% out of the total). Out of these, 59.88% had been to the alternative they had "never" felt worried and 40.12% to "always" and "sometimes", indicating that the psychological ones prevail in relation to the other factors. In the 90 previous days to the test, the limitations in the social contacts, the non-satisfaction with the appearance of the mouth, the concern and the nervousness had been detected and had caused discomfort. One concludes that: (1) the psychological factors are prevalent when used in the self awareness of the mouth condition; (2) it makes necessary the clinical examination so that compared with the subjective measures it might identify the possible discrepancies between the subjective criteria and the technical one.

### 188. THE ROLE OF PEDIATRICIAN IN PROMOTING ORAL HEALTH

TAMBURÚS,VS\*; PEREIRA NETO, JS; DELA COLETA, KE; NOUER, DF FOP - UNICAMP

Many problems in the buccal cavity that they are common in the childhood, they can need the pediatrician orientation. The objective of the present study was regularly to evaluate the knowledge about promotion of oral health in a sample of 51 pediatricians in two cities of the state of São Paulo. A questionnaire was applied containing 33 closed questions about professional formation, level of knowledge of oral health, control of decays, oral hygiene, etc. With base in the statistical analysis was evidenced that 33,3% present an appropriate knowledge of oral health; 45% to regulate and 21,5% demonstrated inadequacy in the formulated answers. Of the sample, 13,72% don't consider decays as infection and 9.8% didn\'t answer to the question; for 70,58% of the professionals don\'t know that the powdered milk is an etiologic factor of decays and that is necessary to do a buccal hygienic after. Only 23,53% have knowledge that the deleterious buccal habits in the 3-4 year-old age group are an etiologic element of the malocclusions. The pediatricians recommend the first visit to the dentistry only before the six months of life. The conclusion of the study is the that the pediatricians don\'t give the due importance for the infectious power of the milk; transmissibility of decays and the appropriate age for the removal of a deleterious buccal habit, it having integration multidisciplinary with the areas.

# 190. RELATIONSHIP BETWEEN FLUORIDE WATER SUPPLIES CONCENTRATION AND TEMPERATURE VERIFIED FOR 21 MONTHS IN PIRACICABA-SP.

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Fluoride in water supplies is a cost-effective and safe method for the prevention of dental caries. To be effective as a public health measure, the maintenance of optimal water fluoride levels is required. The aim of this study was to verify through external control if the fluoride concentration levels of water supplies in Piracicaba -SP oscillated according to the local temperature. The water supplies samples (5ml) were collected during 2 years (from April/04 to February/06, except in January in both years by trained agents of health. 35 samples were collected monthly in every representative preschool of the city. The fluoride dosages was made by the Biochemistry Laboratory of FOP/UNICAMP with an analyzer of ions connected to a fluoride electrode previously calibrated. Piracicaba presents a maximum temperature of 37,5°C and minimum of 18°C (CIAGRI-USP). Comparative analysis of fluoride concentrations between the hottest months (from December to February) and the coldest (from June to July) were considered using the Mann Whitney Test with 5%. of significance level. The results totalizing 630 samples, showed that 77 (12,2%) of them were above 0.8 ppmF and 18 (2,86%) were below 0,6 ppmF. The most part(85%) of the samples were considered presenting excellent patterns (0,6 - 0,8ppmF). Considering the coldest month, the fluoride average found was 0,73 ppmF and 0,71 ppmF for the hottest months without significant difference (p=0,3544). However, taking into account the temperature oscillating between 17.8 and 21.4°C, the acceptable fluoride concentration acceptable is from 0,6 to 0,8ppmF. Thus, the results of the analyzed samples showed adequate fluoride concentration for the local temperature. Regarding the oscillating temperature (summer or winter) in Piracicaba, the water fluoridation system presented an excellent pattern.

# 192. KNOWLEDGE OF THE ATTITUDE OF ELEMENTARY SCHOOL TEACHERS, IN THE FACE OF BUCCODENTAL TRAUMATISM, IN BAURU, SP.

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The occurrence of alveolar-dental traumas in children while at school demands immediate intervention, be it by some layperson with the school team or by the teacher him/herself. The traumas may involve losing the permanent dental element, causing, in the child, a physical and psychological discomfort. This work aimed at analyzing the teachers' knowledge degree such as: helping a child from his/her school, following a dental avulsion. A questionnaire was compiled and applied to elementary school teachers (n=307), from 10 state and 15 municipal schools, in Bauru, SP, in 2005. The knowledge on the procedures to be followed, after a schoolchild suffers a dental trauma, was analyzed. The statistical analysis was descriptive and the comparisons of the results presented in Tables and Graphs. It was observed that 76.54% (n=267) know how to aid when a dental trauma takes place, however, they have many doubts as for the correct procedure in these cases: 12.37% would place the tooth or fragment in water, 10.09% in milk, 4.23% in ice, 3.9% in serum and 2.93% in saliva. Nevertheless, 48.2% would take the child to the dental surgeon and only 0.65% would not know what do to. Taking into account the high prevalence of dental traumas at schools, the need of reformulating information to reinforce and suit the teachers' knowledge, so as to improve the oral health, is justified.

# 193. oral health education: the local health facilitators in the western timor and the tooth-brush of coconut and bamboo fibers

GOYA, S\*.; CASTELLI, G.M.; SANT'ANNA, R.M.F.; ; ARAÚJO, J.J.; SALES-PERES, S.H.C.; BASTOS J.R.M. FACULDADE DE ODONTOLOGIA DE BAURU - SP

The scenario is a house comprised of 6 people and a sole toothbrush available for all, with no hygiene conditions and basic sanitation. The Sorrir – Alcançando Vidas Project (Smile – reaching for lives),in 2005, began its activities in the Western Timor, with an 8-volunteer team from Maringá, PR, aiming at reviewing the above described scenario. The goal was to arouse the interest of the locals as for oral health prevention and education, focusing on the familial nucleus and the individual, by forming health facilitators, so as to improve social inclusion. In the Western Timor, 8 women and a Norwegian female nurse were qualified and the material developed in Brazil was translated into the local language, so as to available to all. A toothbrush made out coconut and bamboo fibers was made, tested and approved, thus effectively improving the brushing. The challenges were: the native languages, the TETUM and the Indonesian BAHASA; the habit of chewing a leaf called AHO, and a seed named BUA along with MALOS (chalk powder) in order to relieve hunger; instruct them and modify habits without interfering in their culture. Some 50 families were visited in 15 days and theatrical events, puppet shows and other forms of entertainment were accomplished with the goal of teaching them brushing procedures and motivating them to improve their health conditions. The women from Timor were the health and oral hygiene instructors, guiding as for the self-care and changing habits in their own families, as well. It was concluded that the benefits will be better observed in the generations to come, and that it is not possible to promote health without considering the individual in an integral way, since health is the reflex of socio-environmental relations and conditions.

## 195. NEED FOR SUBSTITUTE OLD DENTURES UNDER A VIEW OF EDENTULOUS PEOPLE

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Tooth loss can have a deep functional and emotional impact on some people's life, even when the quality of dentures provided is satisfactory, it can be a frustrating experience for the patient. Aiming to evaluate these aspects, the objective of this research was to identify, by the application of 25 questionnaires to edentulous people who use dentures, the need to replace old prosthesis by new prosthesis. It was found that 80% of the interviewees used superior and inferior dentures, 16% used only superior denture and 4% used partial (superior or inferior) prosthesis removable. The dissatisfaction with dentures was related by 64% of the individuals. Information about the use/cleaning dentures was given to 60% of the individuals. Female individuals (p=0.0308) or individuals that used inferior dentures for 20 years or more (p=0.0325) related a larger need to replace their old dentures by new dentures. It was concluded that female individuals and/or individuals who use inferior dentures show larger dissatisfaction with their prostheses, mainly due to the conflict between their perceptions and expectations of the treatment and the perceptions and expectations of their dentists. It was suggested, for the elimination or minimization of this fact, that during the initial consultation, there be a good dialogue between professional and patient.

## 197. CHEMISTRY-MECHANICAL REMOVAL OF THE CARIE WITH PAPACARIE

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The method of chemistry-mechanical removal of the carie as part of ART (atraumatic restorative treatment), which involves the use of hand instruments, relatively inexpensive, non-sophisticated, tooth conservative technique that offers the opportunity for restorative work in remote areas without electricity. The aim of this study is to discuss the papacarie, as a proposal for chemistry-mechanical removal of the carie, focusing: what is, the indications, how the gel acts about the carie and use for the oral health team in the strategy Family Health. ART is a technique recommended by the World Health Organization, suitable in certain circumstances, based on scientific criteria. One of their indications is for patients with special needs, children and adults that are dentist's afraid. It is used in small carie, averages and also deep and for scratchings of the root surface (it softens the tartar). The product removes the dentine of the superficial layer of the lesion, that is highly infected and no mineralized, without recovery possibility. It can be concluded that ART offers the population a dental treatment when the population doesn't have access to dental clinics installed and the papacarie is a product as efficient as the carisolv in the removal of carie. Being, therefore, a great alternative for the removal of the dental carie and use in the strategy Family Health.

# 194. THE INSERTION OF THE DENTAL SURGEON IN THE MULTI-PROFESSIONAL TEAM OF PATIENTS PRESENTED WITH COM FOOD DISORDERS

ARAÚJO,J.J.\*;GOYA, S.; SANT'ANNA, R. M DE F.; SALES PERES, S.H.DE C.;SALES PERES, A.; BASTOS, J. R. DE M. FACULDADE DE ODONTOLOGIA DE BAURU - FOB/USP

Food disorders (FD) are defined as deviations of food behavior which may lead to obesity, anorexia (A), Bulimia (N) and the compulsive eating. These patients must be seen by a multi-professional team, and the dental surgeon, the first professional to detect the early signs of these diseases. These patients present alterations such as dental wear, caused by stomach or food acids and the manifestations of food disorders may involve an asymptomatic increase of the parotids, xerostomia, oral mucosa irritations, cheilitis, dental sensitivity to temperature alterations, anterior open bite and radicular (root) caries. This study aimed at inserting the dental surgeon in the multi-professional team, as well as elaborating a protocol for preventive dental assistance and treatment, besides providing an integration of the dental treatment with the multi-disciplinary team. The team with the Hospital das Clínicas at Ribeirão Preto, SP, is comprised of 1 Psychiatrist, 4 Nutritionists, 2 Psychologists, 1 General Clinician, 1 Speech Therapist and a dental surgeon, the last member to be inserted in the team. One may conclude that the interaction of the multiprofessional team is extremely important and the DS may contribute in the diagnosis, prevention and treatment of oral alterations, providing these patients with benefits in terms of oral and general health.

## 196. The dentist's performance in the health promotion in labour place

GOMES,A.S.\*; QUELUZ,D.P. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The objective of this study is to demonstrate the dentist's performance in the worker's health team, promoting the health in labour place. Not to eliminate the disease, but the cause motivating the worker taking the responsibility for his oral health. Through national and international references, it can be inferred that the labour dentist is the suitable professional to promote, preserve or reestablish the worker's oral health in the different workstations. Important not only to know the oral problems that they can affect the workers directly, it should be analyzed his epidemiology and pathology concretely, as well as studying the impact that they can cause in his life quality, bringing to the surface new elements in the diseases causality analysis and why the largest occurrence. The conclusion is that the Labour Dentistry should maintain the objective of the permanent research of the compatibility between the labour activity and the preservation of the worker's oral health; for being the most efficient and effective to prevent and until impeding damages to the worker's health and of the society, defending the worker's life qual-

## 198. ORAL PAIN PREVALENCE IN SCHOOLCHILDREN WITH LOWER DENTAL CARIES EXPERIENCE

MEIRELES, M.P.R., RIHS, B.R., SILVA, R.C., SOUSA, M.L.R., CYPRIANO, S., GOMES, P.R. FOP/UNICAMP

The objectives of this study went to verify the dental pain prevalence in schoolchildren and its relationship with caries experience and treatment needs in students of 12-year-old of Paulínia city, city with very low caries experience. 413 schoolchildren were examined, of public schools of Paulínia, SP, in 2004, selected by systematic random sampling and the clinical exams were performed according to the WHO criteria (1997) for the caries diagnosis. Prevalence of dental pain was 22.8% and DFM-T in the city was 0.9 (IC=0.8-1.1). The students that told pain presented index DFM-T higher and percentile of teeth decayed higher that the one of the group without pain report (p <0.05). Besides, the schoolchildren with pain report presented percentage higher of teeth with need of healing treatment (p=0.033), presenting more indication of restorations with 2 or more surfaces (p=0.017). This way, in this municipal district with caries experience very low, the group with pain report presented worse conditions of oral health, what can be visualized not only for the treatment needs, but also for the decay experience (DFM-T) and proportion of decayed teeth.

# $199.\ \ PREVALENCE$ of Malocclusion in pre-school children in Americana - sp - brazil and its relation with social-economic status

BASSIRI, F.\*; PEREIRA NETO, J.S. FOP/UNICAMP

Planning and management of health systems depend on a set of information about the health necessities of the population and its order of priority. The aim of this epidemiological transversal study was to determine the prevalence of malocclusion in preschool children (n=160) with 5 years old, both gender, in Americana - SP Brazil, and its relation with social conditions, these evaluated through questionnaire answered by parents/legal guardians. The data had been summarized in tables by observed condition, gender, kind of preschool and social-economic status, and statistically analyzed by Chi-Square and Fisher's Exact Test. The results had shown that 39.87% of the children had presented normal occlusion. Crossbite was found in 25.62%, abnormal overjet in 32.28% and overbite in 34.59% of the sample. The higher prevalence was found in maxilar overjet (30.38%), followed by openbite (20.12%), deep overbite (14.47%) and bilateral posterior crossbite (13.75%). The social-economic status was not statistically significant for the malocclusion (p>0,05). The same it occurred with the sort and the type of educational establishment. In conclusion, the prevalence of malocclusion in the town is high and there is a demand for preventive and interceptive programs for them.

### 201. ANALYSES OF DENTAL CARIES PREVALENCE AND THE RELATIONSHIP WITH SOCIOECONOMIC VARIABLES IN PRE-SCHOLL CHILDREN FROM PIRACICABA.

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The aim of this study was evaluate the dental caries prevalence and the relationship with socioeconomic and clinical (Initial caries lesion – IL) variables in 5year-old preschool children from Piracicaba, 2005. The sample consisted of 728 pre-school children (428 attending 22 public pre-school and 300 attending 18 private pre-school). The exams were performed at the school back yard, under natural light, using dental mirror, CPI probe, air-drying and previous tooth brushing. Dental caries was measured by IL detection, dmft and dmfs following the WHO recommendations. The socioeconomic variables were collected by means of a parental questionnaire, besides of collected the school type (public and private). The mean values for dmft and dmfs were 1,30 (sd=2,47) and 3,08 (sd=7,55) respectively, and 62% of the children were caries free. The univariate analyses showed a significant association between dental caries and socioeconomic variables (p<0,0001), school type (p=0,0002) and IL (p<0,0001). Besides, school type and socioeconomic level showed a high significant association (p<0,0001). By means of multiple logistic regression analyses, only the presence of initial caries lesion was risk indicator of the disease (p<0,05). The dental caries prevalence of the sample was moderate, and the children that showed IL had more chance to developed the disease.

### 203. THE ESTIMATE OF DMFT INDEX USING THE MOST AF-FECT TEETH BY DENTAL CARIES

PEREIRA SM, PEREIRA AC, TAGLIAFERRO EPS, PARDI V, AMBROSANO GMB, MENEGHIM MC FOP/UNICAMP

The aim of this study was to determine the representativeness of each permanent tooth in the DMFT index in 2037 12 and 13-17 year-old individuals from Piracicaba, SP, Brazil. Clinical examination for dental caries was performed by calibrated dentists in outdoor setting, under natural light, using dental probe and mirror, following the World Health Organization (WHO) criteria. The sample was composed by 824 12 year-old schoolchildren in 2001, 939 at the same age in 2005 and 274 13-17 year-old schoolchildren in 2004. The distribution (absolute and relative frequencies) of DMFT index was performed in function of each tooth. Then the mean and standard deviation were calculated considering all teeth (DMFT-total) and the most affected teeth (DMFT-partial). For 12-year-old schoolchildren, 82% and 81.5% of the DMFT-total could be estimated by the status of the first molars, in 2001 and 2005 respectively. For 13-17 year-old schoolchildren, 89.4% of the DMFT-total could be estimated by the status of first and second molars and 59.5% when only first molars were considered. The means (standard deviation) DMFT-total were 1.7 (2.7) in 2001 and 1.3 (1.9) in 2005 for 12 year-old schoolchildren and 2.2 (3.0) in 2004 for 13-17 year-old schoolchildren. The means (standard deviation) DMFT-partial were 1.39(1.57), 1.9 (2.5) and 1.05 (1.40) in 2001, 2004 and 2005. The status of first molars is determinant for estimating the DMFT index in 12-year-old individuals and for 13-17 years-old individuals the first and second molars must be considered.

### 200. KNOWLEDGE OF THE HEALTH AGENTS AND EDUCA-TORS WHO PARTICIPATED OF THE JORNA ODONTOLÓGICA DE PIRACICABA IN ORAL HEALTH. **JORNADA**

DUARTE\*, H.N.; AMARAL, R.C.; SOUSA, M.L.R.; HOFFMANN, FACULDADE DE ODONTOLOGIA DE PIRACICABA/FOP-UNICAMP

The previous knowledge, of agents of health and educators in oral health, is very important, because children have the first contact with these professional about education in health. The aim of this work was to verify the current knowledge that such professionals has regarding oral hygiene and fluoride, as well as the auto-perception of the oral health, for future planning of new educative lectures to such educators. The sample was composed for 214 educators and health agents, employees of the educational establishments of preschool of Piracicaba, in which were applied a questionnaire (before the participation in the educational activity fame clinical table during the JOP – Jornada Odontológica de Piracicaba-2005. The questions were about the occurrence of the caries, oral hygiene and fluoride, as well as self-perception of oral health. 45% of the professionals believed that tooth decay occurs due the bacteria, while that 11% for sugar excess, 39% affirmed that the best way of preventing the tooth decay is brushing teeth after the meals, 58% believe that the fluoride serves for protecting teeth, 30% teach to the children technique of fones; 39% had more doubts about periodontais problems. It was observed that in the majority of the collected data, the agents of health and educators of the city of Piracicaba, has good instruction in oral health.

### 202. "escovódromo" according to the point of view of students at the first year of graduation AT PIRACICABA DENTISTRY FACULTY 9FOP/UNICAMP) IN

SILVA\*, G.G.; AMARAL, R.C.; SOUSA, M.L.R.; HOFFMANN, R.H.S. FACULDADE DE ODONTOLOGIA DE PIRACICABA-FOP/

The interaction of the students during the first year of graduation at the Piracicaba Dentistry Faculty (FOP/UNICAMP) with preschool from Piracicaba and region, during the JOP (Jornada Odontológica de Piracicaba) is important for being the first contact that such pupils has with the society and with the education aiming oral health. The objective of this present study was to know which is the importance that such pupils give to this educative project, besides knowing which difficulties were found in this project. The JOP, has an event called "escovódromo". It is composed by many activities (lunch, video, clinical table and entertainment), which objective is the children education in oral health using playful activities developed by the pupils of 1° year of graduation of the Faculdade of Odontologia de Piracicaba, together with organizer commission. It was applied questionnaires to the first year students who participated of this JOP (03 to 07 of October 2005). The possible answers for the questions were: very bad, bad, good, excellent and excellent. Of the 51 pupils who had answered, 41%, classified the entertainment as good; as well as the lunch (53%) and the clinical table (49%). The tooth brush learning activity was classified as excellent by 47% of them. It demonstrated that the activities are well accepted for the pupils, showing only fatigue (40% of the pupils) as difficulty during the accomplishment of the project.

### 204. ANALYSIS OF THE FLUORIDES CONCENTRATION OF IN THE SUPPLY WATER OF COMMUNITIES "QUILOMBO-LAS" IN THE VALE DO RIBEIRA-SP

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The Vale do Ribeira is inhabited by remaining communities of old "quilombos" that live of the harvest of the banana, the fish and the agriculture of subsistence. These communities, in turn, consume water proceeding from local water resources, without previous treatment. The water fluoridation is considered one of the measures of prevention of the caries of better cost-benefit, have been recommended a concentration of 0,7 to 1,2ppm. The objective of this work was to quantify the concentration of fluoride in the water consumed for these community's 'quilombolas", what it will make possible one better planning of future actions. The analysis was made from aliquot (each one had at least 10ml) collected in the communities and rivers of the region and carried in a plastic container until the UNESP - University of the State of the São Paulo, Scholl Pharmaceutical, Araraguara. After that fluorine was made the chemical analysis by means of selective electrode for ions fluorides. Verified them of concentration of fluoride had been well below of the recommended ones, lesser or equal the 0,2ppm. The knowledge of the concentration of fluoride in the water consumed for these individuals guides the planning of preventive maneuvers and the implementation of some form of systemic use. With this, it is intended to control index CPOD (carious, lost and obturated teeth) in this region that at the moment finds-very high.

### 205. EDUCATION IN ORAL HYGIENE. USINA DO SABER

MIGLIATO, K.L\*; PAGANINI,G.A.; MISTRO, F.Z.; MENDES,E.R.; BOZZO,R.O.; ZANIN, Ļ CENTRO UNIVERSITÁRIO HERMÍNIO OMETTO

Periodontal disease and tooth cavities are considered two of the most important diseases in public health and affect a large portion of the Brazilian population. The objective of this study was to evaluate 06 months of an educational program, directed towards children who participated in the Usina do Saber Project. Ninety children from both genders, ages 07 to 17, participated in this study. The volunteers participated in educational lectures, supervised tooth brushing and topical application of fluoride. Initially, the volunteers were assessed through the plaque index (Loe, 1967), the gingival index (Loe & Silness, 1963), dmf-t and DMF-T index (WHO, 1999). These assessments were repeated quarterly on all participants. The Friedman test was used to analyze the results at the beginning and after 3 months. The results showed that the average DMF-T was 2.88 and the average of dmft was 1.67. When each component of the index was evaluated separately it was observed that the average for the filled component (1.71) was greater for permanent teeth and the average for the cavitied component was greater for the primary teeth (0.84). An initial assessment of the plaque index showed a median of 1.83 and a final number of 1.89, not presenting statistical difference between them. The initial gingival index showed a median of 1.45 and a final number of 1.29, not presenting any statistical difference between them. It can be concluded that the proposed program was not efficient in reducing bacterial plaque or gingival bleeding. However, there was not a statistically significant reduction among the groups with respect to the tooth cavities during the proposed period.

### 207. THE SURGEON DENTIST CHOICE BY DIFFERENT AGE GROUPS PACIENTS.

MORANO, M.J; MIALHE, F.L; CARVALHO, L.M.S; FURUSE, R. FACULDADE DE ODONTOLOGIA DE PIRACICABA - FOP/ UNICAMP.

Knowing the decisive determinants that lead patients to choose a dentist is very important to the clinician that administrates his own dental clinic. Therefore, the aim of this study was to evaluate the opinions of subjects of different age groups about the factors that they consider important in selecting their dentist. The sample consisted of 75 adult subjects divided in three age groups. A questionnaire consisted of seven questions was prepared for the sample asking. It was verified that 68% of the interviewed above 45 years don't go regularly to the dentist office because of absence of money or time and seek the professional only in cases of pain. Most of the interviewed assert that they are indifferent about the age, gender and time of the dentist's time of profession when choosing a dentist. The people above 45 years old prefer consulting in dentist offices nearer their residences or their jobs. All of them affirmed that the dentist must have a clean and hygienic place. Concluding, time of profession and age of the dentist were not important factors identified by subjects of different age group in selecting their dentist, but factors such the capacity and competence of the professional on the realization of a good job, the localization of his office and his appearance was considered important factors used on choosing a dentist.

### 209. RISC CAUSED BY CONTAMINATED WASTE DEN-TISTRY.

ANDRADE, A.F.J.\* ; DIAS, F.C. ; BERTOLDI, L.F. ; FERREIRA, L.R. ; PEREIRA, P.A. ; RINK, M.C.M UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The impact of professional activities on the environment is nowadays a general concern of society. Various dentistry activities produce types of waste that may cause major alterations on the environment and result in diseases on the population if these materials are not disposed properly. This study investigates what kind of clinical waste ends up on the ordinary garbage. The authors interviewed 166 dentists in Uberlândia, MG, Brazil, male and female, equally distributed on the north, south, east, west and central zones of town, in order to get to know what are the materials deposited on the litterbins inside their clinic rooms. The results show that only 26 (15,7%) of them label the plastic bags as containers of contaminated waste, 60 (36,2%) put the biological leftovers in the general waste and 30 (18,1%) deposit with the conventional rubbish even needles used for anaesthesia injections. The general conclusion is that, likewise other activities, dentistry does generate contaminating materials, which are dangerous to the environment and to the population on that specific living area.

### 206. CARIES PREDICTION IN SCHOOLCHILDREN

TAGLIAFERRO, E.P.S.\*; PEREIRA, A.C.; MENEGHIM, M.C.; AMBROSANO, G.M.B. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

This longitudinal study aimed at determining, in 6-8-year-old schoolchildren, the predictors of high caries increment (HCI). Two hundred and six children attending three different schools in Piracicaba were examined in 1997 (baseline) and in 2004 by the same two calibrated dentists. At baseline dental caries, presence of pit and fissure sealants, fluorosis, and oral hygiene status were recorded. The children's parents completed a semi-structured questionnaire concerning socioeconomic level, fluoride usage, dental service utilization, dietary and oral hygiene habits. The dependent variable HCI was determined considering the upper quartile of the caries increment distribution. Logistic regression models were adjusted estimating the Odds Ratio (OR), 95% confidence intervals (CI) and significance levels. Schoolchildren were more prone to having HCI when they presented caries experience in primary teeth (OR=2.68; CI=1.27-5.65; p=0.0007) or when their mothers' educational level were up to 8 years of schooling (OR=2.87; CI=1.40-5.88; p=0.0031). In conclusion, mother's education and previous caries experience related variables were predictors of HCI in the studied schoolchildren.

### 208. CHILDREN OF THE URBAN AREA OF PIRACICABA AND THEIR ORAL HEALTH.

MORANO, M.J.; MIALHE, F.L; FURUSE, R.\*; CARVALHO, L.M.S. FACULDADE DE ODONTOLOGIA DE PIRACICABA - FOP/ UNICAMP

Childhood is an important period for habits and behaviors acquisitions. Therefore, the aim this study was to estimate habits, behaviors and perceptions of a group of children about their oral health. A random sample of 60 children aged between 7 and 13 years, students of two first grade schools in Piracicaba, SP, Brazil, participated the study. A questionnaire was prepared for the sample asking about their habits and oral hygiene instructions, frequency that they went to the dentist, the importance of the dentist, eating habits, knowledge about the etiology of tooth decay and about presence of dentist in their neighborhood. The result indicates that all the children have the habit of brushing their teeth once a day and that only about 10% have had the habit of using dental floss. More than 70% of the sample received oral hygiene orientation of their parents and that 45% of them only go to the dentist when feeling pain. Through the obtained result, it would be concluded that the some conceptions and habits of oral health need to be improved in this group by the implementation of educative programs in schools.

### 210. The importance of health education on the APPROPRIATE TOOTHBRUSH CARE

MIALHE, F.L.; SOUZA, H.W.\* FACULDADE DE ODONTOLOGIA DE PIRACICABA

In spite of toothbrush be the most effective instrument for the removal of the dental biofim, they are contaminated by micro-organisms which may be sources of infection. Therefore, the aim of this study was to evaluate cares adopted with toothbrushes by dental students. A questionnaire was applied to the academics of the 1st to the 5th period from dentistry course of Unioeste, PR, to evaluate the storage forms and disinfection of their toothbrushes. It was verified that, in spite of the great majority have acquired the toothbrush less than 03 months, 92.5% don't dry the toothbrush after use and only 20% use some kind of decontaminant to promote the disinfection of the bristles. About of 1/3 of the sample store the brush on top of the sink. It is concluded, starting from the results of the present study that didactic-pedagogic strategies need to be implemented during the graduation course to promoting the oral health of dental students and their patients.

## 211. WORKER'S CONSCIENCE PROGRAMS ON ORAL HEALTH IN COMPANIES

FUGOLIN, A.P.P.\*; QUELUZ,D.P. FOP - UNICAMP

The objective of this study is to demonstrate the importance of the worker's conscience programs on oral health in companies. The participation of companies in the worker's oral health and the worker's of the need understanding of attempting to eventual pathological alterations in the oral cavity. Through the national and international literature we observed that the service organization of dentistry in the worker's health begins with the company health politics, because the success or failure of service is intimately related to the value that the company gives to their collaborators. Sensitive to the importance of the oral health in the work, and recognizing the participation every time larger of the dentist in the treatment of the relative subjects to the worker's health; the companies have been demonstrating interest in inserting the labour dentist. We know that the company has fundamental paper because most of the workers stays in their work places on average for 8 hours/day, for 6 days/week; what turns the company an efficient one information center. The company is responsible partly for their workers' health and that a healthy worker pays more. We concluded that the participation of the companies in programs brings advantages for all. As the best combat is the prevention and as the prevention it only comes with information, those programs become essentially fundamental so that we get a happy population.

## 213. Multidisciplinary team's importance in the pregnant woman's oral health

MORAES, M. A. C.\*; QUELUZ, D. P. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The aim of this study was to demonstrate the multidisciplinary team's importance in the pregnant worker's oral health. The collection of data was accomplished through national and international references and experience report. It is of fundamental importance the development of activities related to the oral health promotion, looking for to become aware the parents that the preventive treatment begins in the first years of life. Developing preventive programs in the industry, focusing pregnant workers, these are educated and become aware by the health professionals' multidisciplinary team, focusing doctor/ obstetrician/pediatrician and dentist. The conclusion is that is fundamental importance the development of activities as lectures to pregnant workers, mothers for a very prepared team to promote oral health in the industry, always emphasizing her as part of an individual's general health.

### 215. SOCIAL DENTISTRY: HOW TO PROMOTE HEALTH

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The aim of this study is to demonstrate that it is possible a participation more students' active and of the professionals dentists in the oral health, guiding with base in their knowledge that the primary prevention is the so much ideal on the biological side as for the economical. The mouth is the "door of diseases" as the dentist well graduate is capable to act so much in the prevention: of oral diseases as of systemic diseases. Through a good oral habits it is possible to control the resident bacteria number in the mouth and to reduce the chances of having problems as: decay, periodontal disease, ulcers, bacterial endocardit, gastro-intestinal diseases, etc. Students and professionals of the oral health should join to dedicate time in the health promotion because, the prevention continues being the best solution. We ended that with a larger number of professionals if making available to participate in social actions, more people can be benefited, contributing like this to the improvement of the oral health of the Brazilian population.

### 212. DENTISTRY OCCUPATIONAL HEALTH

BARROS, A. C. M.\*; QUELUZ, D. P.; SCHMIDT, C. M.; MAROTE, I. A. A. FOP-UNICAMP

The purpose of this work was to evaluate the dentistry occupational health. Three hundred workers male of companies from Piracicaba/SP attended educational-preventive lectures about dentistry occupational health focusing: carie, periodontal disease, tobacco smoke habit, alcoholism, oral cancer and the labour activity developed with the preservation of the oral health. After lecture, there were discussion groups, distribution of education pamphlets and demonstration of the referred subjects in educational models. After results analysis in relation to the workers' participation in the discussion groups observed: interest in the approached subjects, the minority presents knowledge about oral health, ignorance of the oral health problem of occupational. Employers look for the service labour dentist, to detach a social commitment with the worker, better quality of his employee's life and decrease of the absenteeism. To emphasize that the employers were shown satisfied with their employees' interest. The conclusion is that the worker's health started to have a new definition and interest, should be understood as expression of population life quality and not only attention with the disease and the labour misfortune.

## 214. ORAL HEALTH PROFILE IN UNION DENTAL CLINIC' WORKERS FROM LIMEIRA/SP REGION

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This study evaluated the oral health profile in Union dental clinic' workers from Limeira/SP region. The collection of data was accomplished through 360 dental clinic handbooks from 2003 to 2005 on demographic characteristics and accomplished treatment. After analysis of the results we observed that 100% are resident from Limeira; prevailing the service to the dependents; number of visits to the dentist/year and number of maintenance/year visit was larger in 2003; 91.9% parcel out the payment of the dental treatment; number of emergency/year visit was larger in 2005; the percentage decreased in relation to the number of periodontic procedures (scratching supplies gengive)/year, number of prophylaxes executed /year, number of executed prostheses (removable partial prosthesis, total prosthesis and fix prosthesis)/year; and the percentage increased in relation to the number of restorations of resin composed executed/year. Concluded that the users have been using the more service for restorations than for surgery, evidencing the improvement of the oral health and the quality of these workers' life.

# 216. Masseter and temporalis muscle thickness of children wearing removable dental prosthesis – a six-month evaluation

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Ultrasonography (US) adds valuable information to the conventional examinations of jaw muscle functions and the interaction within the craniomandibular system. The aim of the study was to evaluate the effect of a dental prosthesis in the masseter and temporalis muscles thickness of 25 children 6 to 9 years old, with early loss of primary molars. Muscle thickness was measured using the Just-vision 200 digital US system. Besides that, the subjects' body height and weight were measured through a scale, and the facial morphology was evaluated on photographs, in order to correlate to the muscle thickness, before (t0) and after six months (t6) of the rehabilitation. When indicated, paired or unpaired t tests, Wilcoxon or Mann-Whitney tests, Spearman's or Pearson's coefficients were applied. It was not found any statistical significant difference between genders in any of the variables. The contracted muscles were thicker than the relaxed ones, with statistical difference (p<0.05). The masseter muscle thickness, body weight and height were significantly larger in to and correlated at the second evaluation (p<0.05). It was not found any correlations between facial morphology and the muscle thickness (p>0.05). The findings of this study suggest that a removable dental prosthesis improved the function of the masticatory system, increasing the size of the masseter muscle.

### 217. SAFE USE OF CO2 LASER ON THE REDUCTION OF ENAMEL DEMINERALIZATION

STEINER-OLIVEIRA, C.\*; RODRIGUES, L.K.A.; SOARES, L.E.S.; MARTIN, A.A.; ZEZELL, D.M.; NOBRE DOS SANTOS, M. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Studies have shown that enamel can be modified by pulsed CO2 laser to form a more acid-resistant substrate. The aim of this study was to establish the lowest energy fluency of a pulsed 10.6  $\mu m$  CO2 laser that, when applied on enamel surface, is able to cause chemical and morphological changes and to reduce its acid solubility, without causing pulpal harm. Thermal analysis through a thermocouple was performed during irradiation of 75 human teeth with 1.5-11.5 J/cm2. Enamel chemical composition was assessed, through FT-Raman spectroscopy (FRTS), in 5 teeth of each experimental group both before and after irradiation procedures and afterwards, morphological changes in irradiated enamel were observed by Scanning Electron Microscopy (SEM) analysis. The remaining 10 teeth of each group along with the control group (n=10) were submitted to a pH-cycling model and the enamel mineral loss was determined microhardness. For all irradiated groups, intrapulpal temperature changes were below 3.0°C. FRTS and SEM indicated that fluencies as low as 6.0 J/cm2 induced chemical and morphological changes in enamel (p<0.05). Laser-induced inhibitory effects on enamel demineralization were observed with fluencies from 10.0 J/cm<sup>2</sup>. This study showed that the lowest laser fluency capable of producing chemical and morphological changes to reduce acid reactivity of enamel without exposing pulp vitality to danger is 10.0 J/cm<sup>2</sup>.

## 219. CONGENITAL AGENESIS OF PREMOLARS RELATED TO SUBMERGED PRIMARY MOLARS AND PEG-SHAPED LATERAL INCISOR: A CASE REPORT.

STEINER-OLIVEIRA, C.; SILVA, C.M.S.\*; GAVIÃO, M.B.D.; SANTOS, M.N. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The combination of infra-occluded primary molars and agenesis of the permanent successors is considered rare. This condition progresses with increased severity since the primary teeth do not usually exfoliate spontaneously. The clinical examination of a ten-year-old girl revealed a symmetrical face. At intraoral examination, she presented an Angle class II molar relationship, four submerged second primary molars, agenesis of all second premolars and a lingual positioned peg-shaped right maxillary lateral incisor. A slight mesial tipping of the right and left mandibular first permanent molars was also observed. With regard to the treatment of the lingual positioned peg-shaped right maxillary lateral incisor, first orthodontic therapy would be necessary to bring it to an adequate position and afterwards, treatment by reshaping its ideal contours with an esthetic bonding procedure. The parents decided to continue with the definitive orthodontic treatment at a postponed time. The approach in this case was surgical treatment with the extraction of the submerged teeth and installation of removable appliances to maintain the space and the vertical dimension. In this way, it was possible to rehabilitate the patient, who continues at periodical follow-up until a postponed stage when a new planning will be performed to finish the case.

#### 221. GENERALIZED ODONTODYSPLASIA: A CASE REPORT.

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Generalized odontodysplasia is rare and a nonhereditary developmental anomaly involving both dentitions. The characteristic findings are hypomineralised and hypoplasic teeth, short roots, wide-open apical foramen, and large pulp chamber. Etiology and prevalence are unknown. However, for regional odontodysplasia the data are: 1.7:1 sex ratio of females to males; maxilla was more often affected than mandible; 10.7% missing tooth development; 39.7% failure of tooth eruption. The aim of this study was to describe the characteristics and clinical management of an 10-year old patient with a probable diagnose of generalized odontodysplasia followed by 8 years. After the anamnesis, clinical and radiographic exams it was observed caries lesions and malformations of the primary teeth. Permanent teeth showed thinness and poor mineralization quantities of the enamel and dentin layers. The executed treatment was aesthetic restorations in 12-22; 55,53,63,64,65,36,75,74,73,72,83,84,46 extractions, and removable functional space maintainer. It was concluded that therapeutic decisions must be based on the degree of involvement and case's functional and aesthetic needs. The removable functional space maintainer was an adequate primary treatment option during the period of mixed dentition. Definitive treatment will include prosthetic rehabilitation with implants or total prosthesis once the patient reaches adulthood.

#### 218. ORAL REHABILITATION IN YOUNG CHILDREN

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Early childhood caries is a public health problem with an extremely high prevalence in Brazil. The treatment of young children can be challenging because they are often anxious during dental situations and their level of cooperation is restricted. However, successful treatment may be possible through behavior management techniques. The male patient J.D.J.N., 3 years old, and his responsible came to the Emergence Service of the School of Dentistry at Araraquara-UNESP, complaining about dental pain and difficulties in eating. The diagnosis after anamnesis, clinical and radiographic examination was severe early childhood caries involving most of the deciduous teeth and resulting and vertical dimension loss. The treatment plan included an initial phase of oral environment stabilization procedures (together with pulp therapy and extractions) associated with diet counseling and oral hygiene instructions. Following, the vertical dimension was reestablished by the use of stainless steel crowns in the molar teeth. To finalize the oral rehabilitation, five indirect composite resin crowns with intracanal posts were cemented and one direct crown was performed using acetate matrix. The reestablishment of the oral health conditions is essential for the harmonic functionality of the stomatognatic system, which will favor the adequate growing and development of the child.

### 220. HOMOGENOUS DENTAL BONDING OF A FRACTURED CROWN – 18-MONTH FOLLOW-UP

PAPA, A.M.C.\*; CASTELETI, M.G.; PUPPIN-RONTANI, R.M. FOP/UNICAMP

Traumatic injuries in the permanent teeth of children and adolescents are one of the most frequent causes of dental treatment. Anterior tooth fractures can be restored utilizing treatment modalities from various dental specialties. A clinical case treatment of a maxillary central incisor in a child with a 1rst division CI II Angle is presented. As an alternative to repair the incisor with a fractured crown was the bonding of the original tooth fragment (homogenous bonding). This procedure was used due to it preserves the natural tooth structure while allowing light, color and wear resistance closest to the natural teeth. Considerations were taken about the technique and the advantages for the cost, aesthetic, quickness of execution and stability. By highlighting the importance of light, color, and longevity, this case presentation documents the use of a homogenous bonding technique for the rehabilitating a permanent central incisor of a child. The follow-up period was from 18 months. The patient present no signs or symptoms of pulpal inflammation or necrosis during the clinical examination. We concluded that the technique is fast, efficient and provides favorable results.

#### 222. EFFECT OF CO2 LASER COMBINED WITH FLUORI-DATED PRODUCTS ON INHIBITION OF DENTAL ENAMEL DEMINERALIZATION

LIMA, E.B\*; RODRIGUES, L.K.A; STEINER-OLIVEIRA, C; NOBRE – DOS - SANTOS, M. FOP - UNICAMP

The purpose of this in vitro study was to assess the combined effects of a 10.6  $\mu m$  CO2 laser, fluoridated dentifrice and fluoridated mouthrinse on the reduction of lesion progression in carious human dental enamel. Slabs of previously demineralized dental enamel were randomly assigned to nine groups (n = 10), either treated with CO2 laser or not, with/without fluoridated dentifrice, and with/without fluoridated mouthrinse. After a pH-cycling procedure, fluoride concentrations were determined in the de- and remineralizing solutions, qualitative polarized light and cross-sectional microhardness test analyses were performed to quantify changes in enamel mineral content. All treatments were able to decrease mineral loss when compared with the control group (p < 0.05). Moreover, except for the association of laser with mouthrinse, all combined treatments caused enamel remineralization. In the present study, demineralization progression inhibition ranged from 48% to 60%. The results suggested that the CO2 laser irradiation alone or combined with fluoridated products provided effective protection against demineralization progression in dental enamel. However, the combined fluoride-laser or fluoride treatments did not show any significant additional demineralization inhibitory effect.

#### 223. MASTICATORY PERFORMANCE BEFORE AND AFTER ORAL REHABILITATION IN CHILDREN

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The aim was to obtain information on the masticatory performance of 25 partially edentulous children aged from 6 to 9 years before and after completion of prosthetic rehabilitation. The subjects received treatment during which missing deciduous post-canine teeth were replaced by a removable partial denture that also functioned as a space maintainer. The masticatory function was determined objectively by chewing 17 cubes of artificial test food (3 cm3) during 20 chewing strokes. The degree of fragmentation of the chewed food portions was determined by the sieving method (median particle size and broadness of the distribution). Body variables, weight, height and the body mass index, as well as performance masticatory were assessed before and 6 months after the placement of the removable prosthesis. There were no significant gender differences, either in the first or second session, for all variables. The masticatory performance improved significantly after 6 months of oral rehabilitation (p<0.001), as well as the weight and height (p<0.001). It was concluded that the removable prosthesis was adequate to replace the missing posterior primary teeth, giving the possibility to reestablish the function of the masticatory system, improving the masticatory performance.

#### 225. ROBIN SEQUENCE: TYPES OF RESPIRATORY OB-STRUCTION AND ITS TREATMENTS.

FREITAS, M. C. M.\*; GOMIDE, M. R.; PERES, J. A.; COSTA, B.; HOSPITAL DE REABILITAÇÃO DE ANOMALIAS CRANIOFACIAIS - USP / BAURU - SETOR DE ODONTOPEDIATRIA

Robin sequence is a congenital anomaly characterized by micrognathia, glossoptosis, with or without cleft palate, which is clinically expressed as recurrent attacks of cyanosis, and difficulty in breathing and swallowing. In addition, glossoptosis is only one of the etiological mechanisms responsible for breathing difficulties.

The infant with Robin sequence has not only breathing problems, but

feeding difficulties as well. In a nasopharyngoscopic study, Sher, et al. (1986) classified respiratory obstruction into four types: Type 1: resulting from the posterior displacement of the tongue with comresulting from the posterior displacement of the tongue with compression of the soft palate against the posterior wall of the pharynx; Type 2: resulting from the posterior displacement of the tongue with compression of the soft palate against the posterior wall of the pharynx; Type 3: resulting from the medial movement of the lateral pharynx; Type 3: resulting from the medial movement of the lateral walls of the pharynx obstructing the airways; and Type 4: sphincter contraction of the pharynx, with the tongue not touching the posterior wall of the pharynx. There are different types of treatment for relieving the great respiratory discomfort: prone position, nasopharyngeal intubation, tracheostomy, glossopexy and mandible distraction. The aim of this study is to describe the nasopharyngoscopic findings and its treatments.

#### 227. THE IMPORTANCE OF THE KNOWLEDGE OF THE SYN-DROMES IN THE DENTAL ATTENDANCE

FACULDADE DE ODONTOLOGIA DE PIRACICABA - FOP - UNICAMP

The pathological alterations of development with genetic origin generally are detected in infancy and possess particularitities of dental interest, which justify the necessity of the boarding in precocious age. Thus, in this study, we will describe three anomalies: Picnodisostosis, that characterizes presence of open cranial sutures, hipoplasia of the mandibular angle, bone condensation generalized and deciduous tooth retention; Syndrome of Freeman-Sheldon or displasia skull-carpotársica, that denotes longitudinal mentum ridges and sublabial), hipoplasia of nose wing, deviated retrognathia, buccal low commissure, atresia palati, limitations of articulation; and Syndrome Pierre Robin, that consists of mandibular hipoplasia, respiratory difficulty and congenital cardiac defect. These anomalies, beyond diverse others, also present consequence in the development of oral structures, thus, are the most importance that Dentist has a minimum of knowledge for accomplishment of the attendance of this profile of patients, can carry through a careful boarding, guiding familiar how much the importance of the supervised oral hygienic cleaning, a time that the conditions of buccal health, usually, are deficient. The integration with the support areas, which are, Medicine, Speech Pathology, Physiotherapy, among others, are essential to establish the treatment plan.

#### 224. SURVIVAL ANALYSIS FOR ART RESTORATIONS – 12 MONTH-EVALUATION

SACRAMENTO PA\*, BORGES AFS, BUONGERMINO RC, PUPPIN-RONTANI RM FOP- UNICAMP

OBJECTIVE: To compare the clinical performance of two Conventional Glass Ionomer Cements (CGIC), Ketac Molar e Fuji IX, used in Atraumatic Restorative Techinique (ART). MATERIALS AND METHOD: Schoolchildren aged from 6 to 9 years were selected from Piracicaba-SP, with high caries activity in primary teeth. The infected dentin of primary molars was removed with dentin carver and the affected dentin was left intact. A total of 141 restorations (class I and class II) were performed using Ketac Molar and Fuji IX in a split mouth design. Evaluations were made by direct inspection after 0, 3, 6 and 12 months. Pre-determined scores were used (Frencken e Hölmgren, 1999). Data were submitted to Wilcoxon test (evaluation period), Mann-Whitney test (material/ period) and Log-Rank Survival test (p<0.05). RESULTS: For Class I Fuji IX restorations, there was no statistical difference among the evaluation periods, but for Ketac Molar there was a significantly statistical decrease in the success rate after 3 month-period. Regarding class II restoration there was an initial decrease of success for both materials, which was kept for KM. While Fuji IX showed decrease at 6-month. There was no significantly statistically difference between materials in the same evaluation period for class I and class II restorations that showed similar success rates (survival). CONCLUSION: Restorations accomplished with both materials showed high survival rates after 3, 6 e 12 months, being able to use as a restorative material for ART.

#### 226. DIAGNOSIS AND MANAGEMENT OF INTRUSION IN-JURIES IN PRIMARY TEETH

GIANOTTO, R.M\*; GONDIM, J.O.; GIRO, E.M.A.; NETO, J.J.S.M.; MASTRANTONIO, S.D.S. FACULDADE DE ODONTOLOGIA DE ARARAQUARA - UNESP

The traumatic injuries present a high prevalence in primary as in permanent teeth and may result in injuries in soft, bone, dental and periodontal tissues. Primary teeth are highly susceptible to luxation injuries and this can be attributed to the resiliency of the alveolar bone, characteristic of growing skeletal tissue, resulting in higher elasticity of alveolar bone surrounding the deciduous teeth. An intrusion injury is described as an axial displacement of the tooth deeper into the alveolar socket and its management depends mainly of the direction and severity of the displacement. Then, the diagnostic plays an important role in deciding the appropriate treatment: waiting for spontaneous reeruption when the root of the primary tooth becomes away from the permanent tooth germ, or extraction when the permanent successor tooth may became injured. The aim of this study is to present clinical cases and discuss de diagnosis and the different managements of this kind of injury.

### 228. DENTAL CARE IN HOSPITAL: REALITY AND NECES-

MELONI, TJ\*; LEME, FVR; BELLO, IR; SOUZA, PC; ALKMIN, TY; UEMURA, ST. FUNDAÇÃO HERMÍNIO OMETTO - UNIARARAS

Several factors interfere in dental treatment for patients with special needs: systemic conditions, behavioral alterations, accumulated dental requirements, intolerance to local anesthetics and compromised intellectual and physical conditions. Thus, although many of these patients would be in a position to have in-office dental treatment (Aguiar et al., 2003.) in some cases, attendance in hospital has presented as the form of treatment with reduced risk and attendance time. The aim of this work is to report on hospital dental attendance offered by the \"Fundação Hermínio Ometto - Uniararas" dental course discipline for patients with special needs. In accordance with the need to expand the dentist's field of activity, students are offered training and education for hospital attendance, learning about interdisciplinary action through interaction with the medical team, as well as enabling the patient with limitations for receiving ambulatory attendance at the clinic to be treated. It was concluded that dental treatment in hospital is a reality and necessity in professional education, in order to provide treatment for the patient with limitations for receiving ambulatory clinical attendance.

#### 229. CLINICAL DESCRIPTION OF LABIAL FRENECTOMY

MARIANO, F.V.\* ; GUIRADO, C.G. FOP-UNICAMP

The labial frenectomy is constituted in the surgical removal of the labial brake, it bends of mucous membrane and fabric fibrous prisoners on a side to the surface it interns of the lip, and, of the other, to the alveolar bone, until the papila of the vestibular gum, among the central incisors. The brakes when abnormal they can come hipertrofiados and fibrosados, causing some oral problems. The form, size and anatomical position of the labial brake suffer variations, being some of them wide, very resistant and could extend until the palatine gum. The frenectomy of the labial brake is done when: \*To occur isquemia of the vestibular gum to the pull the brake, sign

\*To occur isquemia of the vestibular gum to the pull the brake, sign that the same is inserted in irregular position; \*To occur retraction gum; \*To exist among incisors of the permanent headquarters; \*Obstruct the cleanness; \*For cause of problems periodontics and occlusion; \*To be in a clear way the diagnosis of the brake of type persistent labial roof;

bectision, 10 of a transfer persistent labial roof; We will tell the steps of a labial frenectomy accomplished in a child of the feminine sex with 8 years of age. Such procedure was accomplished at the Clinic of Graduation of FOP/UNICAMP, for the own student with supervision of Profa. Dra. advisor. The reason, was the mother's solicitation through consultation with the dentist of the family and the confirmation of the real need of this intervention.

## 231. THE CONTROL FOR ANXIETY AND FEAR ASSOCIATED WITH SURGICAL TREATMENT IN CHILDREN IN CHILDREN – LITERARY REVISION

FERNANDES, S.\*.; BORBOLLA, R.R.; CIRELLI, C.H.; COSTA, C.; GIOVANI, E.M.; DIB, L.L.

When the psychological conditioning is not enough to reduce stress the use of pharmacologic resources becomes necessary many times with the purpose of obtaining cooperation and tranquility. The applicant patients for a pré-medication are the ones who present behavior problems, lack of physical or mental condition and the use of thius kind of handling seems to be affective in cases of surgical procedures in apprehensive, resistant and rebel patients. In this paper there has been a literary revision about the medication use for anxiety control and fear associated with the surgical treatment in children with nitrous oxide, chloral hydrate, benzodiazepine and antihistamine. For a safe pré-medication the ideal agent must be affective, fast absorbed not irritating, must not depress, the vital functions and have the least collateral effects. Thus, we conclude that the sedation does not substitute children's behavior handling techniques, raise the threshold of pain perception, reducing stress and favoring the cooperative behavior of the child during the execution of the odontologic treatment, it does not substitute general anesthesia inhalation which has to be done by an anesthetic doctor in a hospital environment, it is safe and efficient since it is done by a trained professional.

#### 233. STORY OF ALVEÓLISE IN DECIDUOUS CENTRAL IN-CISOR

GONÇALVES, A. C.\*; LUCCHESI, A. S. R.; PINHEIRO, S. L. PUC-CAMPINAS

Patient of 9 years of age, looked the Clinic of Odontopediatric of the PUC- Campinas because of 51 not to have exfoliate, but of 11 had erupted and possess the formation complete a of radix. The 51 to present reabsortion to radicular, but same continued adhere gingival, reated of alveolise - lise of the alveolar bone vestibular, caused in the necrosis. The objective from that case went eliminate the focus infective and augement the self-esteen of patient, and he had difficulty of to bush the place. Then decide for in the to move again surgical and no haved necessity of suture. With that's the focus infective went move again and the esthetic of the patient recuperate.

### 230. FLUORIDE DENTIFRICE IN CHILDREN- LITERATURE REVISION

RIBEIRO, KAF\*; COUTO, JDS; SOUZA, PC; ALKMIN, YT; UEMURA, ST; MELONI, TJ. FUNDAÇÃO HERMÍNIO HOMETTO - UNIARARAS

This used to be was the main source of fluorine a few years ago, but actually there are various sources that can provide fluoride for the children; mouthwashes, gel and varnish for professional application and fluoride dentifrices. Evidences suggest that multiple exposures to these different vehicles have led to both a decreasing caries experience and an increased prevalence of dental fluorosis among children. The dental fluorosis occurs in result of the fluoride ingestion in high doses during the period of formation of the tooth. The regular toothbrush with fluoride dentifrices is the procedure more used of oral health care, being that the fluorine in the dentifrice is associated to the increased of fluorosis. Children with less than 5 years approximately ingest 30% of the used dentifrice (CURY, 2001). This study looked for given it to literature regarding the use of fluoride dentifrice. The use of the fluoride dentifrice can be initiated from the 2 years of age (DEAN, HUGHES, 1995) being recommended the dosage though the "Cover Technique" (CHEDID, 1999, for children of age between 3 and 8 years the amount is determined by the "Transversal Technique "and above of this age the "Longitudinal Technique can be used (KRAMER et al., 1997). One concludes that fluoride dentifrice must be used in children, independent of the risk criteria, with orientation and supervision.

### 232. ADAPTATION OF TOOTHBRUSHES FOR CEREBRAL PALSY PATIENTS

BONATTI, C\*; MELONI, TJ; POLETTI, SS; SOUZA, PC; ALKMIN, YT; UEMURA, ST. FUNDAÇÃO HERMÍNIO OMETTO - UNIARARAS

Cerebral Palsy is the term used to designate a group of non-progressive motor alterations, resulting from a lesion in the brain during the first stages of its development (Souza, 1998), characterized by persistent movement and posture disorder, which in spite of arising from a fixed condition, may change as a result of biological factors directly related to the maturation processes of the central nervous system, environmental and circumstantial factors. As a result of this, motor involvement is always present, and these patients have difficulty in performing their oral hygiene, as they are unable to hold a toothbrush, have difficulty in raising their hands or arms, or have limited opening and closing of the hands. The aim of this study is to present adaptations to toothbrushes to overcome the difficulty of holding them, or of moving hands and arms, to enable the cerebral palsy patient to perform its oral hygiene. It was concluded that knowledge of motor alterations and toothbrush adaptations make it easier for cerebral palsy patients to take care of themselves.

### 234. PERIODONTAL TRANSOPERATIVE RESTORATIVE TREATMENT ON MAL FORMED TOOTH ENAMEL

KAMIGASHIMA, G.L.\*; SALMON, C.R.; STEINER-OLIVEIRA, C.; PERES, R.C.R. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Enamel hypoplasia is a very common congenital defect resulting ambiental conditions, either by systemic or local factors or still by hereditary factors. Enamel hypoplasia consists of an incomplete formation of the enamel matrix due to ameloblast cells alterations and can affect either the primary or the permanent dentitions. FOP/UNICAMP under-graduate clinical pediatric patient JVRA, 11 years old, presented an enamel mal formation associated with a longitudinal fissure on the distal third of the vestibular surface of tooth 21. Clinically, it was verified that the fissure extended subgingivally, enabling dental biofilm accumulation and consequent cervical and distal gingival hyperplasia, causing and unfavorable aesthetic and poor hygiene management. The proposed treatment was a periodontal surgery in which a gingivectomy followed by a minimal osteoplasty was performed while a transoperatory restorative procedure with photoactivated resins was done only on enamel, supragingivally, and respecting the biologic space limitations. After the procedures, the gingiva achieved a more uniform contour enabling a better local hygiene and a more favorable aesthetic to the patient.

#### 235. INDIRECT RESTORATION - CASE REPORT

PRIMITZ, V. H; SOUZA, P. C.; SILVA, R. C.; ALKMIN, T. Y; IMPARATO, J. C. P; UEMURA, S. T. FUNDAÇÃO HERMINIO OMETTO - UNIARARAS

Restorations of large coronal destruction have always been a problem in Pediatric Dentistry due to the clinical time required. With the development of adhesive techniques, indirect reconstruction using composite resin has been an option for restoring primary teeth with large coronal destruction, because although there is need for a laboratory step, the reduction in clinical time is extremely important when treating the pediatric dental patient. Furthermore, the technique provides satisfactory ethical and functional results. This work reports a clinical case of a patient attended by the Dentistry Course, at the Fundação Hermínio Ometto-UNIARARAS clinic, presenting large coronal destruction of tooth—. After molding the cavity preparation, the maxillary and mandibular arches were molded, and with the plaster models obtained, the composite resin restoration (Filtek Z 250-3M) was confected. After anesthesia and isolating the operating field, the restoration was cemented with resinous cement (Enforce 3M). It was concluded that the indirect restoration of large coronal destruction is a technique with satisfactory ethical and functional results, and is well accepted by pediatric dental patients.

### 237. MORPHOLOGICAL CHARACTERISTICS OF CLEFT LIP AND PALATE AND RELATED DENTAL ANOMALIES

PERES, J. A.\*; GOMIDE, M. R., FREITAS, M. C. M., NEVES, L. T. HOSPITAL DE REABILITAÇÃO DE ANOMALIAS CRANIO-FACIAIS - USP/BAURU - SETOR DE ODONTOPEDIATRIA

Cleft lip and palate is the most common among the congenital craniofacial anomalies and the incidence in Brazilians is 1:650 in lives born. It involves the middle facial third with maxillary involvement affecting esthetics.

Due to the diversity of characteristics of clefts, it is necessary to use a classification.

Clefts may be divided as unilateral, bilateral or median cleft lip; unilateral or bilateral complete cleft lip and palate; cleft palate and rare facial clefts. These patients usually present dental anomalies such as agenesis, misaligned teeth, supernumerary teeth, enamel hypoplasia, fused teeth, changes in size and shape usually on teeth near the cleft. The objective of this paper is to present the morphological characteristics of various types of cleft lip and palate, in order to help the dentist to properly treat the patients, knowing the limitation and possible dental alterations secondary to each type of cleft.

## 239. ARTIFICIAL CARIES DEPTH ANALYSES OF PRIMARY AND PERMANENT DENTIN BY CONFOCAL LASER SCANNING MICROSCOPY

CARVALHO, F.G.\*; FUCIO, S.B.P.; MATTOS-GRANER, R.; SINHORETI, M.A.C.; PUPPIN-RONTANI, R. FACULDADE DE ODONTOLOGIA DE PIRACICABA- UNICAMP

Confocal laser scanning microscopic (CLSM) is used to visualize the autofluorescence dentin, allowing analyze the caries depth. The aim of this study was to compare two methods of analysis (CLSM and scanning electron microscope - MEV) of caries depth produced by biological and chemical models in permanent and primary dentin. Six primary molars and six pre-molars were used in this study. The oclusal enamel was removed. In adjacent dentine was performed a window (4x2mm) for caries development, a nail-varnish was applied in all sample, except on the window. Half of samples were immersed in acid gel per 14 days and the other half was immersed in broth BHI with S. mutans per 14 days and renewal of culture media was made every 48 h. The caries depth was analyzed in CLSM and the same sectioned surface analyzed was replicated with a silicone rubber impression material and epoxy resin for analysis in MEV. The data of CLSM and MEV were submitted to Linear regression (p<0.05). There is no significant relation among the caries artificial models, permanent and primary teeth. For deep carious measurements, there was significant relation only for primary teeth (75.5%), regardless of caries artificial model. Relation of caries depth between CLSM and MEV was only observed in primary teeth, regardless of caries artificial model.

### 236. CORONAL RECONSTRUCTION IN A PATIENT WITH MULTIPLE COMPROMISED SYSTEMIC CONDITIONS.

GASTALDI, SI\*; SIMPLÍCIO, G; ALKMIN, YT; SOUZA, PC; UEMURA, ST. FUNDAÇÃO HERMÍNIO OMETTO - UNIARARAS.

The aim of this study is to relate the clinical case of a patient, a 12 yearold boy with Diabetes, hypothyroidism, and Hischsprung disease or congenital megacolon, which is an abnormal innervation of the intestine (aganglionosis), causing colon dilation and motility disturbance of the more distal segments. The patient general presents with absence of meconium elimination in the first 48 hours of life and subsequent constipation. The incidence is 1 in 5000 newborn, males being predominantly more affected in the ratio of 1:4. The patient was submitted to corrective surgeries of the intestine, suffering transoperative cardio-respiratory arrests that resulted in intellectual compromise and motor alterations, which aggravated the difficulties in dental treatment. The patient visited the "Fundação Hermínio Ometto - Uniararas" clinic for patients with special needs, presenting with crown fracture of tooth 41, as a result of dental trauma. After endodontic treatment, the tooth was reconstructed using an intra-canal fiberglass post (Reforpost®), cemented with resinous cement (Enforce®), a celluloid crown (Able®) and composite resin (Filtek Z250®). It was concluded that coronal reconstruction using a fiberglass post and celluloid crown presented a satisfactory esthetic and functional alternative for reconstructing young permanent teeth, in patients requiring reduced clinical attendance time.

## 238. THE EVALUATION OF SALIVARY CORTISOL LEVEL IN YOUNG ADULTS WITH TEMPOROMANDIBULAR DISORDERS

ANDRADE, A.S\*, GAMEIRO, G.H, PEREIRA, L.J, GAVIÃO, M.B.D FACULDADE DE ODONTOLOGIA DE PIRACICABA

The evaluation of the psychological factors is important in the control of pain associated with temporomandibular disorders (TMD). The aim of this study was to evaluate the levels of salivary cortisol in 20 young adults with TMD, selected in agreement with the criteria established by RDC (Research Diagnostic Criteria) / TMD. The control group was composed by healthy individuals. Due to the circadian rhythmicity of cortisol, the saliva samples were collected at 7-8 h and 20-22 h. The cortisol levels were measured by an enzyme immunoassay kit. The depression and somatization levels were assessed according to the axis II of RDC. The data were analyzed through the descriptive statistics, paired t-test, independent t-test, chi-square tests and Fisher exact test. The female group with TMD showed salivary cortisol level higher than the corresponding control group in the morning evaluation. The depression scores were higher for the female group with TMD in relation to the control groups and to the male groups with and without TMD. Regarding the somatization, the groups with TMD showed scores higher in relation to the controls, being also significantly higher for the females in relation to the males in all of the groups. It was concluded that the cortisol levels are increased in women with TMD, in whom depression and somatization scores were elevated.

## $240.\ \text{Re-establishing mesio-distal dimension after}$ loss of space due to caries lesion on proximal face – case report

CASTRO, RWA\*; SA FERREIRA, EM;PALMIRO, GT; SOUZA, PC; ALKMIN, TY; UEMURA, ST. FUNDAÇÃO HERMÍNIO OMETTO - UNIARARAS

The presence of caries lesion on a proximal face causes a situation of proximal contact imbalance between the neighboring teeth that migrate in order to re-establish these contacts. As a result, there is loss of arch length, which would make it difficult to re-establish the mesio-distal dimension when restoring the tooth affected by the caries lesion. Depending on the patient's sensitivity to pain, the area involved, the periodontal conditions, this procedure can be performed with an immediate method, using mechanical separators, or by the mediated method, using materials which, by imbibition with saliva, compression or by resilience, develop a slow force of action when placed between the teeth, gradually separating them, does not damage the periodontium. The aim of this work is to present a clinical case in which, use of a method to separate teeth as a means of recovering space lost as a result of proximal face caries lesions, enabled the tooth affected by the disease to be restored and the mesiodistal dimension to be re-established, without damaging the periodontal tissues, and with good acceptance by the pediatric dental patient. It was concluded that mediated separation with the use of elastic rings, in spite of requiring more than one consultation, enables space to be recovered efficiently, without damage to the periodontal tissues and with good acceptance by the pediatric dental patient.

Papacárie® gel

### 241. CHEMO - MECHANICAL CARIES REMOVAL WITH PAPACÁRIE® GEL- A CASE REPORT

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New materials and techniques, aiming to reestablish dental esthetics and function, and to preserve the maximum of healthy structure, plow of major concern in dentistry today. The Papacárie® gel is a material able to removes carious tissue, and to further denaturation of the infected and necrotic dentin, without removing its capacity of regeneration. The vantage of being the method performed without pain, with the uses of scarves, and without anesthetics and the uses of drills. It goes these reasons, this study have the objective presents the clinical marries using Papacárie® gel, with the presentation of his application protocol in sharp decay lesion. The pediatric pacient MR, feminine gender, with 5 years of acts, leukoderma, presents lesions of sharp decays in the deciduous teeth 74 and 75 without involvement pulpar This technique was indicated due to its easy utilization, since it donate not require the uses of rubber dam, anesthetics and drills. Like this, that material an alternative in daily clinical treatment in lesions of sharp decays without involvement pulpar, mainly in pediatric dentistry. Key Words: dental decay, chemo mechanical decay removal,

## 243. BITE FORCE AND ITS CORRELATION WITH SIGNS OF TEMPOROMANDIBULAR DYSFUNCTION IN MIXED AND PERMANENT DENTITION

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The aim was to evaluate bite force (BF) magnitude and its correlation to the signs of temporomandibular dysfunction (TMD), gender, weight, height and age in 101 scholars ranging 6-18 years-old (32 boys/21 girls in mixed dentition and 23 boys/25 girls in permanent dentition). TMD clinical signs were evaluated using the Craniomandibular Index (CMI), and two subscales, the Dysfunction and the Palpation Indexes (DI, PI) BF was determined with a pressurized tube connected to a sensor (MPX5700-Motorola SPS, USA). ANOVA, Tukey test, Pearson's and Spearman's coefficients were applied. BF was higher in the permanent dentition (p<0.05). There were no difference in BF between genders inside the groups, but boys in the permanent dentition had higher values than children in the mixed dentition (p<0.05). The girls in the permanent dentition presented negative correlation in BF with PI and CMI (p<0.05). BF was positively correlated with weight, height and age in the permanent dentition (p<0.05). It was concluded that BF increased from mixed to permanent dentition, assuming an influence of body variables and aging in its enhancement. The TMD signs in older girls were correlated to decreasing bite force, suggesting an influence of muscle tenderness preventing subjects from exerting maximum BF.

### 245. PAPAIN GEL - PAPACÁRIE® AS AN AUXILIARY MEANS TO APPROACH A PATIENT WITH SPECIAL NEEDS.

SOUZA, P.C.\*; MELONI, T.J.; BOZZO, R.O.; SILVA, R.C.; ALKMIN, Y.T.; UEMURA, S.T. FUNDAÇÃO HERMÍNIO OMETTO - UNIARARAS.

In spite of the world decline in dental caries prevalence and severity, in patients with special needs, this disease continues to be an important problem. Dental treatment of patients with special needs complies with the same principles, technique and instruments. The difference lies in the approach to the patient that presents physical, mental or emotional alterations, in addition to fear and anxiety related to dental treatment. Research of new dental materials and techniques, with the aim of performing conservative procedures that are comfortable for the patient, provided the development of papain gel - Papacárie® that enables chemical mechanical removal of carious tissue, thus dispensing with the use of anesthetic and rotary cutting instruments. The present work relates a clinical case of a patient with special needs, in whom the use of papain gel - Papacárie® enabled dental treatment to be performed with positive psychological results, thus encouraging a good relationship with the professional. It was concluded that papain gel - Papacárie® used as an auxiliary means of removing carious tissue in patients with special needs, made it possible to treat the patient that had shown resistance to conventional treatment.

## 242. PLACING PATIENTS WITH SPECIAL NEEDS IN THE DENTIST'S CHAIR – PHYSIOTHERAPY AND DENTISTRY INTERACTION

SILVA, SP\*; BATISTELA, ACT; ALKMIN, YT; SOUZA, PC; SILVA, PL; UEMURA, ST. FUNDAÇÃO HERMÍNIO OMETTO - UNIARARAS.

One of the factors that interfere in dental attendance to patients with compromised physical conditions is to place them in the dentist's chair, due to the presence of involuntary movements and abnormal defective postures. Attendance of these patients without positioning them correctly, involves risk of accidents and unsuitable posture of the professional. With the aim of providing these patients with a suitable position in the dentist's chair, to promote stability, safety, comfort and harmony during attendance, Physiotherapy has acted together with Dentistry. At the Fundação Hermínio Ometto-UNIARARAS Dentistry Course clinic for Patients with Special Needs, patients are assessed by physiotherapy. In accordance with the compromised condition of each patient, they are placed in the dentist's chair by the physiotherapist, using devices especially developed for this purpose, such as adapted cushions, pillows or rolls of cloth used by the patient itself in its wheel chair. It was concluded that when patients with compromised physical conditions are correctly placed in the dentist's chair, it ensures that the professional has a better posture, and diminishes the patients' involuntary movements and defective postures, with the result that they consume less muscular energy.

### 244. CLINICAL ATTENDANCE AND FOLLOW-UP IN A PATIENT WITH DOWN'S SYNDROME

VAZ, D.C.\*; MORAIS, C.C.; D'ANDREA, M.C.; ALKMIN, Y.T.; SOUZA, P.C.; UEMURA, S.T. CENTRO UNIVERSITÁRIO HEMÍNIO OMETTO - UNIARARAS

Down's Syndrome is also known as trisomy of chromosome 21, presents an incidence of 1/800 and is more prevalent in fetuses of mothers over the age of 35 years. Macroglossia, angular chelitis, posterior cross bite, ogivale palate, uvula bifida, tooth enamel hypoplasia, high prevalence of periodontal disease, and late eruption are some of the oral characteristics present in these patients. This work relates the clinical case of a Down's Syndrome patient in whom some of these oral characteristic were observed. The patient was attended at the Fundação Hermínio Ometto - Uniararas Dentistry School Clinic for patients with special needs, and in a diagnostic radiograph it was observed that tooth 85 presented prolonged retention, tooth 45 had an altered eruption axis with risk for impaction in 46. In control radiographs taken 6 and 12 months afterwards, it was possible to verify correction of tooth 45 eruption axis and positioning in the dental arch. It was concluded that it is important to know about the possible oral alterations present in Down's Syndrome patients and to perform control consultations and diagnostic radiographic exams at the various stages of dentition in order to conduct and prevent future dental problems.

### 246. USE OF MICROIMPLANTS IN ORTHODONTIC ANCHORAGE

FELIPE, W. F.\*; PELLIZONI, S. P.; SALIONI, M. C. CRON-OM

The aim of this literature revision is to demonstrate, among the advances in orthodontics, the evolution of anchorage forms, keeping in mind that the control of anchorage has always been a preoccupation for orthodontists and is decisive for the success of the treatment. Conventionally, the intra and extra-buccal apparatus used presents a series of disadvantages, such as: esthetic and functional deficiencies, patient collaboration, etc. Presently, skeletal or absolute anchorage through the use of microimplants, have revolutioned orthodontic treatment concepts, since it offers a fixed and immobile point inside the oral cavity. This offers the possibility of accomplishing simple and complex movements in a more controlled and predictable manner, as well as a vast possibility of installation choices. Furthermore, it minimizes the undesirable effects in reaction units. Hence, the use of microimplants for absolute anchorage makes the orthodontic treatment more effective and predictable with a more comfortable and esthetic apparatus for the patient.

# $247.\ \mbox{multidisciplinary orthodontics-operative dentistry as a solution in the reestablishment of the smile harmony$

OLIVEIRA, R.B.S.; OLTRAMARI, P.V.P.; CARVALHO, C.A.R.; NAVARRO,R.L.; HENRIQUES, J.F.C.; NAVARRO, M.F.L. FACULDADE DE ODONTOLOGIA DE BAURU- USP

The balance of composition constituted by the face with uppers anterior teeth are extreme important to the aesthetic harmony of the smile. With the evolution of the adhesives and conservative restoration, that also included ceramic materials and resin composite, it was brought up treatments never yet imagined. The multidisciplinary point of view enables achievement of function and aesthetics. The integration of Orthodontics and Operative Dentistry is a patient's treatment option for inadequate anatomic teeth form, unaesthetic length, width and dental position that imply directly the smile set. This presentation discusses the integrate planning for a clinical trial in which one the patient presented unaesthetic contours and position of teeth, in addition an unilateral posterior crossbite. It is presented with all the clinical steps to the aesthetic reestablishment of a harmonic smile. Furthermore, this case report shows how a multidisciplinary approach can enable finishing efficiently clinical treatments with adequate aesthetic and function.

## 249. EVALUATION OF DEVELOPMENT OF FRONTAL SINUS IN CHILDREN WITH CLASS II, DIVISION 1, MALOCCLUSION. LONGITUDINAL LONG TERM.

SIQUEIRA, V.C.V.; CARVALHO, A.Z.N.B.\*; MAGNANI, M.B.B.A.; GAMEIRO, G.H.; NOUER, D.F. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

In the cephalometric investigation that used lateral films, it was found that the frontal sinus development showed a growth rhythm similar to development pubertal. The aim of the present investigation was to test the development of the frontal sinus in girls with Class II, division 1, with the 8-11 years old for a 22,4 mouth. The accord with Rüf and Panchers, the peripheral border of the frontal sinus was traced, and the highest (Sh), and the lowest (Si), points of sinus extension were marked. Perpendicular to interconnecting line Sh-Si the maximum width of the sinus was assessed. All cephalometric radiographs were traced by hand on matte acetate film, and retraced in the 30 days by the same investigator, the media was used for analyses of the high and width sinus development. The indictors were statistically analyzed by means of Test "t' and the resulted show that the improved the high (p= 0,001) and width (p= 0,002) of the frontal sinus, and about of correlation matrix Pearson high and width correlationin the significance I in the period evaluation (p inicial 0,015; p final 0,0008). The indictors were statistically analyzed by means of Test "t' and the resulted show that the improved the high (p= 0,001) and width (p= 0,002) of the frontal sinus, and about of correlation matrix Pearson high and width correlationin the significance I in the period evaluation (p inicial 0,015; p final 0,0008).

## 251. RAPID MAXILLARY EXPANSION SURGICALLY ASSISTED IN A DENTIST'S OFFICE. ACCOUNT OF A CLINICAL CASE.

BORBOLLA, R.R\*; FALTIN JR, K.; ORTOLANI, C.L.F.; COSTA, C.; CIRELLI, C. H.; FERNANDES, S. UNIVERSIDADE PAULISTA UNIP

Rapid maxillary expansion (RME), therapy base on the transversal expansion of the maxillary and palatines bones with suture palatal disjunction and posterior bone reparation, always draw great interest of researchers in the orthodontic field along the years. It's a largely employed procedure and maxillary constriction is often associated with malocclusions. In addition, maxillary constrictions have an early development and are hardly self corrected. In fact, since 1860 when ENGELL did this procedure for the first time, the rapid maxillary expansion therapy has been studied as well as its means of application. There are, however, cases where treatment with palatine disjunction is indicated, though diagnostics one observes that the maxillary structures involved in the process of disjunction require surgical intervention in order to make the palatine process more fragile and thus facilitate the mechanical action of the disjunction appliance. In these cases, the surgeon, by using a Le Fort I assisted fracture and releasing the three power pillars of the maxilla, leaves the maxilla able to receive the palatine disjunction. (EPKER, B.N.; WOLFORD, L.M) This study provides the account of a clinical case of a female patient submitted to rapid maxillary expansion surgically assisted in the dentist's own office, with no need for hospital admission and general anesthesia.

#### 248. THE ORTHODONTIC PRIORITY BY TPI

QUEIROZ, V. S.\*; NOUER, D. F.; NOUER, P. R. A.; PEREIRA NETO, J. S.; MAGNANI, M. B. B. A.; SIQUIERA; V. C. V. FOP/UNICAMP

Analysis of population occlusion can identify and prioritize the population individuals necessities and to get information to planning the recourses necessaries to orthodontic treatment. The aim of this study was to evaluate the TPI in 256 patients that looking for orthodontic treatment in the FOP/UNICAMP during 2005 year. The sample was divided in 2 groups (G) according to the ages and subdivided by gender and the ethnic groups. The G1 was composed by patients between 6 to11 years old (N=135), and the G2 was composed by patients between 12 to 17 years old (N=121). Mann Whitney e Kruskal Wallis analysis were used (p<0.05) and the results showed that the mean of the TPI to G1 was 7.07 e 7.98 to G2, without significant differences to gender and ethnic groups. TPI level equal 0 means normal occlusion; 1, 2 or 3 means minimum deviations and low treatment necessity; 4, 5 or 6 means defined deviations and optative treatment; 7, 8 or 9 means handicapping malocclusion and treatment is necessary; 10 and above means high handicapping malocclusion and the treatment is highly necessary. For G1, 0, 1, 2, 3, 4, 5 and 6 levels represents 54.8% and for G2, 7, 8, 9, 10 or above, represents 57.8% of the sample. We can conclude that G2 has the high treatment priority, and it could indicate the tendency of malocclusion became worst increasing the age.

### 250. THE INFLUENCE OF DRUGS AND SYSTEMIC FACTORS ON ORTHODONTIC TREATMENT

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The orthodontic dental movement occurs by an inflammatory process involving osteoclasts, osteoblasts, neuropeptides, citokines and alterations in the innervation and local vascularization. Researches demonstrate that the activity of bone remodeling can be regulated either by local factors, such as the applied forces, or by systemic factors, such as drugs, hormones and vitamins. This work presents the effects of drugs and systemic factors capable to affect the bone metabolism and to influence the speed of orthodontic dental movement

The non-steroidal antiinflammatories (except celecoxib), bifosfonates and sex hormones can reduce the speed of orthodontic movement, while the corticosteroids, thyroids hormones, paratormone and vitamin D can increase the rate of dental movement. It was concluded that the dentist should be attentive to the medications used by the patients, in order to select the best therapeutic strategy (the control of the forces and interval among visits) for each case. Moreover, paracetamol and celecoxib should be the drug choice for relief of possible discomfort associated to the orthodontic treatment, because they don't influence significantly in the rate of dental movement.

### 252. CEFALOMETRIC EVALUATION OF THE FACE STANDARD IN PATIENTS WITH ATYPICAL DEGLUTITION

ANTONIALI, E.A.\*; MAGNANI, M.B.B.A.; NOUER, D.F.; SIQUEIRA, V.C.V.; FRASSON, J.M.D.; SOUZA, R.A. FOP-UNICAMP

Considered one of the more common and harmful buccal habits, the atypical deglutition decisively intervenes for not the establishment and maintenance of a good dental occlusion. This problem affects the neuro-musculatura of the patient promoting a unbalance of the functions of the stomathognatic system. The present work had for objective to evaluate 90 telerradiografias of the head in lateral norm, of children between 6 the 12 years, independently of the sort, ethnic group or social classroom, being 45 without lingual atipias (group has controlled), and 45 with different types of atypical deglutition (experimental group), following the criterion established for the classification of NOUER & NOUER (1987), that they estimate the lingual positioning in high, average and low. The largenesses used in this research had been: FMA, S-N.Go.Gn, FMIA, IMPA and AXLE Y, with intention to evaluate the correlation of the type of atypical deglution with the alteration possibility of the face standard. After the analysis statistics (test T), is concluded that only the referring values to axle Y had been significant, denoting a trend of face alteration in this largeness, however, the same resulted was not evidenced for the three different types of lingual position, in the other analyzed measures

#### 253. EVALUATION OF THE SHEAR BOND STRENGTH OF METALLIC BRACKETS BONDED IN ENAMEL WITH AN AD-HESION BOOSTER.

MORAIS, E.\*; CORRER-SOBRINHO, L.; ROMANO, F.L.; NOUER, D.F. FOP-UNICAMP

The purpose of this study was evaluate the shear bond strength of metallic brackets (Dyna-Lock) bonded in 90 incisive bovine inferior in different enamel conditions with the composites Transbond XT and Concise Ortodôntico, and the hydrofilic adhesion booster Orthoprimer. The sample was divided in 6 groups (n=15): Group I-Transbond XT in agreement using the manufacturer's instructions, in dry enamel; Group II-Transbond XT and Orthoprimer, in dry enamel; Group III-Transbond XT and Orthoprimer in enamel contaminated with human saliva; Group IV-Concise Ortodôntico using the manufacturer's instructions; Group V- enamel was dry, and the bonded with oncise Ortodôntico and Orthoprimer; Group VI-the enamel was contaminated with human saliva, and applied OrthoPrimer, and to bonded with Concise Ortodôntico. After the fixation, the specimens was termocycles, and the shear bond strength testing was performed in machine Instron with speed of 0,5 mm/min. The data were submitted to the Analysis of Variance and the Test of Tukey (5%), being obtained shear bond strength of 11,35 MPa for the Grupo I, 9,85 MPa for the Grupo II, 7,68 MPa for the Grupo III, 16,34 MPa for the Grupo IV, 12,43 MPa for the Grupo V and 5,62 MPa for the Group VI. We concluded that in the group with Concise contaminated with saliva there was the small shear bond strength and that Transbond XT same contaminated had a significant shear bond strength.

### 255. PREVALENCE OF MALOCCLUSION IN A MULTIRA-CIAL SAMPLE OF BRAZILIAN SCHOOLCHILDREN: RELA-TION WITH EARLY TOOTH LOSS.

SOUZA, R.A.; MAGNANI, M.B.B.A.; NOUER, D.F.; SIQUEIRA, V.C.V.; ROMANO, F.L.; PASSOS, M.R. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The aim of this study was to evaluate malocclusion in mixed-race Brazilian schoolchildren, aged 7–11 years, in mixed dentition, from Jequié, a city in northern Brazil, as well as to investigate its interrelation with early loss of teeth. The sample consisted of 1014 individuals, both genders, from low socioeconomic backgrounds. Clinical examination was carried out in the individuals' classrooms by one adequately calibrated orthodontist. Data were analyzed by chi-square test and Fisher's exact tests with p < 0.05. Results: Angle's classification revealed that 22.3% of the population had normal occlusion. Class I malocclusion was observed for 47.6%, Class II division 1 for 21%, Class II division 2 for 0.9%, and Class III for 8.2% of all the individuals assessed. Subjects (n = 199) with early loss of teeth were excluded because such condition could modify status of malocclusion, which was then classified as follows: Class I (36.2%), Class II division 1 (17.5%), Class II division 2 (0.7%) and Class III (3.7%). Conclusions: These results revealed a greater trend for Class III malocclusion, when compared to Class II division 2, among the individuals assessed. The early loss of teeth might interfere with malocclusion classification, and should be included in epidemiological surveys on malocclusion since it is considered an important ethological factor.

### 257. EFFECTS OF CHRONIC ALCOHOL CONSUMPTION ON THE RAT SUBMANDIBULAR SALIVARY GLAND AND BONE RADIODENSITY.

SILVA, A.R.S.\*; RIBEIRO, A.C.P.; SUNDEFELD, M.L.M.M.; SALZEDAS, L.M.P.; SOUBHIA, A.M.P. FACULDADE DE ODONTOLOGIA DE ARAÇATUBA-UNESP

Alcoholism is a complex psychosocial disease and ethanol is the oldest and most widely used drug around the world, in Brazil, a special kind of alcoholic beverage (sugar cane liquor) is widely consumed. Xerostomia and high prevalence of mandible and femur fracture are strongly associated with alcoholism, although, there is a lack of information in the dental literature concerning oral features of alcoholic patient. The objective of this research was investigating alcohol induced alterations, especially salivary gland dysfunction and bone alterations in an alcoholic animal model. Ten Wistar rats ingested growing concentrations of sugar cane liquor during 60 days and their submandibular glands were compared with those of normal controls by light microscopy and histomorphometry. Their femur radiodensity were analyzed using a radiographic digital image system (Digora). The histomorphometry did not show any statistically significant difference between ducts and acini volume of both groups. Concerning femur radiodensity, significant difference between alcoholic and non-alcoholic rats were found. Chronic ingestion of sugar cane liquor may not produce significant changes in rats' submandibular glands however alcoholic rat femur seems to have lower radiodensity and that could contribute to the frequent bone fracture in alcoholics. Granted by CNPq.

#### 254. THE EFFECT OF MANDIBULAR PROTRUSIVE APPLI-ANCES ON GLENOID FOSSA MORPHOLOGY

SIQUEIRA, V.C.V.; MAGNANI, M.B.B.A.; NOUER ,D.F. ·RIBEIRO R

FACULDADE DE ODONTOLOGIA DE PIRACIABA

The skeletal discrepancies and the desarmonies of craniofacial growth complex needs a previous intervention before orthodontic treatment to reduce the time and dentition exodontics. Many authors research the functional orthopedic appliances wich cause changes in the glenoid fossa. These factors are also able to reverse effects of treatment on mandibular growth ,direction, size, morphology and a better facial profile.

#### 256. SOURCES OF ERRORS IN CEPHALOMETRY

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Cephalometry is a fundamental method of orthodontic diagnostic which errors frequently occur because of complexity. Considering the importance of cephalometry to the successfully orthodontic treatment and diagnosis, this study purposes an explanation approach of several analysis cephalometric errors, based on bibliography revision. Errors caused during radiography taken occur due to alignment less and fixation of x-ray elements, cephalostat and film, as well, incorrect patient head positioning in cephalostat. During cephalometric tracing errors can occur in cephalometric landmark identification and in measurement process.

#### 258. EWING SARCOMA OF THE MANDIBLE IN A CHILD

BRAZÃO-SILVA, M.T.; FERNANDES, A.V.; SOUZA, K.C.N.; FARIA, P.R.; CARDOSO, S.V., LOYOLA, A.M. UNIVERSIDADE FEDERAL DE UBERLÂNDIA

We report a rare case of Ewing sarcoma in a four year-old girl. The patient was referred to the oral surgeon for evaluation of a tumefaction in the left side of the mandible. She was submitted in the previous three weeks to endodontic and antibiotic treatment because of a diagnosis of pain related to the inferior left first deciduous molar. Clinical examination depicted noticeable mobility of the first and second inferior left deciduous molar. In the same region, an evident tumefaction was found. Nocturnal pain was reported by the patient's mother, but other flogistic alterations were not identified. Plain radiographies and computerized tomography showed wide and irregular bone resorption, including the cortical bone and displacement of teeth germs. Biochemical blood examination did not evidence alteration in the calcium, phosphorus and alkaline phosphatasis. Hypothesis of central giant cell lesion, primary or metastatic sarcomas were raised. Incisional biopsy, histopathological and immunohistochemical findings were compatible with the diagnosis of a lesion of the Ewing sarcoma family tumors (ESFT). The patient was referred to oncologic treatment, and was submitted to chemotherapy according to the Brazilian protocol for the treatment of ESFT. However, the patient evolved to death thirteen days after the initiation of the medical treatment due to leucopenia and subsequent infectious sepsis.

#### 259. CEMENTOBLASTOMA: CASE REPORT

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Cementoblastoma is a tumor originated from odontogenic ectomesenchyme and characterized by proliferation of cementum-like tissue. We report a case of a 20-years-old Caucasian man admitted at Faculdade de Odontologia de Piracicaba/UNICAMP with a complain of two unsuccessful attempts of endodontic treatment of first right lower molar. Clinically there was a small swelling of bony consistency, clear limits and slightly painful in the posterior right mandible. Panoramic radiographic showed a lesion with radiopaque center and radiolucent border associated with the periapical area of the first molar. There was root resorption and loss of root outlining. The clinical hypotheses were of cementoblastoma, fibro-osseous lesions and osteoblastoma. Incisional biopsy was performed and the histopathology examination showed mineralized cementum-like matrix, irregular trabeculae and basophilic reversal lines. The final diagnose was Cementoblastoma, based in clinical, radiological and histological features. The lesion and the tooth were removed surgically and, after two years, there was recurrence. A "block" resection was performed in order to remove the affected area. This case highlights the importance of including less common lesion in the hypotheses list, particularly for those lesions simulating inflammatory periapical diseases, as well as demonstrates the risk of the conservative treatment in immature cementoblastomas.

## 261. HISTOMORPHOMETRIC ANALYSIS OF THE EFECTS OF THE HOMOGENOUS AMNIOTIC MEMBRANE ORAL MUCOSITIS OF TREATED RATS WITH 5- FLUOROURACIL.

UENO,C.S.F\*; VILELA-GOULART,M.G; DINIZ,F.G; PATEKOSKI, H.K; SPINNELLI, M.R.G; VALVA,V.N; GOMES, M.F FACULDADE DE ODONTONTOLOGIA DE SÃO JOSÉ DOS CAMPOS-UNESP

This clinical study evaluated the duration of soft tissue repair in the oral mucositis in the labial fornix at lower incisors region, after treatment with proteic extract of the homogenous amniotic membrane (HAM) in orobase, in rats that received 5-fluorouracil. Sixty rats were divided into three groups of 20 rats: control (oral mucositis induced by 50% acetic acid); group 5-FU (oral mucositis induced by 5- fluorouracil + 50% acetic acid); group 5-FU + HAM proteic extract for protection). Three doses of 20 mg/kg/day were administered intraperitoneally. The proteic extract of HAM in orobase was applicated over the ulcer in the oral mucosa and the inferior lip was sutured. After 3, 7, 14 and 21 days, five animals of each group were sacrified. The specimens were fixed in 10% formol during 72 hours and after were prepared for histological and histomorphometric analysis. The results showed that HAM was biocompatible, with good adherence to the lesion and presented angiogenic, mitogenic and antibacterial properties in the group 5-FU + HAM the inflammatory process decreased significantly when compared with the other experimental groups (p<0.001), so, HAM accelerated the soft tissue repair in the oral mucositis provoked by administration of 5-fluorouracil in rats.

#### 263. ORAL MUCOSITIS IN CHEMOTHERAPY RATS: BIO-CHEMICAL PARAMETERS OF SALIVA

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This research work analyzed the biochemical parameters of saliva during the soft tissue repair of an oral ulcer induced by 5-fluorouracil in the labial fornix of mandibular central incisors region, after the application of homogenous amniotic membrane (HAM) protein extract. It was evaluated the concentration of calcium, phosphorus, total proteins, pH and enzymatic activity of alkaline phosphatase (APA). Sixty rats were divided in three groups: control group (oral mucositis induced by 50% acetic acid); 5-FU (oral mucositis induced by 5fluorouracil + 50% acetic acid); and 5-FU+HAM (oral mucositis induced by 5fluorouracil + 50% acetic acid + HAM protection). Three doses of 20 mg/kg/day were administered intraperitoneally. The proteic extract of HAM in orobase was applicated over the ulcer in the oral mucosa and the inferior lip was sutured. After 3, 7, 14 and 21 days, the saliva was collected and five animals of each group were sacrificed. The results showed that HAM was biocompatible, very adherent and accelerated the soft tissue repair. The ions concentration of calcium and the enzymatic activity of APA increased significantly (p<0.001) in the group 5-FU+HAM when compared with the other two groups. The concentration of phosphorus was lower in the group 5-FU+HAM also in comparison to the other two groups. The total concentration of proteins and the salivary flow pH were constant during the whole experiment.

#### 260. ADENOSQUAMOUS CARCINOMA: A CASE REPORT.

TOLEDO, F.A.\*; JABUR, R.O.; ASSIS A.F.; ROSA, A.L.; BRENTEGANI, L.G.; LACERDA, S.A. FACULDADE DE ODONTOLOGIA DE RIBEIRÃO PRETO - USP

The adenosquamous carcinoma is an extremely rare variant of squamous cell carcinoma. It presents a mixed differentiation pattern composed by a superficial area similar to squamous cell carcinoma and underlying area similar to ductal adenocarcinoma. It seems to originate from multifunctional reserves cells of basal layer of the epithelium. It has predilection for tongue, oral floor and mucous membrane, in older adults and in both sexes. The present clinical case belongs to the patient J.J.S., white man, 74 years old, that required attendance in the Center of Specialized Attendance of Oral Diagnosis (CAEDO) for presenting a nodular infiltrative lesion in oral floor, with around 4 months of evolution, pain on touch and presence of inflammatory perilesional area. It was accomplished incisional biopsy and the histopathologic exam showed a typical moderately differentiated adenosquamous carcinoma (G2). The patient was directed to the oncology service for treatment. The adenosquamous carcinoma is a neoplasm of less favorable prognostic than the squamous cell carcinoma of similar pattern, with mean survival time rate around 24 months. The described case presented cT2C2 cN1C1 staging clinical

#### 262. SCHWANNOMA: A CASE REPORT

system classification.

FREITAS, P.\*; NERY, L.R.; LAUTENSCHLÄGER, G.A.C.; RODRIGUES, M.T.V.; LARA, V.S.; RUBIRA-BULLEN, I.R.F. FACULDADE DE ODONTOLOGIA DE BAURU – UNIVERSIDADE DE SÃO PAULO

A 70-year-old white male presented to the clinic with the chief complaint of "a mass on the tongue". It was a non-growing mass and it presented a 2-year history. On intraoral examination, a painless nodular mass was observed on the anterior third of the tongue, which was 1 cm in diameter, pedunculated, soft on palpation and covered by a mucous membrane of normal color. The presumptive diagnosis was inflammatory fibrous hyperplasia and an excisional biopsy was performed. The microscopic analysis revealed in the fibrous connective tissue spindle-shaped cells with nuclear palisading around acellular eosinophilic areas, forming Verocay bodies (Antoni A tissue). It could also be observed hypocellular myxoid areas (Antoni B tissue). According to the microscopic features, the diagnosis was Schwannoma, which is a benign tumor arising from the Schwann cells of the neural sheath. It is relatively rare in the oral cavity and the tongue is the most frequent localization. It is clinically characterized by a painless, slowly growing and encapsulated mass. The diagnosis is usually made after a microscopic examination and the treatment is the complete surgical removal of the lesion. Recurrence and malignant transformation are quite uncommon. The case of Schwannoma of the tongue reported here highlights the importance of considering this tumor in the differential diagnosis of nodular lesions present on the tongue.

## 264. BIOLOGICAL MODEL FOR BONE REPAIR STUDIES IN DIABETIC RABBITS: HISTOMORPHOMETRIC ANALYSIS

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This work developed an experimental model to study the evolution of the process of bony repair in diabetic rabbits. Twenty-four adults rabbits were divided in three groups for observation: control(C), diabetic(D) and diabetic associated to PTFE membrane (D-PTFE). For diabetic induction the animals received just one dose of monohydrated alloxan(90mg/kg) by intravenous administration(auricular or femoral vein). The surgical bone defect was accomplished in parietal bones rabbits. In the group D-PTFE, the membrane covered the floor and the surface of the surgical bone cavity. In the D and C groups, the bone defect was filled up with blood clot. Three rabbits of each group were sacrificed after 15, 30, 60 and 90 days. The specimens were fixed in 10% formol and prepared for histomorphometric analysis. The results showed that the 90 mg/kg of monohydrate alloxan was suitable to promote the diabetes mellitus when administered at auricular vein, because constant and superior glicemia was observed to 200mg/dL and presence of buccal manifestations and you generate related to the diabetes. The bone regeneration was slower in the diabetic group when compared with the control and diabetic-PTFE groups in whole the observation periods, but there was not significant statistical difference between these last two groups. We concluded that the membrane of PTFE facilitated the development of the process of bony repair.

### 265. ODONTOLOGIC MANAGEMENT OF A PATIENT WITH DOWN SYNDROME WITH OLIGODONTIA

DINIZ FG, GARCIA LB, CAU SC, VILELA-GOULART MG, MORAES MEL, COELHO-FERRAZ, MJP GOMES, MF.
CENTRO DE BIOCIÊNCIAS APLICADO A PACIENTES COM NECESSIDADES ESPECIAIS - CEBAPE/FOSJC - UNESP

The Down syndrome is an anomaly caused by the trisomy of chromosome 21 caused by three fundamental types of chromosomal alteration (Trisomy - 96%, Mosaicism - 2% and Translocation - 3%) exhibiting craniofacial and mental alterations with implications in the development of the craniocervical system. This work reports the clinical case of a 16-year-old patient with Down syndrome missing 13 permanent teeth, proved radiographically in addition to anterior open bite, facial asymmetry, macroglossy, oral respiration. The hand and wrist radiography analyzed by Greulich & Pyle method showed early bone maturation with fused ossification centers, with age equivalent to 19 years old. The cephalometry showed anti-clockwise growth by the Jarabak analysis, changed position of the Hyoid Triangle of Bibby and Preston with altered lingual and mandibular position and mastication predominant in the left side according to the Plane Laws. The treatment emphasized the importance of the functional rehabilitation of the stomatognathic system in addition to the functional orthopedics of the maxillomandibular complex and other specialties such as speech therapy, nutritional and physiotherapy. Based on the specific literature, it is important to consider the clinical and radiographic aspects during the diagnostic process, and to value a transdisciplinary approach with a positive reflex on the maintenance of a general health.

### 267. EPITHELIAL-MIOEPITHELIAL CARCINOMA OF MINOR SALIVARY GLAND: CASE REPORT

SILVA, A.A.\*; CORREA, M.B.; VARGAS, P.A.; GRANER, E. LOPES, M.A. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Epithelial-myoepithelial carcinoma (EMC) is a rare tumor of salivary glands, corresponding for 0,48% to 1% of all salivary gland tumors. It affects more frequently parotid glands being rare in minor salivary gland. 40-year-old, man was referred for evaluation of a painless swelling on the hard palate with two months of duration. On clinical examination it was observed a well-define painless mass, measuring 1,5 x 1,5 cm. An incisional biopsy was performed and microscopically the lesion was composed mainly by clear cells. In some areas it was composed by a ductal pattern being the inner layer of eosinophilic, cuboidal duct-lining cells and the outer layer of clear cells highly suggestive of epithelial-myoepithelial carcinoma. Although we detected neural and blood vessels invasions, mitoses and necrosis were absent. Immunohistochemistry analysis showed that peripheral ductal cells were immunoreactive for smooth muscle actin, and S-100 protein, suggesting a myoepithelial differentiation. Whereas the luminal cells were strongly positive for cytokeratins (AE1/AE3) and weakly positive for epithelial membrane antigen. According to these findings, a diagnosis of EMC was established. A right partial maxillary resection was performed and the surgical margins were free of tumor. The patient is in follow-up for 12 months without signs of recurrences or metastasis.

### 269. SQUAMOUS CELL CARCINOMA ON HYPERPLASIA PRODUCED BY PROSTHESIS.

MATUOKA, R.I.\*; MARANGONI, A.T.D.; BUZZA, C.M.; TOLEDO, F.A.; LEITE, R.A.; CAMPOS, A.A. FACULDADE DE ODONTOLOGIA DE RIBEIRÃO PRETO - USP

The relationship of the squamous cell carcinoma with ingestion of alcoholic drinks and smoker habit is known. The relationship of chronic injure of low intensity and the possibility of irreversible malignancy cellular alterations, during the process of cellular division responsible for the permanent repair in areas of chronic and persistent injures, is also known. The present case is of patient N.V.B., woman, 65 years, white race, that looked for attendance in the clinic of Diagnosis of the University of Franca, with hyperplasic ulcerated lesion, alveolar vestibule, on area of 16 to 18 teeth. In December of 2005 the patient noticed area of rough and illness gengival. She looked for professional care that relief the total prosthesis, that she uses for 25 years, without improvement. In March of 2006 she looked for another professional that guided her for our clinic. Nodes colud not be assessed. An incisional biopsy were made and the histopathological diagnosis was a well differentiated squamous cell carcinoma espinocelular (G3). The patient was guided for treatment in Cancer Hospital of Franca city. In view of the absence of the habits of smoke and ingestion of alcohol and the previous history of trauma easily identifiable for the presence of a fibrous hyperplasia by prosthesis previous to the diagnosis of CEC, the relationship chronic injure-cancer is evidenced in this clinical case.

### 266. PARADENTAL CYST: REPORT OF TWO CASES

MOURÃO, C.F.\*; PIRES, F.R.; SANTOS, T.C.; OLIVEIRA, M.G. UNIVERSIDADE ESTÁCIO DE SÁ

Paradental cyst is an uncommon inflammatory odontogenic cyst adhered to the enamel-cementum junction, possibly originated of remants of the reduced enamel on epithelial remants in the periodontum. It is usualy located adjacent to the distal portion of partially- erupted lower third molars with previous history of pericoronaritis, as a radiolucent unilocular well-defined area. Differential diagnosis includes lateral radicular inflamatory cyst and lateral inflammed dentigerus cyst, and treatment includes conservative surgical excision almost always associated to removal of the associated tooth. The aim of this work is to present two cases of paradental cyst associated to lower thid molars, discussing their microscopical diagnostic difficultes and the importance of clinical data. Both cases presented as unilocular radiolucences distal to the teeth and treatment included surgical removal of the cysts and associated teeth. Both patients slowed no signs of recurrence. Paradental cyst is an uncommon cyst, which needs complete clinical history associated to microspical analysis for correct final diagnosis, and conservative surgery is the treatment of choice, with excellent prognosis after complete removal of the cyst.

## 268. OPTICAL DENSITY ANALYSIS OF HOMOGENOUS DESMINERALIZED DENTIN MATRIX IN THE BONE REGENERATION OF ALLOXAN-INDUCED DIABETIC RABBITS

DESTRO, M.F.S.S.\*; BANZI, É.C.F.; VIEIRA, E.M.; GOMES, M.F.; VILELA-GOULART, M.D.G. BIOCIÊNCIAS E DIAGNÓSTICO ORAL -CEBAPE - FACULDADE DE ODONTOLOGIA - FOSJC-UNESPUNESP SÃO JOSÉ DOS CAMPOS

This research evaluated the bone repair process after implantation of homogenous demineralized dentin matrix (HDDM) in surgical defects on the parietal bone of diabetic rabbits, using polytetrafluorethylene (PTFe) barrier. Thirty-six rabbits were used and divided into four groups: control (C), diabetic (D), diabetic with PTFe (D-PTFe/nD and D-PTFe=12, left and right parietal), and diabetic with PTFe associated to HDDM (D-PTFe+HDDM). To induce Diabetes, the animals received a single dose of alloxan monohydrate (90mg/kg) on the marginal ear vein and the glycemia was verified daily. The bone defects were accomplished on the parietal bone and the rabbits were sacrificed after 15, 30, 60 and 90 days. The defects were examined radiografically and by optical desity (Tukey test p<.05). The radiografic findings showed that the D-PTFe+HDDM group presented greater radiopacity and better structural organization when compared to the C, D and D-PTFe groups. It was significant statitically difference (p<.001) between the diabetic-PTFe+HDDM and C and D groups. It was possible to conclude that HDDM was biocompatible in diabetic rabbits. The HDDM stimulated the increase of the radiopacity into bone defect, showing osteopromotive activity during the bone regeneration process. The monohydrated alloxan (90mg/kg) was efficient in the induction of diabetes in rabbits.

### 270. dens invaginatus: clinical, radiographic and ultrastructural aspects

SILVA, K.R.\*; CARVALHO, L.M.S; ALMEIDA, O.P FACULDADE DE ODONTOLOGIA DE PIRACICABA

dens Invaginatus (DI), commonly known as dens in dente, is a developmental tooth malformation that most commonly affects upper permanent lateral incisors. Dens invaginatus in lower permanent teeth is extremely rare. The aim of this work is to report the clinical, radiographic and ultrastructural characteristics of one case of dens in dente affecting the left lower permanent lateral incisor. a 13-yearold girl received dental treatment in a private clinic complaining of a wound in the gingiva. Intra-oral examination revealed a gingival fistula involving the left lower laterala incisor, which showed an evident morphological alteration diagnosed as dens in dente. Panoramic and periapical radiographs confirmed the malformation of the tooth and also showed a radiolucid periapical lesion. with the diagnosis of dens in dente type III, and considering the clinical conditions, the affected tooth and the periapical lesion were surgically removed. The tooth was processed for macroscopic, histologic and ultrastructural observations. Macroscopically the affected tooth showed irregular morphology. Enamel and dentin showed gross alterations, including hypomineralization. Ultrastructural features included alterations on prismatic enamel surface and dentin. Dentinal tubules showed alterations of orientation, density, size and shape.

# **271.** EDEMOGENIC TEST STUDY ON THE FOLGOGEN CAPACITY OF FOUR ROOT CANAL FILLING CEMENTS: INTRAFILL, PULP FILL, SEALAPEX AND SEALER26

PEREIRA, MR\*; CARDOSO, CL; LAWALL, MA; TEVEIRA, LAA FACULDADE DE ODONTOLOGIA DE BAURU-USP

The final stage of endodontic treatment is filling and sealing the root canal system with gutta-percha points and root canal sealers. The root canal sealers are irritating to the periapical tissues when flowing out through the apical foramen. To evaluate the tissue response to the flogogen capacity of the root canal sealers Intrafill, Pulp Fill, Sealapex and Sealer 26, it was applied the edemogenic test, which quantifies the swelling formed consequently to the contact of these cements with the tissues. Fourty-six male Wistar rats were used and distributed into eight groups of six animals. The groups were divided according the four sealers and two post-surgical periods (three and six hours). Evin's blue was perfused through the caudal artery, and subsequently, after freshly mixed, the sealers were injected in the subtegument dorsal region of the animals. After three and six hours the animals were sacrificed and the samples were evaluated at the spectrophotometer. According the results here obtained, it was concluded that the exudate intensity was statistically similar at the two post-surgical periods for all sealers, and Sealapex and Sealer 26 were less irritating to the tissues than Intrafill and Pulp Fill.

#### 273. FACIAL DUPLICATION - CASE REPORT

ONO, R.; MARQUEZ, I. M.; PAIVA\*, L.T.M.; SILVA, L.R. UNIVERSIDADE FEDERAL DE UBERLÂNDIA

It is reported a case of a newborn with facial duplication. The child presented two oral cavities, an incompletely duplicated nose, and coarse malformations in the encephalon, with a amount of liquid which occupied regions where there wasn't cerebral tissue. There was a small encephalocele in the frontoparietal region. There are cases of symmetric facial duplication described in the literature, varying from a simple nasal duplication until two complete faces in a single head (diprosopus).

### 275. CYCLOSPORINE AND TGF-β1 INFLUENCE IN MYOFIBROBLAST TRANSDIFFERENTIATION

LM SOBRAL\*, MG KELLERMANN, KG ZECCHIN, E GRANER, RD COLETTA FACULDADE DE ODONTOLOGIA DE PIRACICABA

Myofibroblasts are characterized by expression of the smooth muscle isoform of -actin (α-SMA), and when activated synthesize high levels of extracellular matrix. Several studies demonstrate that TĞF-β1, which is produced in high levels for normal gingiva (NG) cell cultures treated with cyclosporin (CsA), possess important function in the stimulation of myofibroblast transdifferentiation, however the exact mechanism of this factor remains unclear. The objective of this study was to characterize the effect of CsA and TGF-β1 in α-SMA expression, as a marker of myofibroblast transdifferentiation, in NG cultures. To assess myofibroblast presence a number of modalities were employed that included RT-PCR, western blot, immunohistochemistry, immunofluorescence and flow citometric analysis. Our results demonstrated that TGF-β1, but not CsA induces myofibroblasts transdifferentiation. In addition, we demonstrate that TGF-β1 effect was followed by an induction on CTGF and type I collagen expression levels, and although CsA has induced TGF-β1, it did not induce CTGF. In conclusion, CsA-induced gingival overgrowth is characterized by an excessive accumulation of connective tissues, but myofibroblasts are not involved with this process. (FAPESP05/01003-7)

## 272. COMPARATIVE STUDY OF THE EFFECT OF THE OSTEOPENIA ON FRACTURE RESISTANCE OF FEMALE AND MALE RAT FEMURS

CARDOSO, T.W.\*; YUJRA, V.Q.; REIS, L.I.; AMADEI, S.U.; LEITE, F.P.P.; ROCHA, R.F. FACULDADE DE ODONTOLOGIA DE SÃO JOSÉ DOS CAMPOS -

With the increase of the life expectancy, senescents of both sexes are searching for better bone quality in order to prevent fractures caused by osteoporosis. Our objective was to compare the effect of the osteopenia caused by hormonal deficiency on fracture resistance of female and female rat femurs. Thirty-two rats (3 months old) being 16 male (8 orquiectomized and 8 control) and 16 female (8 ovariectomized and 8 control) were castrated or sham-operated and sacrificed after 90 days. Femurs were removed, kept in Ringer -20°C until the three-point flexion assay in an EMIC machine, with 15mm of distance between the supports, constant strength of 5.08mm/min and cell load of 50kgf. Maximum strength (MS), Rigidity (R) and Dislocation (D) were evaluated by the program Tesc 1.1. The results were submitted to the Student's t-test (5%) and did not show difference in any of the properties in the male group. However, the female group showed difference in MS (p=0.040) and D (p=0.021). In comparison to the castrated groups of both sexes, the males presented higher values that the females (p<0.02). It was concluded that for the females the ostopenia diminished the MS as well as the D, which suggested higher bone fragility when compared with the normal females and the males with the same castration time. The degree of osteopenia in the castrated males did not alter the properties of MS, R and D.

## 274. CLINICAL-PATHOLOGICAL CORRELATIONS OF MYOFIBROBLASTS IN ORAL SQUAMOUS CELL CARCINOMA.

KELLERMANN, M. G.\*; SOBRAL, L. M.; SILVA, S. D.; LOPES, M. A.; GRANER, E.; COLETTA, R. D. UNICAMP

The objective of this study was to determine myofibroblast presence and its correlation with clinical and histopathological features of the oral SCCs. A total of 68 oral samples, 28 from normal tissues and 38 from SCCs, were assessed immunohistochemically for the specific marker of myofibroblast  isoform of smooth muscle actin (-SMA). Presence of myofibroblasts was classified as negative, weak or strong, where more than 50% of the stroma was composed by myofibroblast, in a blinded analysis performed by 3 of the authors. All normal samples were negative for myofibroblast presence, whereas 23 (60.5%) of the oral SCCs showed expression of -SMA-positive cells around the tumor cells. Twelve (31.6%) of the oral SCCs showed a strong and broad presence of myofibroblasts which positively correlated with clinical N stage and regional recurrence after treatment. Interestingly, myofibroblast presence also correlated with matrix metalloproteinase 1 and 2 (MMP1 and MMP2) activities of the oral SCCs. Our results suggest that myofibroblast presence is specific of tumor process, and may alter the prognosis of the oral SCC patients.

## 276. ORAL KAPOSI'S SARCOMA: A CLINICO-PATHOLOGICAL AND IMMUNOHISTOCHEMICAL STUDY.

MARTÍNEZ G $\mathbf{M}^*,\;\; \mathsf{GONZÁLEZ}\; \mathsf{I}\; \mathsf{R},\;\; \mathsf{ALMEIDA}\; \mathsf{O}\; \mathsf{P}\;,\; \mathsf{RAMÍREZ}\; \mathsf{V}\; \mathsf{A}.\;\; \mathsf{FOP}$ 

Objectives: The objectives of the study were to analyze the clinical, histological and immunohistochemical characteristic of 30 oral KS and contrast their histological and immunohistochemical profile with 30 intraoral pyogenic granulomas (PG). Methods: Ongoing descriptive and observational study. Demographic and clinical data were obtained from clinical records (age, gender, antiretroviral therapy, viral load, CD4+ lymphocyte count and characteristics of oral lesions). H&E and PAS were used to review histological characteristics of oral tissues. Cases were investigated by immunohistochemistry using a panel of antibodies: vimentin, CD-68, CD-34, CD-117 (c-Kit), aAML, actine, desmine, S-100 protein, CD1a, Bcl2, CMV, p24 and HHV-8. Results: The 30 AIDS patients with oral KS were male, mean age of 34.5 years; ten of them had mucocutaneous KS. 16/30 oral KS were nodular (16/29) and localized on the palate (23/29). All oral KS were positive for vimentin, CD-34, HHV-8 and aAML, while 27 were positive for CD-68+, four positive for CD-117 (c-Kit). All KS cases were negative for desmine, CD1a and S-100 protein. All PG cases were positive for desmine. Conclusions: The main differences between KS and PG were the positive results for desmine in GP and the positive finding of c-Kit and HHV-8 in KS

## 277. ANALYSIS OF THE EXPRESSION LEVELS OF 39 HOX MEMBERS IN THE ORAL SQUAMOUS CELL CARCINOMA CELL LINES.

BITU, C.C.\*; DESTRO, M.F.S.S; GRANER E, COLETTA, R.D. FACULDADE DE ODONTOLOGIA DE PIRACICABA

We analyzed the expression levels of the 39 HOX genes in squamous cell carcinoma cell lines. These genes are grouped in 4 clusters named A, B, C and D and their association with several neoplasias, including prostate, ovarian, kidney, lung and skin cancers and leukemias, has been widely reported. They are still involved in crucial cell mechanisms such as cell cycle, proliferation, differentiation and apoptosis. Total RNA from 4 squamous cell carcinoma cell lines were subjected to the reverse transciptase-polymerase chain reaction (RT-PCR) "duplex" method with specific primers for each of the HOX family members and for the control gene GAPDH. The samples were electrophoresed in 8% polyacrylamide gel and the results were subjected to densitometric analysis. None of the cell lines expressed HOXA6 and HOXA9, whereas their paralogous genes HOXC6 and C9 were expressed. All cell lines expressed the members HOXA13, HOXB13, HOXC13 and HOXD13. Our results showed different expression levels of the HOX family members in the oral squamous cell carcinoma studied cell lines. Financial support: CAPES and FAPESP.

### 279. THE EFFECT OF CIGARETTE SMOKE INHALATION AND ESTROGEN-DEFICIENCY STATE ON EXPERIMENTAL PERI-ODONTITIS. A HISTOMETRIC STUDY IN RATS.

CARVALHO, M.D.\*; BENATTI, B.B.; CÉSAR-NETO, J.B.; NOCITI JR, F.H.; SALLUM, A.W.; SALLUM, E.A. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

It has been shown that cigarette smoking inhalation (CSI) and estrogen deficiency (OVX) may affect mandibular alveolar bone height and density during experimental periodontitis. However the association of the two factors has not been evaluated. Therefore, this study aimed to verify the effects of CSI + OVX on experimental periodontitis-related bone loss. Forty-five female wistar rats were randomly assigned to one of the following groups: group 1: SHAM, sham surgery, (n = 15); group 2: OVX, ovariectomy, (n = 15); group 3: CSI+OVX, 3 months of CSI + OVX, (n = 15). Sham surgery, ovariectomy and ligature placement were done at the same day for all groups. CSI started 60 days before OVX + ligature placement and continued for 30 days after, when the animals were sacrificed and the sections were obtained. Bone loss was histometrically evaluated. OVX and CSI+OVX did not affect the bone on the unligated sites (P<0.05). On ligated sites, OVX and CSI+OVX significantly enhanced bone loss (P<0.05) when compared to SHAM; however no significant difference was observed between these two groups (P>0.05). Within the limits of the present study, it can be concluded that cigarette smoke inhalation do not amplify the deleterious effects of estrogen deficiency on bone loss in ligature-induced periodontitis in rats.

## 281. PERIODONTAL TISSUE REACTION TO GLASS IONOMER RESTORATION INTO THE BIOLOGICAL WIDTH. A CLINICAL STUDY IN DOGS.

SANTAMARIA, M. P.\*; CARVALHO, M. D.; SUAID, F. F.; SALLUM, A. W.; NOCITI-JÚNIOR, F. H.; SALLUM, E. A. FOP-UNICAMP

Restoration into the biological width is a very common finding in daily clinical practice and it is associated with gingival inflammation and clinical attachment loss. This can be a result of the restorative material nature and its superficial features. The aim of this study was to assess the periodontum clinical response when a glass ionomer restoration was placed into the biological width. For this, we used 9 dogs which received on mandibular canine, a transgingival restoration until the bone crest level (test site). On the other canine, a notch was made on the bone crest level (control site). Before surgery and after 65 days, the following clinical parameters were taken: probing depth (PS), clinical attachment level (NIC), bleeding on probing (SS) and gingival recession (RG). No statistical difference between the two groups was seen for PS (p>0.05). However a difference was seen in intragroup analysis for PS in group one (p=0.01), showing greater probing depth after the healing period. When NIC was evaluated, significant difference was seen (p<0.05) between baseline and final evaluation in the both groups, with greater loss after the healing period, but no difference was seen between them. These results shown that the surgical procedure led loss in clinical attachment level with or without the presence of the restoration. However, with the presence of a restoration, the probing depth tends to be greater.

#### 278. INFLUENCE OF CHRONIC STRESS IN THE MODULA-TION OF PERIODONTAL DISEASE INDUCED IN RATS

PERUZZO\*, D. C.; BENATTI, B. B.; ANTUNES, I. B.; ANDERSEN, M. L.; NOGUEIRA-FILHO, G. R.; NOCITI JR., F. H. FOP-UNICAMP

The aim of the study was to evaluate the influence of chronic stress (CE) on the induced-periodontal disease (PD) in rats. 30 male Wistar rats were divided in three groups and placed in the respective treatments for a 30-day period: G1- 10 rats without PD and with CE; G2- 10 rats with induced PD on the inferior first molars without CE; G3- 10 rats with induced PD under CE (food restriction, isolation and nocturnal immobilization) for 12 hours. At the end of the experimental period all animals were killed and the following measured were done: blood collection for evaluation of seric levels of stress-related glucocorticoids (GC) (cathecolamines-CA and corticosteroids-CO) and the mandibles were decalcified for the histometric analysis of interradicular bone loss (BL). Once the data were obtained for each animal the means were calculated for each group and then compared. It was observed that G3 showed elevated levels of CA and CO (224,72±103,15 ng/ml; 343,77+84,36 ng/ml), respectively, which were statistically different from G1 (123,71+36,33 ng/ml; 68,08+54,15 ng/ml) and G2 (129,86+31,78 ng/ml; 75,28+44,55 ng/ml). For the BL parameter differences were found between the three groups: G1 (0,17±0,04 mm); G2 (0,46±0,12mm) and G3 (0,87±0,2mm), (p<0,001), which demonstrates the effect of CE on BL. Within the limits of this study CE can modulate alveolar bone destruction in chronic induced PD in rats.

## 280. COLLAGEN-BASED ABSORVIBLE MEMBRANE USED AS TETRACYCLINE DELIVERY IN PATITENTS WITH CHRONIC PERIODONTAL DISEASE.

TELES, M.S.\*; HORBYLON, B.Z.; BORGES, D.C.; MENEZES, H.H.M.; MAGALHĀES, D.; TAGA, E.M. UNIVERSIDADE FEDERAL DE UBERLÂNDIA FACULDADE DE ODONTOLOGIA

Several periodontal therapeutic resources like scaling and root planning, and antimicrobials controlled-release devices in subgingival sites have been destined to the buccal adequacy. The present work evaluates the reduction levels of probing pocket depth (PPD) and gingival index (GI) after scaling and root planning, with and without the use of tetracycline hydrochloride controlled-release device, gotten from bovine collagen resorbable membrane, applied in patients with probing pocket depth ≥ 5mm. After the experimental period (28 days), the control group, submitted to the scaling and root planning, had presented average reductions of 1.3mm (PPD) and 63,5% (IG) and for the test group, submitted to scaling and root planning and the tetracycline hydrochloride controlled-release device of 2.6mm (PPD) and 87,5% (IG).

### 282. EVALUATION OF MODIFIED IMPLANTS SURFACE ON BONE HEALING - A HISTOMETRYC STUDY IN RATS.

PERES, M. F. S.\*; VIEIRA RIBEIRO F; CASARIN R. V. C.; NOCITI JR. F. H.; SALLUM A. W.; CASATI M. Z. FOP- UNICAMP

The aim of this study was to investigate the effect of a treated implant surface on bone healing. Fourteen rats received one titanium implant in each tibiae: one received machined implant surface (Control) and the other treated implant surface (Test). After 60 days, undecalcified sections were obtained. Percentages of bone-to-implant contact and bone filling within the limits of implant threads and in a 500 μm-wide zone lateral to the implant were obtained. Furthermore, the implant surfaces were evaluated with scanning electron microscope. The histometric results showed that the Test group positively affected bone-to-implant contact (p<0.05), when compared to the Control group. However, there were no significant difference among the groups regarding the others parameters (p>0.05). It can be concluded that the modified implant surface utilized in the present study promoved a better bone-to-implant contact around implants inserted in tibiae of rats than machined implant surface.

## 283. PRIMARY OCCLUSAL TRAUMA EVALUATION ON PERIODONTAL LIGAMENT THICKNESS IN OVARIECTOMIZED RATS

CAMPOS, M.L.G\*; CARVALHO, M.D; CÉSAR-NETO, J.B; NOCITI JR, F.H; SALLUM, A.W; SALLUM, E.A FOP UNICAMP

Osteoporosis and occlusal trauma are different conditions that cause a reduction of the bone mass. In the alveolar bone they could act sinergically enlarging the bone loss around teeth. The present study evaluated the primary occlusion trauma influence (OT) in estrogen deficient rats (OVX), on alveolar bone. 28 females rats were randomly assigned in 2 groups: Test- OVX + OT (n=11); Control- SHAM (Sham surgery) + OT (n=17). In all animals the occlusal trauma was obtained based on the reduction model of the vertical dimension (VD). In the same day of the occlusal trauma promotion, the test group animals had the ovaries lifted up and returned intact to the original position. After 30 days all animals were sacrificed and sections were obtained. There was no periodontal ligament thickness difference between groups (ANOVA p>0.05). Within the limits of the present study, it can be concluded that the estrogen deficiency was not capable to promote an increase of the periodontal ligament thickness on furcation region of teeth with primary occlusal trauma.

### 284. ROOT COVERAGE ON RESTORED SURFACES. CASE REPORT.

FEITOSA, D.S.\*; SANTAMARIA, M.P.; SUAID, F.F.; SALLUM, A.W.; NOCITI-JUNIOR, F.H.; SALLUM, E.A. FACULDADE DE ODONTOLOGIA DE PIRACICABA - FOP

Gingival recession is an apical shift of the gingival margin with the exposure of the root surface. It is a common finding in population with high standard of oral hygiene as well as in periodontal untreated populations with poor hygiene (Serino, 1994). Commonly, gingival recession can be associated with cervical tooth wear as a result of abrasion, erosion and abfraction, which are generally called noncarious cervical lesions. When present together with gingival recession, the non-carious cervical lesions require a periodontal-restorative integrated procedure. The aim of this work is to show three cases of gingival recession associated with non-carious cervical lesion treated with a coronally advanced flap surgical procedure and a resin glass ionomer restoration. The final outcome, after the healing period, showed the resolution of both gingival recession and tooth wear with great esthetic and gingival health.

## 285. association between subepithelial connective tissue graft and platelet riched plasma (PRP): clinical assessment in dogs.

SUAID, F.F.\*; CARVALHO, M.D.; SANTAMARIA, M.P.; DE SOUZA, H.W.; NOCITTI JÚNIOR , F.H.; SALLUM E.A. FOP/ UNICAMP

The aim of this study was to evaluate the association between subepithelial connective tissue graft and platelet-riched plasma (PRP). Retraction defects were surgically created in maxillary canines of nine female mongrel dogs. Three months after plaque accumulation, defects were assigned to 2 groups: association between subepithelial connective tissue graft and PRP (experimental) and subepithelial connective tissue graft (control). Height and width of retraction and thickness and height of keratinized mucosa were assessed. Results showed that the subepithelial connective tissue graft associated with coronally-positioned flap is effective in treating retraction defects in dogs. However, no statistically significant difference was observed for the association between subepithelial connective tissue graft and PRP. In conclusion, no benefits were verified for the association of PRP in repairing retraction defects.

### 286. RIDGE AUGMENTATION BY GUIDED OSSEOUS REGENERATION FOR IMPLANT INSTALLATION: CASE REPORT

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The rehabilitation of edentulous ridges was favored after osseointegration implants discovery. However, the absence of adequate bone height and volume can prevent implant installation. Many bone grafts techniques were proposed for correction of ridge deformities, including autografts, allografts and alloplastic materials. Autografts obtained from intra-oral sites show the highest success rates. However, the surgical technique is critical due to two operated sites, which difficult its use in certain clinical situations. To solve this problems, the use of guided bone regeneration by positioning of a membrane barrier associated or not with allografts was proposed. In this case report, we describe a case of a male patient showing ridge volume deficiency after teeth and a previous implant loss. For ridge deformity correction, it was performed an allograft with positioning of a e-PTFE membrane before implant installation. During implant surgery, it can be noted the increase in volume and density of bone, allowing the positioning of osseointegrated implants and oral rehabilitation of 100% of success after more than 5 years of follow-up.

#### 287. STUDY OF DESORPTION OF INCORPORATED DOXY-CYCLINE TO MEMBRANE USED IN REGENERATIVE PERI-ODONTAL PROCEDURES

HORBYLON, B.Z.\*; MAGALHÃES, D.; MENEZES, H.H.M.; BORGES, D.C.; CARNEIRO, K.F.; RUGGIERO, R. FACULDADE DE ODONTOLOGIA DA UNIV. FEDERAL DE UBERLÂNDIA

Antimicrobials incorporated to membranes used in periodontal procedures can promote antibacterial action in infect sites. This study tested the hypothesis that desorption of incorporated doxycycline to absorbable membrane is effective for at least 31 days, period with safe margin for osteogenesis. For this, it was constructed a calibration curve from the drug solubilised in physiological serum in several concentrations, in accordance with Lambert-Beer's law. To determine the desorption kinetic, isotherms were obtained by the introduction of the membrane impregnated with doxycycline in physiological serum at  $20^{\circ}\text{C}$  per 31 days. With the use of spectrophotometer (Shimadzu UV 2501 PC) periodic measures of drug concentrations in the solution were obtained by the determination of the absorbance in 2 wavelengths (wave A=275nm, wave B=345nm). With those data it was constructed a time/concentration graphical in which the drug concentration measured in the first hour (wave A=0,00803mg/ml, wave B=0,00794mg/ml), revealed increasing until the second day (wave A=0,00931mg/ml, wave B=0,00895mg/ml), and remaining in approximately 0,008mg/ml in wave A and wave B from 50 to the 310 day. These results demonstrate that after initial growth, the drug concentration in the solution remained constant in approximately 0,008 mg/ml until the period of 31 days, showing effectiveness in the considered clinical performance.

#### 288. EFFECT OF EDTA GEL APPLICATION IN THE TREAT-MENT OF GINGIVAL RECESSIONS WITH SEMILUNAR CORONALLY POSITIONED FLAP

BEZERRA, B.B.\*; BITTENCOURT, S.; RIBEIRO, E.D.P.; NOCITIJR, F.H; SALLUM, A.W; CASATI, M.Z. FOP-UNICAMP

This controlled clinical trial evaluated the semilunar coronally positioned flap(SCPF), with or without the use of EDTA, as a biomodifier agent of the root surface, in the treatment of gingival recessions. Fifteen patients with bilateral Miller's Class I buccal gingival recessions of ≤4mm in anterior/superior teeth were selected. One tooth in each patient was randomized to receive either SCPF with(SCPF-e) or without(SCPF-n) the use of EDTA gel(24%). The clinical parameters depth of the gingival defect, width at the coronal extent of the gingival defect, width and thickness of keratinized tissue, probing depth, and clinical attachment level were measured at baseline and 6 months postsurgery. Patient postoperative pain was evaluated with a visual analogue scale. The average percentages of root coverage, after 6 months, for SCPF-e and SCPF-n were 70.2% and 90.1%, respectively. This difference was statistically significant(p<0.05). Complete root coverage was achieved in 40.0% and 66.7% for SCPF-e and SCPF-n groups, respectively. No significant difference was observed in the other parameters. Not one patient needed to use analgesic medication, in the postsurgery, for pain control. Based on these results, it can be concluded that biomodification of root surface with EDTA gel(24%) negatively influence the treatment of gingival recessions with semilunar coronally positioned flap.

### 289. INCIDENCE OF HYPERSENSITIVITY AND GINGIVAL RECESSION AT THE FOP-UNICAMP.

FURLAN, L. M.\*; SALLUM, A.W.; SALLUM, E. A.; JUNIOR, F.H.N; CASATI, M. Z. FACULDADE DE ODONTOLOGIA DE PIRACICABA

The objective of this study was to observe the incidence of gingival recession and tooth hypersensitivity of the exposed cervical areas in patients of the FOP-UNICAMP undergraduation clinic, being allowed to evaluate the necessity of treatment of hypersensitivity and the root aesthetics covering. Two hundred two patients were examined. They were over 18 years old and were randomly chosen for the evaluation of the incidence of gingival recession and tooth hypersensitivity. The areas of gingival recession were measured, from the cement-enamel junction to the gingival margin, in the buccal faces, with a metered Williams probe and the hypersensitivity was evaluated transferring a blunt probe with light pressure on the root exposed surface and with a air flush of 3s on the area with gingival recession. About 76% of the people presented gingival contraction and 28% hypersensibility. The incidence increases with age. People who smoke are more likely to present gingival recession and hypersensitivity that the ones that does not smoke. Te conclusion was that the aesthetics need and the hypersensitivity treatment is high in this population.

# **291.** LATERALLY POSITIONED STIMULATED OSTEOPERIOSTEAL FLAP FOR COVERAGE EXPOSED ROOT, TREATED OR NOT "IN SITU" WITH PHOSPHORIC ACID. COMPARATIVE MORPHOLOGIC STUDY IN DOGS.

MORAES, S.M.\*; PASSANEZI, E.; BOSCO, A.F.; GREGHI, S.L.A.; SANT'ANA, A.C.P.; REZENDE, M.L.R. FACULDADE DE ODONTOLOGIA DE BAURU - USP

Laterally positioned activated osteoperiosteal flap and in situ root demineralization have been currently proposed one apart of each other for coverage of denuded root surface, with promising results. Passanezi et al had associated these techniques and mentioned good clinical results, but without histological evaluation. According to, the proposal of this issue was to show if the histological evaluation. According to, the proposal of this issue was to show if the histological evaluation. According to, the proposal clinical result are compatible with successful biological result. 12 dogs were selected. Gingival recession was created on the maxillary canine teeth. 42 days after, an activated osteoperiosteal flap was raised on both sides and phosphoric acid solution was applied solely to the experimental root. The osteoperiosteal flaps were then laterally displaced and sutured so as to cover the entire denuded root surface in both sides. The animals were sacrificed and block sections for histological study were obtained at 7, 14, 30 and 90 days postoperatively. The histological findings indicated an accelerated wound healing over the roots that received acid conditioning, resulting in a cementum deposition on the root. The results support that in situ root demineralization in association with osteoperiosteal activated flap may result in a more extensive area of reinsertion and a lesser epithelial apical migration, thus allowing the attainment of a biological process suggestive of promising clinical applicability to treat denuded root.

## 293. EFFECT OF CHITOSAN/TRICALCIUM PHOSPHATE SPONGE ON BONE REPAIR IN CALVAIRA DEFECTS – A PI-

CORRÊA, M.G.\*; CARVALHO, M.D.; BENATTI, B.B.; NOCITI JÚNIOR, F.H.; SALLUM, A.W.; SALLUM E.A. FOP-UNICAMP

Chitosan is a biodegradable and non toxic natural biopolymer, with similar chemical structure to the one of the cellulose, which is showing beneficial effects as carrier and osteoconductor. The present study aimed to evaluate the effect of the chitosan/tricalcium phosphate (TCP) sponge on bone repair in a calvaria defect in rats. The Chitosan sponge was fabricated by freeze-drying a mixture of Chitosan solution and TCP powder. Twelve adult male rats were randomly divided in two groups: test (GI - N=6) and control (GII - N=6). An 8mm calvarial defect was created in the parietal bone of each animal and in the group I, the chitosan sponge was applied filling the defect. After 10 weeks, the animals were sacrificed and histological preparations were obtained for the histometric evaluation. The averages of the extension of new bone for GI and GII presented significant difference (83.54±17.72 e 10.01±6.59, a<0.01). Within the limits of the present study, it can be concluded that the chitosan/TCP sponge produced an osteocondutor effect, increasing the bone formation in the calvarial defects.

### 290. DYAGNOSIS AND TREATMENT OF PERIIMPLANTITIS: A CLINICAL CASE.

VALE, H.F\*; CASARIN, R.C.V; RIBEIRO, F.V; SALLUM, E.A; NOCITI-JR, F.H; CASATI, M.Z. FACULDADE DE ODONTOLOGIA DE PIRACICABA

Periimplantitis are inflammatory reactions resulting in attachment loss on osseointegrated and functionally implants. Approximately 4 to 15% of populations with implants are affected by this disease. Since the necessity of confirm the loss of attachment, clinical and radiographic evaluations are necessary to the diagnosis of the disease. The treatment of the periimplantitis concerns the decontamination of the area and removal of the granulation tissue. Because the morphology of the osseous defect, bone grafts are usually applied to improve the success of the therapy. So, the aim of this study is discuss the diagnosis and treatment of periimplantitis, linking that to a clinical case. The patient presented implants at 14 and 15 elements with radiographic bone loss associated with excess of ciment used in the prosthesis. Once the excess and granulation tissue are removed, a tetracycline solution was used to decontamition the area and a bovine grafts to fulfill the defect. To increase the thickness of gingival tissues, a connective tissue graft was used and the region sutured. The success of periimplantitis treatment could be confirmed after six months by clinical and radiographic examinations.

## 292. RELATIONSHIP BETWEEN SELF-PERCEPTION OF AGGRESSIVE PERIODONTITIS SYMPTOMS AND INITIAL RESPONSE TO PERIODONTAL TREATMENT.

RIBEIRO, E.D.P.\*; CASARIN, R.C.V.; SALLUM, E.A.; SALLUM, A.W.; NOCITI-JR, F.H.; CASATI, M.Z. FACULDADE DE ODONTOLOGIA DE PIRACICABA-UNICAMP

The aim of the present study was to evaluate the relationship between self-perceived symptoms of advanced generalized aggressive periodontitis and initial response to periodontal treatment. 26 subjects presenting generalized aggressive form of periodontal disease were selected. The subjects answered a questionnaire about the perceived symptoms of periodontal disease with a scale of sensibility, in which a numeric value was determined for each symptom referred. The percentage of sites with Probing Depth (PPD) ≥ 5mm, Plaque Index (PI) and Gingival Index (GI) were evaluated and the patients received a full mouth prophylaxis. One month later, the patients were reevaluated for PI and GI, and the percentage of reduction, as well as the PPD, were correlated with the numeric value of the aggressive periodontitis symptoms. Spearman's correlation and Wilcoxon's test were used with a significance level of 5%. The greater the self-perception of these symptoms, the better was the short-term response to the treatment. A positive correlation between the reduction of GI and self-perception of bleeding during tooth brushing (p=0.04, r=0.27) and redness and swelling of gums (p=0.04, r=0.26) was observed. The PPD &#8805; 5 mm did not shown any correlation with the self-perception and as well as with the initial response to the treatment. Within the limits of this study, we can conclude that self-perception of symptoms of generalized aggressive periodontitis have an influence on the initial response of the patient to the treatment.

### 294. CLINICAL AND THERAPY CONSIDERATIONS ABOUT PERIMPLANTITIS

NAVES, M.M.\*; BORGES, D.C.; HROBYLON, B.Z.; CARNEIRO, K.F.; MAGALHÃES, D.; MENEZES, H.H.M. UNIVERSIDADE FEDERAL DE UBERLÂNDIA E HD ENSINOS ODONTOLÓGICOS

The host answer to biofilm over the implant includes a series of inflammatory reactions that occur initially on the soft tissue, although they might progress later and cause a bone support loss of the implant. This progressive bone loss might be a result of a bacterium infection, occlusal overload or both. This type of failure is called periimplantitis. As seen, clinical success of osseointegrated dental implants has been established in a long term basis, it is possible to conclude that the foresight of this technique does not depend only on the osseointegration, but also of the health and integrity of the periimplant tissues. Therefore, the aim of the present study is to present a literature review of the etiologic factors, diagnosis and treatment of periimplantitis, as well as the health maintenance of tissues around the implant, having graduation students as target public.

PERIODONTAL DISEASES

# $295.\ \ {\rm EVALUATION}\ THE\ EFFECT$ of Periodontal no surgical therapy on the formation of volatile sulphur compounds (vsc).

LIMA,L.L.\*; PERUZZO, D. C.; RIBEIRO,E.D.; BITTENCOURT, S.; NOGUEIRA-FILHO, G.R.; NOCITI JR, F. H.; CASATI,M. Z. FOP-UNICAMP

The aim of this study was evaluated the effect of the periodontal therapy on the formation of the volatile sulfur compounds (VSC). For this, 10 patients with chronic periodontitis were selected, of both sexes, with at least 8 sites, distributed in the two arcades, with probing depth ≥ 5 mm and bleeding on probing. The clinical parameters were appraised, an only examiner properly gauged, and were the following ones: plaque index (PI), probing bleeding (PB) clinical attachment level (CAL), probing depth (PD). Also were appraised the levels of VSC, accomplished with the volatile sulfur compounds monitor and the humid weight of the coating tongue (CT). The parameters described above were appraised before (0 day - baseline) and 90 days after the periodontal therapy. Obtained the averages of each patient, where observe a significant statistically reduction in the medium values of PI(46.15±5.30 vs 41.30±17.13; p=0,006), SS (44.38±15.90 vs 36.53±12.31; p=0,007), PD (5.78±0.366 vs 3.83±0.64; p=0,0005), CAL (7.40±0.45 vs 6.09±0.52; p=0,0005) as well as for the levels of VSC (317.3±232.37 vs 163.3±145.63; p=0,0005). Inside of the limits of this study, it can be concluded that the periodontal therapy was effective in the reduction of the appraised clinical parameters, as well as in the reduction of the medium values of VSC.

## 297. HYALURONIC ACID BENEFITS IN THE TREATMENT OF

BRAZÃO, M.A.M.\*;BEZERRA, B.B.; CAZATI, M.Z.; TOLEDO, S.; SALLUM, E.A.; SALLUM, A.W. FOP-UNICAMP

Hyaluronic acid, a high molecular weight polysaccharide, plays a vital function in the extracellular matrix since it acts on the homeostasis, cellular distribution and is also associated with the bone mineralization and tissue repair in inflammation. Due to its characteristics, hyaluronic acid has anti-inflammatory, antiedematous, anti-infective effects and it also participates in tissue regeneration and healing. Periodontal disease is characterized by loss of tissue attachment associated with the inflammatory process, which promotes great alterations in the extracellular components of the periodontal tissues. Hyaluronic acid, which is found in this tissue, is degraded by hyaluronidase release by the host and by the periodontopathogenic bacteria, which leads to a reduction in the functions of the hyaluronic acid in the periodontal tissues. Clinical studies evaluating the effect of the application of hyaluronic acid in the periodontal tissues have demonstrated beneficial effects in the clinical parameters. The aim of this study is to discuss the possible benefits of hyaluronic acid in the treatment of periodontal diseases.

#### 299. RESECTIVE THERAPY IN CLASS III FURCATION

DA SILVA\*, GHR; RIBEIRO, FV; CASARIN, RCV; RIBEIRO, EDP; SALLUM, EA; CASATI, MZ FOP - UNICAMP

The treatment and long-term maintenance of class III furcation involvements is a challenge in periodontal therapy. The anatomical configuration of the internal aspect of the involved furcation promotes an inaccessibility of the furcation to both professional and patient plaque control measures. Since the inability to completely debride the involved furcation through the use of non-surgical and open flap curettage, the clinician must have enough knowledge to choose the appropriate management of periodontally involved molars. The purpose of this paper is to discuss the available treatment options to class III furcation and report the clinical procedures that could be performed in the treatment of these furcation defects. Inferior molar presenting class III furcations lesion was submitted tunneling, to improve the biofilm control at the interradicular region. The success of the therapy could be achieved after 9 months of radiographic and clinical follow up. Superior molar also presenting class III furcation was submitted to root amputation. The distovestibular root was removed and osteotomy was realized to facilite the access to oral hygiene. This technique also was successful after 6 months of follow up.

### 296. INTERRELATIONSHIP PERIODONTICS X ORTHODONTICS: A CLINICAL CASE

NEIVA, T.G.G.; YURTSEVER, F.V.; PERUZZO, D.C.; NOGUEIRA – FILHO, G.R. FOP-UNICAMP

Orthodontic treatment aims at reaching an ideal, aesthetical and functional occlusion, without damaging the periodontal tissues. Tooth movements can result in loss of alveolar bone and gingival attachment, depending on the alveolar bone thickness and mechanical factors, such as strength intensity, velocity and type of dental movement. This can be harmful to periodontal longevity and the success of orthodontic treatment. The objective of this study was to present a clinical case of a patient, 24 years old, with periodontal alterations in tooth submitted to orthodontic movement. After clinical and radiographic exams, the diagnostic was chronic periodontitis. The treatment proposed was basic periodontal therapy associated with orthodontic treatment, later mucogingival surgery and support therapy.

## 298. EFFECT OF DENTIFRICE AND MOUTHRINSE TRICLOSAN ASSOCIATION ON DENTAL BIOFILM CONTROL

RIBEIRO, F.V.\*; CASARIN, R.C.V.; VILLALPANDO, K.T.; TO-LEDO, S.; CASATI, M.Z. FACULDADE DE ODONTOLOGIA DE PIRACICABA - FOP

The aim of this double-masked study was to evaluate the clinical efficacy of triclosan mouthrinse and dentifrice, isolated and associated, on dental biofilm reduction. Forty patients with diagnosis of gingivitis were selected and randomly divided in four groups (n=10): G1: triclosan mouthrinse and dentifrice; G2: triclosan mouthrinse and placebo dentifrice; G3: placebo mouthrinse and triclosan dentifrice; G4: placebo mouthrinse and dentifrice. The evaluation was performed by a calibrated examiner, using a quantitative plaque index (PI) at baseline, 15 and 30 days. Intragroup analysis was performed by Friedman's test and intergroup analysis by Kruskall-Wallis. Intragroup evaluation revealed statistically significant reduction on PI only in the groups that used triclosan, independently of the group (G1, G2 e G3) (p<0.05). The results of intergroup analysis suggested that only the group that used triclosan dentifrice and mouthrinse (G1) statistically reduced PI at 30 days, when compared to placebo group (G4) (p<0.05). It can be concluded that triclosan use in dentifrice or mouthrinse is effective on PI reduction and that the association of triclosan dentifrice and mouthrinse promotes better results on dental biofilm reduction.

### 300. GINGIVAL RECESSION TREATED WITH CORONALLY ADVANCED FLAP. CASE REPORT.

ROCHA, F.\*; SANTAMARIA, M.P.; SUAID, F.F.; CASATI, M.Z.; SALLUM, A.W.; SALLUM, E.A. FOP-UNICAMP

The gingival recession is defined as the displacement of the gingiva apically to the cementoenamel junction. This lesion can be observed in patients with or without good oral hygiene (Serino, 1994). Its etiologic factors are gingival inflamation and traumatic toothbrushing. Although this recession rarely leads to dental loss, it is frequently associated with dentin sensibility, esthetic problems, cervical wear and plaque accumulation. Several techniques to recover exposed radicular surface are used. The aim of this work was to present a case in which a coronally positioned flap surgery, a technique described by Allen and Miller (1989), was used successfully.

### 301. OCCLUSAL AND SURGICAL THERAPY FOR RESOLUTION OF STILLMAN CLETS.

ANCHIETA,R.B.\*; SILVEIRA,C.S.; LUIZE,D.S.; MURAKAWA,A.C.; BONFANTE,S.; BOSCO,A.

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The Stillman clefts are incisions in apostrophe form, extended to leave and inside of the gingival margin with varied distances. The fissures usually happen in the vestibular surface. An or two can be present in relation to an only tooth. The margins of the fissure are a rift round lineal apically, in the gingiva, and the remaining of the gingival border is hole, instead of gauged. Described originally by Stillman, they are considered result of occlusal trauma. The fissures can be recuperated spontaneously or to persist as superficial lesions of deep periodontals pockets, that penetrate in the support fabrics. For resolution of such lesions, it is indicated the occlusal threapy firstly as treatment form, however, if there is not resolution, can be also indicated periodontals surgeries for improvement of the problem. Two clinical cases will be presented, in which one of them only obtained complete resolution with occlusal adjustment and other, more extensive, in that was also necessary the surgical procedure.

### 302. PLANNING AND PREVISIBILITY OF INTERPROXIMAL PAPILLA RECONSTRUCTION PROCEDURES

NUNES,I.F.\*; BORGES,D.C.; HORBYLON,B.Z.; MAGALHÃES, D.; MENEZES, H.H.M. UNIVERSIDADE FEDERAL DE UBERLÂNDIA-FACULDADE DE

UNIVERSIDADE FEDERAL DE UBERLÂNDIA-FACULDADE DE ODONTOLOGIA

The search for dental treatment for aesthetic reasons it has become more common in recent years, involving not only the reestablishment of the dental integrity, as well as of periodontal tissues, in special of interproximal papilla. However, restricted literature for the reconstitution and preservation techniques of interdental tissue it has been observed. So, this work means to elucidate the dentist about papillar damages and previsibility of reconstruction procedures, evidencing, the necessity of the accomplishment of integrated planning with other dental specialties, making possible the patient's aesthetic and functional reestablishment

### 303. Biofuncional aspects of Root coverage - a case report

LIMA,C.S\*; HORBYLON,B.Z.; BORGES,D.C.; MENEZES, H.H. M.; MAGALHAES,D.; SOARES, C.J..
UNIVERSIDADE FEDERAL DE UBERLÂNDIA/ HD ENSINOS ODONTOLÓGICOS

Localized gingival recessions continue to represent an important esthetic condition requiring treatment in periodontics. Many techniques have been applied to solve those problems but their success depends on some important factors like occlusal estability, root conditioning and gingival recession morphology. This report describes a case in which these factors were observed and the therapeutic measures applied yielded satisfactory root coverage, an increase in the width of the keratinized gingival and improvement in hygiene status.

### 304. Prosthetic indication to frenectomy: case report.

ARAUJO, P.F.\*; SANTAMARIA,M.P.; SUAID, F.F.; SALLUM,A.W.; NOCITI-JÚNIOR, F.H.; SALLUM,E.A. FOP-UNICAMP

Frenum is a small band or fold of integument or mucous membrane that checks, curbs, or limits the movements of an organ or part. The mandibular and maxillar frena are little clinical significant. However, they become aberrant when they are associated with gingival recession, difficulties in the orthodontic and prosthetic therapies. Within the great variety of mucogengival surgeries, frenectomy is defined as the excision of a frenum. The aim of this work is to report a case which an aberrant frenum inserted over the edentulous ridge, limited the prosthetic rehabilitation plan. After the frenum surgical incision and a 3 months of healing, the wound was completed healed and the frenum was inserted on an apical position.

# 305, EVALUATION OF THE INFLUENCE OF THE IMMEDIATE LOSS OF ATTACHMENT PRODUCED BY ULTRASONIC TIPS DURING ROOT INSTRUMENTATION ON PERIODONTAL TREATMENT RESPONSE.

CASARIN RCV, RIBEIRO EDP, BITTENCOURT SB, NOCITI-JR FH, SALLUM EA, CASATI MZ FOP-UNICAMP

The aim of the present study was to evaluate the longitudinal influence of the immediate loss of attachment produced by ultrasonic tips during root instrumentation on periodontal treatment response. Fourteen patients with at least 4 anterior teeth with probing pocket depth (PPD) ≥ 5 mm and bleeding on probing were selected. Teeth were randomly divided into 2 groups: A) root instrumentation with an ultrasonic tip (KF235K after-five-Hu-Friedy) of 0.53 mm diameter; B) root instrumentation with an ultrasonic tip (Perio Sub-DabiAtlante) of 0.71 mm diameter. The following clinical parameters were evaluated: PPD and relative clinical attachment level (rCAL). These parameters were obtained by a calibrated examiner (Kappa=0.91) with a computerized electronic probe (Florida Probe) and analyzed before treatment, immediate, 1 and 3 months after. The parameters were compared by ANOVA and immediate tissue trauma (rCAL immediate after treatment – rCAL before treatment) by Student paired t test. Tissue trauma observed on group A (0.85±0.45 mm) and B (0.15±0.20 mm) was statistically different (p=0.02). Both groups showed PPD reduction and rCAL gain after treatment, however without difference between groups. It can be concluded that immediate tissue trauma does not negatively influence the response to periodontal treatment.

### 306. RECOVERY OF THE BIOLOGICAL WIDTH BY A MULTIDISCIPLINARY APPROACH: CASE SERIES.

YURTSEVER, F. V., NEIVA, T. G. G.; PERUZZO, D.C.; NOGUEIRA – FILHO, G.R. FOP-UNICAMP

The relationship between periodontology and prosthodontics deserves atention in the current scenario of dentistry. Success in prosthodontics treatment is related to the maintenance of the biological width (BW), which is responsible for the maintenance of periodontal health. Restoration margins must be well adapted and localized. At the periodontal point of view supragingival, gingival and intrasulcular margins (<0.5mm) are well tolerated, however, subgingival margins (>0.5mm) are not indicated since they are trespassing the juncional epithelium and connective tissue insertion (CTI). The lack of adaptation of the restoration margins can lead to an unbalance in periodontal health leading to inflammation of the supportive periodontal tissues and uncontrolled bone resorption, causing the formation of periodontal pockets or gingival recessions. The violation of the biological width can be treated with periodontal surgery or orthodontic traction. Surgical correction can be faster but may not be the choice for esthetic areas. Orthodontic traction, however, is more indicated for areas with esthetic concerns. The aim of this study is to show a case series of BW recovery through surgical techniques such as intern bevel, distal wedge and apical positioning of the flap, and through orthodontic extrusion.

#### 307. EVALUATION OF PERIODONTAL TISSUES AFTER RE-ESTABLISHMENT OF BIOLOGICAL WIDTH SURGERY -COMPARISON OF TWO SURGICAL TECHNIQUES

SILVA, L.H.G\*; TRAMONTINO, V.S.; DE TOLEDO, S.; PINTO, F.R.; GURGEL, B.C.V.; IRIYAMA, N.T. FOP-UNICAMP

The invasion of the biological width may cause injuries to periodontal tissues, resulting in gengival inflammation, loss of conjunctive insertion and alveolar bone reabsorption, making surgical re-establishment necessary. The aim of this study was to evaluate the dimensions of periodontal tissues after re-establishment of biological width surgery, comparing 2 techniques (apical scrap positioned [ASP] and internal bevel [IB]) for treated teeth and adjacent, in 3 moments: preoperative (T0), 1 month postoperative (T1) and 3 months postoperative (T2). 18 selected patients were evaluated by an examiner through the use of metered probe, digital caliper rule and guide for probing. The parameters evaluated were biological distance (BD) and biological width (BW). The values in mm (average  $\pm$  dp) for BD, in T0, T1 and T2, respectively, were: for IB, 53±0,53Aa, 2,30±0,81Aa, 2,18±0,67Aa and for ASP,63±0,77Aa, 1,54±0,68Ab, 1,63±0,54Ab. Averages  $\pm$  dp for BW, in T0, T1 and T2, respectively, were: for IB: 4,30±1,13Aa, 4,78±0,90Aa, 5,05±0,92Aa and for ASP: 4,42±1,13Aa, 3,93±1,07Ab, 3,88±1,11Ab. Treatments followed by different letters differ by the Test of Tukey (p<0,05). Capital letters compare times (intragroups) and lower cases treatments (intergroups). It's concluded that both surgical techniques are effective and satisfactory clinically, reestablishing the biological width in a period of 3 months. Fapesp 04/11758-2.

## 309. CORRECTIVE FINISHING OF IMPLANTED-SUPPORTED FRAMEWORKS: INFLUENCE ON MARGINAL MISFIT AND RELIABILITY OF SINGLE-SCREW TEST

DAROZ, L.G.D\*; FRAGOSO, V.S.; OLIVEIRA, L.V.; MESQUITA, M.F.; HENRIQUES, G.E.P. FOP-UNICAMP

The objective was to evaluate the effect of corrective manual finishing over misfit level of multi-unit implant-supported frames. Were fabricated 40 frameworks (20 in titanium (Ti) and 20 in Co-Cr alloy). A metallic index containing 05 Branemark-type multi-unit abutment analogs used to frameworks fabrication. The frames were grouped (n=10) accordingly with the finishing sequence proposed: (A) corrective finishing of cast cylinder borders followed by corrective finishing of cast cylinder screw seats; (B) corrective finishing of cast cylinder screw seats followed by corrective finishing of cast cylinder borders. Four experimental groups were obtained (Ti A and B; Co-Cr A and B). The marginal gaps assessment (obtained before and after each finishing step) follow the single-screw test protocol using a traveling microscope (120X). The Friedman's test was used for evaluate the intra-group effect of each finishing procedure. In the Ti A and B, and Co-Cr A groups, there was no differences among the different sequences of finishing (p<0,05). In the Co-Cr B group, it was observed in significantly rising of marginal misfit after cast cylinder borders corrective finishing (p=0,0017). The corrective finishing do not show significant effect on marginal misfit level of titanium frameworks. For Co-Cr frames, the corrective finishing shows an adverse effect on framework passivity

### 311. RIBBON OF POLYESTER IN THE MOLDING OF TRANSFER IN YOU IMPLANT DENTAL.

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The osseointegration is the firm and durable union among it implants it and the bone, not allowing movements. This rigidity generates the need of passive adaptation of the components of the prosthesis on them you implant, to obtain the success.

Even so, she is difficult to obtain, therefore there are alterations originated in function of the critical stages of: molding, obtaining of models and making of the prosthesis. Especially, the molding is divided in: adaptation of the components fastened among you implant them and the transferentes, followed by the transfer technique (union of the components with acrylic resin) and the molding properly said. Special attention will be given to the use of the resin that is the first factor could cause alteration

In literature the division of the resin is consecrated with disk diamantado after its prey and posterior re-union. In view of the difficulties found to have an ideal transfer, this work it

proposes the use of a new technique with the use of a ribbon of polyester to reduce the clinical time, to increase the patient's comfort and to obtain the passivity requested in the obtaining of the molding.

### 308. HOW CAN YOU OBTEIN A NATURAL EMMERGENCY PROFILE?

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The restoration of a lost element immediately after its extraction it is possible with the application of the immediate load, installation of the it implants and of the temporary prosthesis in an only surgical time allowing the maintenance of the hard and soft tissues. Illustrated by the case of the patient SH, 46 years, with a fracture in the element 25 we will describe the technique of making of the temporary prosthesis using as base an obtained mold of the fragment in position with technique of the duplication of the model, followed by the waste of the crown of the tooth to 2 mm of the part subgingival where the profile of emergency of the temporary prosthesis is made. We give sequence to the phase laboratorial wearing away in tunnel form the plaster below the first waste in order to facilitate the entrance of the temporary components of the transfer that will be accomplished in the moment of the surgical act. After the installation of the it implants it is transferred with the component the platform of the it implants capturing its three-dimensional position and positioning it in the model of plaster. In this phase the temporary prosthesis is made with reference to the profile generated in the first waste. The aesthetics of the prosthesis is favored, because the temporary prosthesis acts maintaining the architecture periimplants there are not rebasing need and the temporary prosthesis it is built out of the buccal cavity what it reduces the contamination and the patient's stress.

### 310. REINFORCEMENT OF WEAKENED TOOTH WITH COMPOSITE RESIN AND CARBON FIBER POSTS

BIANCA BARCHETTA DE NÁPOLES, KÁTIA RODRIGUES REIS, GERSON BONFANTE, JONAS ALVES DE OLIVEIRA, LUCAS VILLAÇA ZOGHEIB FACULDADE DE ODONTOLOGIA DE BAURU DA UNIVERSIDADE DE SÃO PAULO

The internal root destruction widens the root canal and weakens the tooth structure, making the tooth more susceptible to fracture. According to several authors, the reconstruction of widened roots using adhesive techniques that increase the thickness of the root walls and decrease the caliber of the root canals may reinforce the dental structure, allow the use of cylindrical posts and increase post retention. The objective of this work was to show an internal root reconstruction clinical report using a modified root reinforcement technique reported by LUI at 1994, proposing the substitution of the stainless steel post Luminex® (Dentatus) by the carbon fiber post. According to this technique, the composite resin located in the deep portion of the root canal was polymerized through a transparent plastic post, an then a matching post was cemented into the post space. In vitro studies regarding the finite element analysis have elucidated that the forces are best distributed when the teeth are restored using fiber posts and, on a different note, there is a concentration of forces when teeth are restored using metallic posts. In this way, the severely weakened pulpless teeth may be preserved at the present clinical report with a predictable prognosis, avoiding its extraction.

# 312. ORAL REHABILITATION OF A TOTAL EDENTATE PATIENT, TEETH GRINDING, CARRIER OF TEMPOROMANDIBULAR DYSFUNCTION, USING OVERDENTURES IMPLANT-RESTRAINED - A CLINICAL REPORT.

VEDANA, L.\*; CRUZ, M.V.J.; LAMEIRA, D.P.; LANDULPHO, A.B.; RAMOS, G.G.; RIBEIRO, C.E. FCULDADE DE ODONTOLOGIA DE PIRACICABA (FOPUNICAMP)

The teeth grinding can be defined as the not functional habit to press and/or to creak teeth, generally during sleep, being considered one of the habits most destructive of the oral cavity. The planning of rehabilitation of teeth grinding and carrying patients of DTM, it starts with the occlusal splint therapy. That they promote the relief of the painful symptoms by means of the reestablishment of the muscular balance and to articulate. The objective of this work is to present a clinical report where a patient total edentate, teeth grinding carrying e of temporomandibular dysfunction, it was treated with plain occlusions devices, which acts directly in the reestablishment of the vertical dimension and of the position to articulate more comfortable, providing in this way a maxilo-mandibular relationship more optimized, and rehabilitated with overdentures implant-restrained.

### 313. PROSTHETIC SOLUTION TO EDENTULOUS PATIENT IN ADOLESCENCE

SILVA, L. L. B\*; LANDULPHO, A. B.; ALVES, M. R.; CRUZ, M. V. J.; VEDANA, L.; SILVA, F. A.

FACULDADE DE ODONTOLOGIA DE PIRACICABA/UNICAMP

The indication to complete denture in adolescence is rare, but is necessary when premature tooth loss occur. There is a great concern between the dentists about the manufacturer of complete denture to patients in growth phase therefore prostheses can be a limit factor of growth of maxillaries. The aim of this work is to present the clinical case of a patient with 13 years-old of total edentulous, which was directed for the course of Specialization in Dental Prothesis of the College of Dentistry of Piracicaba/UNICAMP. Complete denture with 3 expanders in the superior had been confectioned, in accordance with the growth of the jaw and 1 expander in the inferior located in the median line, to allow the adjustment of the protheses in function of the growth of maxillaries. The control was periodic for the activation of the expanders. This treatment has proven successful results returning to the patient function, aesthetic and social conviviality.

#### 314. USING O'RING IN SMALL INTEROCLUSAL SPACE

PAIXAO, F.\*; RAMOS, G.G.; CASSELLI, H.; SILVA, F.A.; SILVA, W.A.B.

FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

A free-end affects the firmness of a removable partial denture very much and whenever it is possible an anchorage and a distal retention has to be used. A 63 year-old-patient, I.I.S., class II according to Kennedy classification, had the root 47 moved and the movement decreased the interoclusal space. So, the usual technique of the o'ring system couldn't be used in this case. As the maintenance of this root was very important to the retention and to the stability of the removable partial denture a modification of the technique was suggested and a inversion in the position of the attachments was done—the female part of the attachment was put in the root together with the metal core and the male part was put on the plastic saddle of the prosthesis. This modification permitted the maintenance of the root 47 and created better retention and firmness to the removable partial denture, favoring the chewing by the patient.

### 315. REESTABLISHMENT AND REGISTER OF THE VERTICAL DIMENSION OF DIMINISHED OCCLUSION

DINIZ, P.V.P.; OLIVEIRA, A.C.S.; BRAZÃO-SILVA, M.T.; PRADO, C.J.; NEVES, F.D.; FERNANDES-NETO, A.J. UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The Brazilian population still does not receive the writs of prevention from the Deontology as it should have. Many people are still attacked severely for the caries and periodontal illnesses. The consequences of not replaced dental losses, mainly the posterior ones, will make the previous teeth play functions for which they are not prepared, for example, the chew. The result and the loss of dental structure, implies in aesthetic deficiency, reduction of the vertical dimension of occlusion (ovd), lack of occlusal stability and the condylus, among others. For way of this clinic case will be argued how must be proceeded to reestablish ovd diminished (for the metric, phonetic, aesthetic and deglutition methods). First, a jig of acrylic resin will be activated chemically (caar) and later, using the caar test as base, associated to two bilateral posterior colon also of caar, the register will be carried through to maxillomandibular of a patient having few remaining teeth in the maxillary and the jaw, being that the posterior ones do not present oclusais contacts. It is demonstrated that this technique makes possible to carry through the maxillomandibular register to transfer the study models or work for the semi adjustable articulator in way very precisely, contributing excessively for a correct diagnosis, planning or even an execution of the prosthetic work.

### 316. FULL ARCH REHABILITATION USING FIXED COMPLETE DENTURES AND IMPLANT IMMEDIATE LOADING

TRAMONTINO, V.S.\*; DAROZ, L.G.D.; FERREIRA, D.F.; HENRIQUES, G.E.P.; NÓBILO, M.A.A.; MESQUITA, M.F. FOP-UNICAMP

The protocol for osseointegrated implant rehabilitation demands time enough for tissues repairing after implant surgery and it requires an amount of prosthetic procedures until prosthesis insertion. The immediate loading of implants by means of anticipated insertion of the prosthesis has been recognized as possible, showing high rates of success. A case detailing in which 5 osseointegrated implants (Replace-Select; Nobel Biocare) were placed immediately after exodontics surgery in interforaminal area with a fixed complete denture screwed a few hours after implants placement will be shown. To fabricate prosthetic framework, an innovator technique was used, looking forward to abbreviate the time of laboratorial procedures, in which casting was not used and prefabricated bars were incorporated completely by laser welding. Still, as a way to anticipate prosthesis finishing, an alternative technique was used to gingival esthetic veneering using a light curing acrylic resin (Versyo.com; Heraeus-Kulzer).

#### 317. PROSTHESIS IN PROTOCOL WITH FIBERGLASS RE-INFORCEMENT AND IMMEDIATE LOADING

GOMES, S.M.F.\*; GOMES, V.L.; GONÇALVES, L.C.; GOMES, J.B.; LOPES JÚNIOR, I.; LIMA LUCAS, B. FOLIFU

The treatment with implants has improved the oral rehabilitation. The Branemark System Classic is well documented for its successful and predictable results in dental implant rehabilitation. However, the classic two-stage protocol is associated with problems, such as long treatment time, incapacity of the immediate loading use, and high treatment cost. Recently, there has been considerable interest in early or immediate loading, which has showed predictable results and with high success rates for various indications. The goal of this effort is to discuss the clinical report results of a complete-arch mandibular prosthesis, which was fixed in four implants with immediate functional loading. In order to provide resistance, fiberglass reinforcement was added inside the prosthesis, which was made of self-curing acrylic resin and was placed above the UCLA abutment. The complete denture was inserted immediately. According to the presented technique, it was possible to guarantee for the patient aesthetics, comfort, masticatory efficiency, and a high fracture resistant.

#### 318. AESTHETIC ANTERIOR: IMPORTANCE OF PERIODON-TAL TISSUES ON THE PLANNING OF PROSTHESIS ON AN IMPLANT AND FIXED PARTIAL DENTURE

FERREIRA, F.M.\*; NOVAIS, V.R.; PRADO, C.J.; NÓBILO, M.A.A.; FERNADES-NETO, A.J.; SIMAMOTO JÚNIOR, P.C. FACULDADE DE ODONTOLOGIA DA UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Patients are more exacting with dental treatment in relation to aesthetic, functional and biological aspects. Therefore, total analysis about teeth, lips, gingival and face, its necessary to oral rehabilitation success, to supply harmonic smiles. The interaction of gingivalteeth is fundamental to optimized aesthetic of prosthesis, when anterior superior region are involved. Thus, care with periodontal tissues is important in prosthetic planning to obtain aesthetic, functional, better hygienic and good phonetics. The formation of interdentally or interimplant papilla and the reconstitution of gingival concave arch are the aim of actual Dentistry, in order to optimize the esthetics of a prosthesis on an implant and a fixed partial denture, to similarly natural dentition in relation to emergency profile of prosthetic element. The aim of this paper is to discuss several techniques of planning, like of gradual pressure, surgery technique and artificial gingival, that objective achieved better relation between periodontal tissues and prosthesis.

## 319. INFLUENCE OF RECTIFICATION PROCEDURE IN THE COUNTER-TORQUE FORCE OF PROSTHETIC SCREWS OF IMPLANT-RETAINED FRAMEWORKS.

MACHADO, A.C.M.\*; NÓBILO, M.A.A.; HENRIQUES, G.E.P.; MESQUITA, M.F.; DAROZ, L.G.D.; FRAGOSO, W.S DEPARTAMENTO DE PRÓTESE – UNIVERSIDADE ESTADUAL DE CAMPINAS.

Cast implant-retained frameworks can present irregularities that can cause a decrease of retention and lower force necessary to loose the prosthetic screws. The aim of this study was to evaluate the counter-torque force to loose prosthetic screws before and after the procedure of manual rectification of the screw base in implantretained frameworks. A metallic mandibular master cast containing 3 conical abutment analogs (Micro-Unit; Conexão) disposed 10mm of center to center were used to manufacture 10 one-piece cast frameworks made from titanium. The frameworks were tightened on the abutment analogs with 10Ncm torque following a tightening sequence from the central abutment to the distals. The force (in Ncm) necessary for loosing the screws (counter-torque force) was evaluated after the grip of the frameworks on the abutments with the use of a digital torquemeter (TQ3000; Lutron). The counter-torque evaluation was performed before and after the manual rectification of the screw bases using a manual trimer (Conexão). The mean values of counter-torque force were calculated for each framework, before and after the rectification procedure. Test t for pared samples was used to compare the situations. It was observed significant difference among the mean counter-torque values of the prosthetic screws before (5.78±1.03Ncm) and after (7.06±0.62Ncm) the rectification procedure (p <0.01). The rectification process of the screw bases increased significantly the values for loosing the prosthetic screws of cast implant-retained frameworks

### 321. INFLUENCE OF OCCLUSAL FEATURES ON OCCURRENCE OF TEMPOROMANDIBULAR JOINT NOISES

ALVES, M.R.\*; RIBEIRO, C.E.; SILVA, L.L.B.; VEDANA, L.; SILVA, W.A.B.; SILVA, F.A. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

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The aim of this study was to verify if exists an association between the presence of temporomandibular joint noises and the presence or absence of anterior guide and posterior occlusal interferences. Four hundred patients who were looking for dental care at Piracicaba Dental School -UNICAMP were evaluated. The patients were submitted to an anamnesis, beyond clinical and physical examinations, based on the questionnaire of the Center of Study and Treatment of Functional Alterations of the Stomatognathic System, of the same school. The presence of anterior guide and posterior occlusal interferences were evaluated during jaw excursive movements. The presence of noises was recorded by a visual and numerical analogical scale, by the patient complaint. The data were submitted to Qui-square statistical test, with 5% of significance. The occurrence of noises was lesser in patients without canine guide or with molar occlusion on the work side (p<0.01). Patients without incisive guide or with molar occlusion on the non-working side presented greater incidence of noises (p<0.05 and p<0.01; respectively). It was not found any association between molar occlusion on protrusion and presence of noises (p>0.05). It could be concluded that the absence of incisive guide and the presence of molar occlusion on non-working side appeared to be the main factors related to the presence of joint noises.

## 323. INFLUENCE OF OCCLUSION VERTICAL DIMENSION ON OCCURRENCE OF TEMPOROMANDIBULAR JOINT NOISES

RIBEIRO,C.E.\*; SILVA, W.A.B.; SILVA, F.A.; ALVES, M.R.; CRUZ, M.V.J.; PAIXÃO, F.. FOP UNICAMP

The aim of this study was to verify the presence of temporomandibular joint noises in patients with higher or lower occlusion vertical dimension (OVD), evaluating if an association between these characteristics exists. Four hundred patients who were looking for dental care at Piracicaba Dental School - UNICAMP were evaluated. The patients were submitted to an anamnesis, beyond clinical and physical examinations, based on the questionnaire of the Center of Study and Treatment of Functional Alterations of the Stomatognathic System, of the same school. The presence of noises was recorded by a mixed analogical scale (visual and numerical), by the patient complaint and the OVD was measured by the Willis method. The data were submitted to Qui-square statistical test, with a significant level of 5%. The occurrence of noises was lesser in patients with higher OVD (p<0.01). Patients with lower OVD presented greater incidence of noises (p<0.01). It could be concluded that the presence of lower OVD appeared to be strongly related to the presence of joint noises, as like as the higher OVD appeared to be strongly related to the absence of joint noises.

#### 320. THE RELATION BETWEEN THE MISFIT ABUTMENT/IM-PLANT AND THE LOST OF TORQUE IN ABUTMENTS' SCREW

OLIVEIRA, A.C.S.\*; PRADO, C.J., NEVES, F.D.; BARBOSA, G.A.S.; BRAZÃO-SILVA, M.T. UNIVERSIDADE FEDERAL DE UBERLÂNDIA

The vertical misfit between the abutment and the implant have been treated as a possible fact of mechanical issues. This work has an objective of correlate the increase of vertical misfit abutment/implant with the lost of applied torque. Using a metallic matrix containing five implants of the system Brånemark (Neodent, Brazil) with regular platform (4,1 mm), the achievement of a work model, which polished five infra-structures intermediated by UCLA's abutments. Therefore, these were melt in a pure commercially Titanium block (Tritan grade I, Dentaurum). We analyzed the misfit by the midst of comparative microscope (Mytutoyo) after a 20 N/cm torque. We achieved the average of misfit per abutment, totalizing 20 averages. The lost of torque was evaluated by digital torque machine (TQ-680, Intruterm), achieving the value of torque losing per abutment. Using a rule of three, which the value of applied torque corresponded to 100% and the value to be calculated corresponded to the percent of torque losen, we achieved the value of applied torque losing in the abutment's screw, in %. After the fulfillment of the pearson correlation test (p<0,05), between the misfits of values (35,08 $\mu$ m±8,10) and the percents of torque losing (50,71%±11,37), we observed the absence of a significant correlated statistic (p=0,295) between those factors. We conclude that big misfits will not necessarily imply in great lose of torque.

## 322. CORRELATION BETWEEN MARGINAL MISFIT AND STRAINS TRANSMITTED TO THE ABUTMENTS OF IMPLANT-SUPPORTED PROSTHESES

FRAGOSO, W.S.\*; HENRIQUES, G.E.P.; MESQUITA, M.F.; DAROZ, L.G.; OLIVEIRA, L.V. UNIVERSIDADE ESTADUAL DE CAMPINAS

The longevity of implant-supported rehabilitation is limited when strains proceeding of marginal misfit have injured the bone-implant junction. The purpose of this study was to correlate the marginal misfit of cast implantsupported frameworks made from commercially pure titanium with strain in the abutments. From a mandibular master cast, containing 05 Micro Unit abutment analogs, 10 frameworks were made from investment casts for over-analog casting technique. Plaster casts were used to originate 10 others frameworks gotten by one-piece casting technique and 10 frameworks by the laser welding technique. The marginal gaps were measured using a traveling microscope (X120). The strains were captured after the caught of all prosthetic screws. By means of Analysis of Variance and Tukey test were exhibited statistical significant differences (P≤0.05) among the mean values of marginal misfit and strain, respectively, in the groups: one-piece casting technique (332,87±63,91μm; 1033,85±222,29gf), laser welding technique (187,22±35,44μm; 856,71±289,17gf) and over-analog casting technique (97,70±40,53μm; 586,38±134,84gf). The frameworks from over-analog casting technique provided a smaller marginal misfit and strain than laser welding technique and one-piece casting technique, it was observed a positive correlation (P<0.01) between increase of marginal misfit and strain.

#### 324. IMMEDIATE LOADING IN GRAFTED MAXILLA, A CLINI-CAL REPORT.

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According to the original protocol of Branemark, a healing period of 3 to 6 months were necessary to allow for complete osteogenesis and woven bone remodeling into load-bearing lamellar bone prior to any occlusal loading. However, single-stage surgery and immediate loading concepts have been introduced to further accelerate treatment schedules, and decrease the negative aspects of multiple surgical phases and the difficulties associated with interim management. Although many studies have shown that an overloading on this initial period prejudices the bone repair around the implant, the actual literature shows a high success rate for the immediate loading procedure. The case report presents the treatment of a patient with an extensive alveolar resorption treated with a bone augmenting procedure from intraorally sites. After a healing period of 5 months, a biomodel was required to plan the implant surgery and the prosthetic phase. Ten implants were placed; however, only 8 achieved 40N for the immediate loading. After 6 months, the definitive fixed implant-supported prostheses were placed using 9 implants. The case is stable with a 3 year of follow up. It can be concluded that the treatment planning was adequate restoring patient's function and aesthetics.

## 325. ANALYSIS OF THE REPRODUCIBILITY OF THE MASS AND VOLUME OF THE CUBES OF OPTOCAL OBTAINED BY TWO DIFFERENT METHODS

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The Optocal has been used for tests of masticatory performance however the method of confection of the cubes and reproducibility are not reported. This study aimed to verify the existence of standardization of two properties in cubes produced from two methods. A first obtained the cubes by means of an aluminum mold with compartments with form and desired size, approximated sides of 5.6 mm. The second method obtained the cubes by means of a machine of cut in which was led a plate of Optocal produced in a closed aluminum mold, with height of 5.6 mm and sides of 12.5 mm of length. For each method 200 samples had been made in five consecutive days for different examiners, each group with n=40. The sides of each cube had been measured with digital calipers (Digimess) and weighted in analytical balance with precision of 0.0001g (Sauter kg Ebingen- Germany). The ANOVA test and Tukey b was applied (P<.05) to verify the significance of the mass and volume difference of each group of cube. The data demonstrated statistical significant difference for the mass (p=.000) and volume (p=.000) of the cubes confectioned from the first method. No significant difference was found between the masses (p=0,097) and the volumes (p=0,218) of the second method. It can be concluded that only the second method allowed to a standardization of the mass and volume of the cubes of Optocal and that the technique to obtain them can interfere with the reproducibility.

## 327. TENSILE STRENGHT OF CASTING POST CEMENTED AND SUBMITTED THE PREPARATION WITH DIAMOND BURN.

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The refinement in the preparation of the coronary portion of the casting post (CP) cemented constitutes in practical routine in the clinic. However, the effects of the action of the diamond burn in high rotation on the cement agent are little argued. This study it tested the hypothesis of that the preparation with high rotation and the passed time between the cementation and the accomplishment of the preparation have negative effect in the tensile strenght of the CP cemented in bovine roots. Eighteen bovine roots had been parted with 15mm of length, endodontically treated, alleviated in 11mm. CP had been confectioned in cover-aluminum league and cemented with cement zinc phosphate and divided in 6 experimental groups: group: A: CP that had not been submitted the preparation and had been traction: 20minutes-(A1), 60minutes-(A2) and 24hours-(A3) after the cementation. In group B the CP had been prepared 20minutes; C 60 minutes and in group D 24hours after the cementation. The assay was carried through in universal machine (EMIC) with speed of  $0.5 \, \mathrm{mm/min}$ . The data of tensile strenght had been analyzed by the analysis of variance and test of Tukey (α= 5%). The values (Kgf) had been: A1-7,7±3,7A;A2-16,8±4,9A; A3-9,1±6,5A;B-7,8±6,1A;C-15,2±8,1A;D-14,7±10,2A. Verified that it did not have significant difference between the groups. Inside of the limitation of this study it can be concluded that the preparation with high rotation and the factor passed time between the cementation and the assay did not produce effect on the resistance of the CP.

## 329. THE SPLINT MATERIAL INFLUENCE OF THE TRANSFERS ABUTMENTS IN THE IMPLANTOLOGY MOLDING ACCURANCY

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The passive fit over implants is necessary to prevent injuries to the bone and implants. Many researches used Duralay Resin or Pattern Resin to link the transfers abutments used to transfer molding the implants with open tray. Generally, the monobloc infrastructure needs to be splited and bonded again to minimize the resin contraction. The purpose of this research was to evaluate the distortion caused by the acrylic resins Duralay® (Reliance) (group 1), Pattern Resin® (GC) (group 2) and light curing resin (Wilcos) (group 3). The resins were manipulated by the orientations of the manufacturer, in a place with controlled humidity and temperature. The infrastructures of the G1 and G2 were cut and bonded. The G3 was made in monobloc and there were no cuts. After 15 minutes of the end of the polymerization the infrastructures were removed form the cast and we waited 30 minutes to reposition then on the cast and take then to the microscope (Olympus - 120X) to start the analysis. We have used analysis of variance (ANOVA) and Tukey Test to compare the groups. The values of marginal misfit was: G1 (89,46mm, DP±5,69); G2(50,66mm, DP±5,36); G3 (33,33mm, DP±9,85). It was observed significant difference between the groups (p<0,01). In conclusion, the light curing resin group presented the best result compared to the others and it is viable to use in a clinical situation

### 326. PROSTHETIC REHABILITATION IN CANTILEVER WITH THE SYSTEM PROCERA - ALL ZIRKON

LAMEIRA, D.P.\*; SILVA, L.L.B.; ALVES, M.R; SILVA, F.A; LANDULPHO, A.B; SILVA, W.A.B. FACULDADE DE ODONTOLOGOA DE PIRACICABA (FOPUNICAMP)

The restoratives ceramics for guaranteeing aesthetic excellency make possible to the dentists restoring options of high efficiency, under the aesthetic point of view. As consequence these materials had suffered structural modifications with the purpose to become them more resistant being able to be excused the use of metallic infrastructures. The aim of this work is describe the clinical case of a patient with loss of the left lateral incisor, rehabilitated with prosthesis using a system that adopts the drawing concept and manufactures assisted for computer - Procera® "AllZirkon" - in cantilever. The main pillar of prosthesis was the tooth keeping in cantilever the lateral incisor. The great care was the maintenance of the oclusal balance not to overload the pillar main. This system demonstrated to be efficient in this rehabilitation in cantilever for its resistance to the fracture to be bigger that of the too much ceramic systems, promoting high degree of previsibility since its physical properties if are similar of metallic infrastructures, returning finally to the patient aesthetic and function.

## 328. REABILITATION OF AESTHETIC PREVIOUS TOOTH THROUGH THE EMPRESSE SYSTEM. STORY OF A CLINICAL CASE.

BERALDO,T.F.\*; MAIA,M.C.R.; FAVARETTO,A.L.C.; SÁBIO,S.; SÁBIO,S.S. 3178

Introdução

The previous tooth is a complex procedure which had aesthetic and the number of available materials. Each material is, in accordance with the manufacture, the final "solution more suitable". however, despide the marketing similarity, the final results can disappoint the professional. The aesthetic one demanded determines that the Surgeon has complete knowledge of the performance of each ceramic system. This work presents the Empress System as material of choice in the restoration of two central incisors. The initial planning of confection of two plated had to be modified for the restoration of one tooth with a total crown, because of an accidental breaking suffered by the patient. Do to the great loss of dental strcture it was used composed resin and fibre glass bolts for coronary reconstruction. The molding procedure used one silicona of addition and moldeiras of the moldex type, that present the advantage to determine the oclusal relationship in the same mold. The final quality was evidenced by the satisfaction presented by the patient, what in it takes them to conclude that the Empress System can be used safely in works with high aesthetic requirement.

#### 330. OVERLAY: ACTING PROSTHESIS FOR THE REESTAB-LISHMENT AND DIAGNOSIS OF THE VERTICAL DIMENSION OF DIMINISHED OCCLUSION

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To rehabilitate individuals with vertical dimension of occlusion (vdo) diminished still is a great challenge for the surgeons dentists. It is necessary, first, to make the correct diagnosis. Clinical situations which have few severely consumed remaining teeth and, with irregular oclusal plan and reduced vdo, present aesthetic, chewing, phonetic e, normally, fibromyalgia deficiencies. Then, first it is necessary to reestablish such functions, especially of vdo, and to evaluate them during a certain period, for later, planning rationally the definitive rehabilitator treatment only after the professional be certain that the "new" vdo is comfortable to the patient. An alternative to reestablish dvo, the centric relation, to return stability and occlusal harmony is the use of overlay. This presentation will approach clinical and laboratorial phases in the confection of this modality of prosthesis and will argue its advantages and indications. This type of prosthesis is of easy and fast confection and presents highly satisfactory a cost/benefit relation.

## 331. ALTERATION DIMENSIONAL OF POLYSULFIDE'S AND POLYETHER'S MOLDS UNDER INFLUENCE OF THE TIME OF POURING OF MODEL

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The delay in pouring of elastomers impressions can be cause of possible dimensional alterations of the dies, mainly when they are under influence of other factors. It was the purpose of this research to test the hypothesis of that the passed time enters the attainment of impressions of polysulfide and polyether and the pouring of models has influence in the dimensions of the gotten model, by means of a method that simulates the conditions found in the practical clinic. It had been used one polysulfide (Permelastic) and a polyether (Impregum), to mold a master model contend two pillars: 1 first premolar and 1 first molar humans beings prepared for fixed partial denture with three elements. Six reference points had been established in each tooth, resulting in seven measurements. Molds had been gotten with acrylic resin custom-trays, and stored for the times of 30min, 2h and 12h (n=10) and leaked with dental stone type IV (Vel-Mix). Three examiners measured the master model and the samples in comparing microscope. The distances, in had been compared by means of test t-student, ANOVA two-way and test of Tukey. Polysulfide and the polyether had generated models with alterations in at least one of the distances, but only one of them was influenced by the storage time. The most of the alterations was clinically acceptable

## 333. EVALUATION OF HARDNESS AND FRACTURE TOUGHNESS OF IN-CERAM AND IPS-EMPRESS CERAMIC CORE SYSTEMS

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The aim of this study was to evaluate the hardness and fracture toughness of two ceramic core systems: In-Ceram Alumina, Vita Zahnfabrik, Bad Säckingen, Germany (InC) and IPS-Empress II, Ivoclar Vivadent, Schaan, Liechtenstein (IPS). Ten discs of each material (7,5mm of diameter x 3,0mm of thickness) were embebed in acrylic resin and polished with silicon carbide papers up to 1200 and serially abrasive rubbers. Hardness and fracture toughness were determined by indentation technique using a microhardness tester 1600-6300 (Buehler, Lake Bluff, EUA) with a Vickers diamond indenter. The applied load was 1000gf for 20 seconds. The size of cracks were obtained by a software and the fracture toughness was calculated with the formula "Kic = 0.016~(E/H)1/2~x~P/C3/2". The data were subjected to analysis of variance (p>0,05). Hardness mean values was 1279,31 VHN for InC and 546,47 VHN for IPS. Fracture toughness mean value for IPS was 2,551 x 106 N/m3/2, although, wasn't possible the measurement for InC because cracks weren't formed in corner indentations. It was conclude that hardness mean values of InC were statistically higher than IPS; and that cracks weren't formed in corner indentations of InC specimens with load of 1000gf, preventing the measurement of fracture toughness.

## 335. REABILITATION OF AESTHETIC PREVIOUS TOOTH THROUGH THE EMPRESSE SYSTEM. STORY OF A CLINICAL CASE.

BERALDO,T.F.\*; MAIA,M.C.R.; FAVARETTO,A.L.C.; SÁBIO,S.; SÁBIO,S.S. 3178

#### Introdução

The previous tooth is a complex procedure which had aesthetic and the number of available materials. Each material is, in accordance with the manufacture, the final "solution more suitable". however, despide the marketing similarity, the final results can disappoint the professional. The aesthetic one demanded determines that the Surgeon has complete knowledge of the performance of each ceramic system. This work presents the Empress System as material of choice in the restoration of two central incisors. The initial planning of confection of two plated had to be modified for the restoration of one tooth with a total crown, because of an accidental breaking suffered by the patient. Do to the great loss of dental strcture it was used composed resin and fibre glass bolts for coronary reconstruction. The molding procedure used one silicona of addition and moldeiras of the moldex type, that present the advantage to determine the oclusal relationship in the same mold. The final quality was evidenced by the satisfaction presented by the patient, what in it takes them to conclude that the Empress System can be used safely in works with high aesthetic requirement.

## 332. INTER-RELATION BETWEEN HIPOMOBILITY AND HIPERMOBILITY OF THE TEMPOROMANDIBULAR JOINT

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According to the classification proposed by the Academy of Orofacial Pain, the disorders of the temporomandibular joint (TMJ) may cause restricted (hipomobility) or widening (hipermobility) mouth opening. Among the disorders of the temporomandibular joint that may cause hipomobility or closed-lock, there are the disc displacement disorders, like the disc displacement without reduction, which is characterized by the displacement of the disc on closing followed by a failure to reduce or recapture the disc during translation. The hipermobility is classified as a displacement of the disc-condyle complex, meaning the movement of the complex forward as a unit beyond the articular crest. These antagonic clinical conditions are usually presented in an isolated form. However, one-side articular hipermobility may occur as a compensatory reaction to the hipomobility on the contra-lateral joint (Bell, Goldman). On this clinical case report, a 23 year-old woman was seen for treatment with pain, clicking and closed-lock on joints. After a clinical exam, muscle palpation and radiographic exams, the coexistence of the chronic disc displacement without reduction on the right TMJ and hipermobility was diagnosed. The treatment employed has consisted on the use of a repositioning oclusal splint and exercises for hipomobility and hipermobility.

## 334. THE CHALLENGE OF INTEGRATED PROCEDURES IN THE REHABILITATOR TREATMENT THROUGH THE OSSEOINTEGRATED FIXTURES.

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The execution of integrated procedures needs the establishment of a plan of treatment based on correct diagnosis and therapeutically sequence, that eliminate all the existing etiological factors and to establish the conditions necessary to cure and to keep the stomathognatic system in complete normality. Therefore this work has for purpose, besides showing the success of the osseointegration fixtures, to mainly enhance to the importance of the treatment to multidiscipline. The case discourses the necessity of the patient in carrying through some procedures, being submitted to removing of considered elements lost, periodontal treatment, orthodontic treatment, the patient also was rehabilitated with provisory prostheses, sinus lift and the installation of the fixtures. After such initial procedures, were molded, already with the teeth that had been kept repaired, and in this case that we use Procera's abutment, the model with its prepare having had been scanned being possible to install copings of alumina, thus being able the patient to be rehabilitated with personalized prosthesis and of primordial esthetic, taking care of completely its expectations.

We conclude that the work in team is of utmost importance for the success of the treatment and integrated procedures are essential so that all the success expectations are reached.

## 336. OCCLUSAL CONSIDERATION IN IMPLANT THERAPY - THE BIOMECHANICAL RISK FACTORS TO SUCCESS AND LONGEVITY OF THE OSSEOINTEGRATION

BLATT, M\*; ROSSETTI, P.H.O.; BUTIGNON, L.E.; BONACHELA, W.C. USP/BAURU

The clinical success and longevity of osseointegrated implants are largely influenced by the manner mechanical estress are tranfered from implant to surround bone, without generating forces of magnitude that would jeopardizes the osseointegration. The dental implants due to lack of the periodontal ligament unlike natural teeth, react biomechanically in a different fashion to occlusal force. It is therefore believed that dental implants may be more prone to occlusal overloading, which is often regarded as one of the potential causes for peri-implant bone loss and failure of the implant/implant prosthesis. Overloading factors that may negatively influence on implant longevity include large cantilevers, parafunctions, improper occlusal designs, and premature contacts. The purposes of this work are to discuss the currently concept in occlusion of implant and biomechanical risk factors in this therapy. In conclusion, it is important to control implant occlusion within physiologic limit and thus provide optimal biomechanical factors in implant rehabilitation to ensure a long-term implant success.

## 337. ANALYSIS OF THREE SEQUENCES OF SCREWS CAUGHT ON TENSION TRANSMITTED TO THE ABUTMENTS OF IMPLANT-SUPPORTED FRAMEWORKS.

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Several factors can weak the longevity of the implant-supported rehabilitations, and the strains induced in the abutments have been studied due the potential damage at the bone-implant interface. The objective of this work was to evaluate the effect of three sequences of screws caught, on the strain induced in the abutments. A mandibular master cast was made, containing 5 Micro Unit abutment analogs, numbered from 1 to 5. After impression proceedings, using polyether in custom trays, were obtained 7 stone models to build 7 commercially titanium pure (CP Ti.) frameworks, gotten by one-piece casting technique. The strain were measured by means of strain gauges bonded in the abutments, after the caught of all prosthetic screws (10 N/cm), in agreement with the following groups and respective caught sequences: G1: 12345; G2: 24315 (control); G3: 15243. The strain mean values of each group were submitted to Analysis of Variance (ANOVA) and Duncan tests (p=0,05). There was statistical significant differences among the groups  $G2(617.8\pm145.7gf)$  and  $G3(445.5\pm107.5gf)$ , being the group G1 (508,4±122,57gf) statistically similar to the others. The sequence of screws caught for the groups G1 and G3 produced the smallest strains values, generating better passivity in the abutments when compared whit the control group.

## 339. EVALUATION OF THE ABUTMENT SCREW INITIAL TORQUE LOST AFTER THE UTILIZATION OF NEW AND USED SCREWS

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This work aims to evaluate the percentage of lost in the applied torque when using new and used screws. Four infrastructures (IE), each one with five abutments UCLA castable type, were cast in cobalt-chrome alloy (Remanium, Dentaurum). It was also used 20 new UCLA abutment screw (G1), 20 abutment screw were used two times (G2), and 20 abutment screw were used more than two times (G3). The values of the applied torque (20Ncm) and the slackening torque were measured with a digital torque meter (TO-680, Instrutherm). A role of proportion was made, in that the initial torque corresponded to 100% and the percentage of slackening torque was the value to be found. Then values in percentage of torque lost in relation to the initial could be obtained. The results were submitted to statistical analysis (p<0.05). ANOVA and Tukey tests were applied demonstrating a significant statistical difference between the groups G1 (50.71%  $\pm$  11.36) and G2 (24.01%  $\pm$  3.33) (p=0.000), and between G1 (50.71%  $\pm$  11.36) and G3 (25.60%  $\pm$  4.64) (p=0.000), being the maximum values to G1. No statistical difference were found between G2 and G3 (p=0.774). Within the limitations of the present work, it could be concluded that the initial lost screw percentage value is small when using screws after applied an initial torque, and it could keep stable after the appliance of successive torque.

#### 341. INFLUENCE OF ESTROGEN RECEPTOR ALPHA POLY-MORPHISMS IN BRAZILIAN WOMEN TMD

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Temporomandibular disorder is the term used to designate pathological conditions that involve masticatory muscles and temporomandibular joints. That, when associated with pain, is more prevalent among women than men, suggesting that there might be an influence from reproductive hormones. One possible reason for that correlation would be an association between certain estrogen receptor  polymorphisms and pain perception. Based on that, the aim of this work was to investigate the correlation between the presence of the XbaI and PvuII estrogen receptor  polymorphisms and Brazilian women TMD. For that, 300 women were divided in 3 groups: group 1 –TMD and TMJ pain; group 2 –TMD and without TMJ pain; and control group – no TMD. The TMD diagnosis was done throughout Research Diagnostic Criteria for Temporomandibular Disorders. In order to obtain DNA, buccal epithelial cells were collected through a glucose solution mouthwash. The A-351G and T-397C SNPs of estrogen receptor alpha gene were analyzed by restriction fragment length polymorphism of PCR products. The analysis of genotype frequencies of XbaI polymorphis site showed a borderline significant difference (p=0.0556) when the groups carrying TMD were compared to control group. In fact individuals with GG genotype at A-351G locus seemed to be 2.28 times more susceptible to TMD when compared with individuals AA/AG. The GG genotype of A-351G locus was significantly more prevalent in TMD with pain group. This genotype seemed to increase susceptibility to pain in women with TMJ disarrangements (odds ratio= 2.55).

## 338. EFFECT OF POST-CURE TIME AND WATER STORAGE ON THE DIMENSIONAL STABILITY OF AUTOPOLYMERIZING ACRYLIC RESINS.

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This study evaluated the effect of post-cure time (immediate, 1, 24, 48 and 72h) and of the storage condition (dry-d or water-w) on the dimensional stability of 3 autopolymerizing acrylic resins: Dencor-DE, Duralay-D and Pattern LS-P. Twenty specimens were made for each resin (n=10) by using a stainless steel mold (50X0.5mm) with reference points. The distances between these points were measured (6x) with a Nikon perfilometer (Model 6C) being the specimens maintained at 26°C. The differences between the linear dimension of each specimen and the measurements made on the stainless steel mold were calculated and expressed as percentage change. Data (%) were analyzed with 3-way ANOVA and Tukey's tests (a=0.05). The mean values of dimensional change were: DE(d)=-0.45%; DE(w)=-0.33%; D(d)=-0.37%; D(w)=-0.12%; P(d)=-0.25% and P(w)=-0.12%, where the minus signal means shrinkage. While DE showed progressive shrinkage (between -0.40 and -0.45%) after initial measurement (-0.24%), D and P showed lower dimensional change after 48h (-0.20 and -0.13%, respectively) and after 72h (-0.21 and -0.14%, respectively), regardless of the storage condition. After 1h, D (-0.24%) and P (-0.17%) produced lower dimensional changes than DE (-0.44%), regardless of the storage condition. No significant difference was found between D and P in all experimental conditions. DE, D and P produced progressive shrinkage after polymerization.

### 340. EFFECT OF DENTAL WEAR ON INTEROCLUSAL DISTANCE DURING SPEECH

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The aim of this study was to investigate changes on interocclusal distance during pronunciation of /m/ and /s/ sounds, in dentate patients presenting dental wear due to bruxism, before and after installation of stabilization appliance and oral rehabilitation. Subjects were divided into 2 groups: G1)composed by 18 dentate patients presenting dental wear, G2)composed by 18 patients completely dentate. The magnetic jaw-tracking device was used to measure the interocclusal distance during speech. The measurements were carried out 1 week before insertion of appliance (T0); immediately before (T1); after 24 hours(T2), 7(T3), 30(T4) and 60(T5) days; 1 week after oral rehabilitation(T6) and 1 month after oral rehabilitation(T7). Data were collected and submitted to ANOVA two way. Comparison between groups revealed significant differences for /m/ sound in all periods of evaluation: T0(7,0); T1(6.8); T2(6.7); T3(6.7); T4(6.9); T5(6.8); T6(6.6) and T7(6.8). No statistical difference was observed for the /s/ phoneme. The comparison between before and after interocclusal appliance insertion and oral rehabilitation showed no significant differences for both sounds. Results showed that subjects with dental wear treated with interocclusal appliance therapy and oral rehabilitation had changes in the interocclusal distance of speech during phonation of /m/ sound.

# 342. THE INFLUENCE OF THE DIFFERENTS CURING AND THE FLASKING TECHNICS IN THE DIMENSIONAL VERTICAL OCCLUSION AND THE AREA OF OCCLUSIVE CONTACTS IN COMPLETE DENTURES

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The purpose of this study was to evaluate different flasking and polimerization technics in the occlusal vertical dimension (OVD) and in the area of the occlusive contact (AOC). Forty pairs of complete dentures were distributed into four groups of ten pair each, according to the treatments: GI – water bath and monomaxillary flasks (control); GII – microwave irradiation and monomaxillary flasks; GIII - water bath and bimaxillary flasks; GIV- microwave irradiation and bimaxillary flasks. For the measurements of OVD it was used a wood base in which the articulator and digital caliper were positioned. The AOC was measured using the software Owin 550 (Leica®). Datas were submitted to ANOVA and Tukey's test at 5% significance level. All groups showed percent variation for the OVD: GI= 1.92%; GII= 2.92; GIII= 2.27% e GIV= 2.72%, there were significant statistical differences between GI and GII (p=0.083). There weren't statistical differences for the AOC values, in the upper and lower models, except for GII, in the upper models, every groups showed reduction in the area of the occlusive contact. It was concluded that: OVD changed in all groups independently of curing method; there weren't statistical differences between the groups for AOC; there weren't diferences between mono and bimaxillaries flasks.

## 343. INFLUENCE OF THE PERIODONTAL LIGAMENT IN TOOTH AND IMPLANT SUPPORTED REMOVABLE PARTIAL DENTURE THROUGH MEF

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The data about the association of the free-end saddle removable (FERPD) with an osseointegrated implant (OI) are inconclusive. The objective of this study was to evaluate by the finite element analysis (FEA) the stress distributions fFERPD reproducing the periodontal ligament (PL) in the homogeneous and non-homogenous condition. 6 models (M) were created in the AutoCAD 2005 software (Autodesk Inc/USA). MA: hemiarch representing the natural tooth 33 and edentulous space in the posterior region; MB: similar to MA with a FERPD replacing the absent teeth; MC: similar to MB, with OI (3,75x10mm) positioned in a posterior region. The models MD, ME and MF identical to MA, MB and MC, respectively; however, with PL in non-homogeneous conditions similar to "in vivo" performance. The finite element analysis program ANSYS 8.0 (Swanson Analysis Systems/USA) was used for numeric analysis. The models were loaded with vertical forces of 50N. The maxims concentrations stress, in MPa, were: MA (58,9); MB (77,8); MC (207,1); MD (110,3); ME (191,3) and MF (326,6). Conclusions: 1) The non-homogenous condition of PL enhanced the implant benefits in relation to the support structures should be adopted in studies of that nature; 2) there was an increase stress values for the models with non-homogeneous condition PL; 3) Independently of the heterogeneity of PL, the implant did not reduce the stress on the support teeth.

## 345. CLINICAL EVALUATION OF THE FAILURES OF REMOVABLE PARTIAL DENTURE

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The aim of this study was to evaluate the failures of the removable partial denture and possible damages on the tooth and periodontal health. The material consisted of 33 patients who were provided between 2000 and 2002. For the abutments of tooth-supported removable partial dentures, (G1) a clasp design with a cast circumferential buccal retentive arm, a rigid reciprocal clasp arm and a rest adjacent to the edentulous ridges was selected (n=12). In cases with unilateral and bilateral distal-extension (G2), a clasp design including a T clasp of Roach retentive arm, a rigid reciprocal arm and a mesial rest were used (n=21). The factors evaluated on the prosthesis were the fracture of theirs components. In the abutment teeth it was evaluated caries and calculus presences, mobility, fracture and bone level. The Chi-square test was used in the percentages comparisons. Kruskal-Wallis was used in the comparison of the mobility degree. The variance analysis or the T-Student Test was used in the comparison of the average among groups referents on sulcus depth and level of bone loss. The results showed that G2 presented more base dislocation and more tendency of bone loss than G1 (p<0.05). Making reference to the other criteria, no difference was noted between both groups. It was conclued that an adequate prothesis planning contributes to prothesis haven't cause damages to the support structure.

## 347. OVERLAY REMOVABLE PARTIAL DENTURES IN THE REHABILITATION OF PATIENTS WITH GENERALIZED WORN TEETH – CLINICAL AND LABORATORIAL STEPS

TJIOE, K.C.; BLATT, M; CARVALHO, L.F.; BONACHELA, W.C. FACULDADE DE ODONTOLOGIA DE BAURU - UNIVERSIDADE DE SÃO PAULO

Oral Rehabilitation in patients having generalized worn tooth has been a great challenge for the dentists, mostly for those less experienced. Occlusal instability, loss of vertical dimension and loss of anterior guidance occasioned by the excessive tooth wear might damage estomatognathic system's biology, function and esthetic. The etiology of tooth wear may be multifactorial, and the parafunctional habits (bruxism) is one of the mainly factors involved. So, the correct dignosis and treatment planning of the case are crucial to control and reestablish the system's harmony. In face of the complexity on oral rehabilitation cases, these should start by reversible procedures, e.g. the confection of overlay, and just after the restoration of the altered oral functions, irreversible procedures can be executed, improving the final results of the treatment. Thus, this report's purpose is to demonstrate the clinical and laboratorial steps for the confection of an overlay and its indications, contraindications, advantages, disadvantages and outcome as well as the importance of those procedures for the planning and execution of complexes rehabilitations.

# 344. ANALYSIS OF THE CLASP DESIGN INFLUENCE ON THE STRESS DISTRIBUTION IN A DISTAL-EXTENSION RE-MOVABLE PARTIAL DENTURE IMPLANT-SUPPORTED BY THE FINITE ELEMENT METHOD.

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The data about the stress distribution on the support tooth of a distal-extension removable partial denture (DERPD) supported partially by implant is inconclusive, once the clasp has not been considered in the previews studies. Therefore, our objective was to evaluate, through 2-D FEA, the DERPD support structures behavior considering the clasp influence. For this, 8 models were elaborated: MA- hemiarch including teeth 33 and edentulous space for distal; MB- similar to MA, with a DERPD replacing the absent posterior teeth, without clasp influence; models MB7, MB ie MBr were similar to MB, but in these models, the clasp was considered in accordance with terminal shape, respectively, "7", "i" e "r"; model MC7, MCi e MCr- similar to MB7, MBi e MBr, and with an implant (10.0x3,75mm) supporting the DERPD base in a posterior region. The numerical analysis was realized in the program ANSYS 10.0. The loading (50N) was performed in each cuspid simultaneously. The stress maps showed clasp influence on the support tooth, once the stress was higher for MB7, MBi and MBr than MB. However, the most evident difference was observed in the alveolar ridge because the stress was smaller than in MB. The implant (MC7, MCi and MCr) did not reduce the stress on the support teeth. In conclusion, the association between DERPD and implant did not reduce the stress on the support teeth but diminished the stress on the alveolar ridge.

### 346. RESTORATION OF CANINE GUIDANCE ON NA OCCLUSAL SPLINT USING AMALGAM: A CLINICAL REPORT

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Several studies focused on the efficacy of canine guidance in reducing the electromyographic activity of elevator muscles, has reported that occlusal splints with canine protected articulation develops low electromyographic activity of masseter and temporal muscles, and when the guidance is eliminated a rise in activity followed. On this way, the importance of maintenance of canine guidance on occlusal splints has been emphasized. A 17 year-old man was seen for treatment with pain in the elevator muscles. The pain was present on waking and worsened on palpation and function, presenting a condition compatible with the diagnosis of temporomandibular disorder (TMD). 28 after the insertion, the splint showed deep wear in the areas of canine guidance and non working side interferences, which suggests that the bruxism appeared to be ongoing. A simple method to restore canine-protected articulation on occlusal splints, with amalgam, has been described. This procedure, useful in situations of early wear of the splint, has led to maintenance of canine guidance for a longer period of time and to postponement of fabrication of a new splint.

### 348. EFFECT OF INTRAORAL APPLIANCE TO TREAT PRIMARY SNORE AND SLEEP OBSTRUCTIVE APNEA

GOMES RIBEIRO, C.\*; DEL BEL CURY, A. A.; RIBEIRO-SOBRINHO, D. G.

UNIVERSIDADE ESTADUAL DE CAMPINAS - FACULDADE DE ODONTOLOGIA DE PIRACICABA

Sleep related breath disorders affect the individuals interfering with personally life. This study evaluated the effectiveness of mandibular advancement splint (MAS) in subjects with sleep- related breathing disorders using both objective and subjective outcome measures. Eleven subjects with non-apnoeic snoring or obstructive sleep apnea (OSA), diagnosed by overnight polysomnography were fitted with MAS. The individuals were analyzed for changes in the respiratory disturbance index (RDI) and Epworth Sleepiness Scale (ESS) scores. Statistically significant differences in the RDI and ESS scores, before and after Mandibular Advance Splint therapy were assessed using T test and the Wilcoxon Signed Ranks test respectively at the 5% level of significance. The median values improved in all subjects significantly. So, the individuals with no-apnoeic snoring or light OSA had polysomnography exam normal while the subjects with moderate OSA had an improvement, being 75% of them without OSA and 25% with light OSA, and 50% those with severe OSA change to moderate and 50% to light OSA (p<0.05). The median Epworth Sleepiness Scale scores decreased in all individuals significantly (p<0.05). In conclusion, the MAS is considered safety and efficient therapy for the treatments of patients with sleep-related breathing disorders.

## 349. EFFECT OF RELINING AND MICROWAVE DISINFECTION ON THE FLEXURAL STRENGTH OF DENTURE BASE ACRYLIC RESINS

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This study evaluated the effect of laboratory and chair-side relining and microwave disinfection on the ultimate flexural strength (US) and on the flexural strength at the proportional limit (PLS) of two denture base resins (Lucitone 550-L and  $Acron\,\bar{M}C\mbox{-}AC).$  Bars of L and AC were made (64x10x2mm) and relined (1.3mm) with 3 relining resins (Kooliner-K, Tokuso Rebase Fast-T and New Truliner-N). In addition, specimens relined with L and AC and intact L and AC specimens were made (64x10x3.3mm). Twenty specimens were made for each material (n=10) and tested (5mm/min) in water at 37°C after 1) polymerization and 2)microwave disinfection (650W/6min). Data (MPa) were analyzed with ANOVA and Tukey's tests (P=0.05). After microwave disinfection, AC, L and L-N demonstrated a decreased US (79.27 to 70.57MPa; 73.27 to 64.49MPa and 44.14 to 32.67MPa, respectively) and AC-K demonstrated an increased US (37.76 to 49.49MPa). Microwave disinfection did not influence the US of the T composite specimens. After disinfection, L-L produced the highest US (78.66MPa). Similar results were seen for the PLS. AC and L produced a decreased PLS after disinfection (35.94 to 29.08 and 30.11 to 25.49MPa, respectively). AC-K showed an increased PLS after disinfection (16.05 to 21.48MPa). N produced the lowest US (between 32.67 and 35.38MPa) and PLS (between 14.11 and 14.13MPa) after disinfection, regardless of the denture base resin.

#### 351. APPLICATION OF CULTURE INDEPENDENT MOLECU-LAR TECHNIQUES IN DENTISTRY: REVIEW AND PERSPEC-TIVES.

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The development of new techniques and therapies based on molecular biology may change diagnosis, prevention and treatment procedures in Dentistry. The identification of existent species in oral microflora play an important role in pathogenic processes and clinical evolution. This study aims to discuss about concepts, techniques and application of the molecular biology in Dentistry. Most studies about oral microorganisms used culture and biochemical characterization. However, the majority of phylotypes cannot be cultivated by standard techniques, and most bacteria have not been cultivated. More than 500 bacterial species that inhabit the human oral cavity were identified; some of them have been associated to periodontal disease (Actinobacillus actinomycetemcomintan, Fusobacterium nucleatum, Porphyromonas gingivalis, Prevotella intermedia e Eikenella corrodens). The use of techniques involving Polymerase Chain Reaction (PCR) and 16S rDNA sequencing may improve the identification of bacteria poorly described, permitting an accurate identification of species. The knowledge and application of culture independent molecular techniques in Dentistry will allow dentists to better understand and study the function of microorganisms associated to dental caries, periodontal disease, and other oral processes.

### 353. PASSIVE FITTING OF IMPLANTS RETAINED PROSTHESIS - CLINIC CASE REPORT

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The fitting of the prosthesis is an essential factor for final success of the oral rehabilitation with osseointegrated implants. There are several factor influencing on fitting when casting understructure is used, as concerning to casting process, type of metal alloy, and understructure extension. For more extended and casted understructure, the recommendation is to saw and to solder the understructure in order to eliminate these difficulties, and to obtain a more acceptable fitting. However, the soldering of bigger metallic understructure in fixed partial prosthesis is a procedure, which may to introduce distortion and areas of mechanical weakness, situation also verified in the laser soldering. Using prosthetic components indicated for the passive fitting with immediate load, the purpose of this work was to show the use of the laser soldering as a satisfactory alternative for the cementation, with support of the passiveness in bigger structures with more biomechanical benefits, and longevity of the prosthesis retained by implants.

### 350. EFFECTS OF NYSTATIN, FLUCONAZOLE AND PROPOLIS ON ACRYLIC RESIN SURFACE

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The prevalence of candidosis in denture wearers is as well established as its treatment with antifungal agents (AA). However, little research has been done as regards the effects of AA on denture base surfaces. Therefore, the aim of this study was to evaluate the effect of Fluconazole (FLU), Nystatin (NYS) and Propolis (PRO) orobase gel on methyl-methacrylate (MMA) surfaces. Deionized water and orobase gel without any active component were used as control groups. Specimens (3.0 x 2.5 x 0.5 cm) were made using water bath (Clássico) or microwave polymerized (Onda Cryl) MMA resin. After polymerization the specimens were polished and their surfaces were evaluated for roughness (SR), contact angle (CA), free energy (SFE) and hardness (HD). Later, specimens were immersed in AA and controls for 14 days and all the variables were measured again. SR results showed similar behavior in water bath and microwave polymerized MMA resins, with PRO reaching the highest and statically different values from the other AAs (Tukey, p <0.05). No differences between the two MMA resins and NYS compared with FLU were found as regards HD, CA and SFE (Tukey, p >0.05). It could be concluded that antifungal agents were able to interfere in MMA surface.

## 352. INFLUENCE OF MARGINAL MISFIT IN THE COUNTERTORQUE OF SCREWS IN IMPLANT-RETAINED FRAMEWORKS

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The purpose of this study was to evaluate the counter-torque force of prosthetic screws in implant-retained frameworks with different levels of marginal misfit. A mandibular master cast containing 3 conical abutment analogs (Micro-Unit;Conexão) and disposed 10mm of center to center were used to manufacture 10 one-piece casting frameworks made from cast titanium. The counter-torque force was evaluated in two experimental situations: (a) after casting, directly on the mandibular master cast; (b) on an index in gypsum obtained through the final frameworks simulating minimum misfits. The screws were tightened in a sequence from the central abutment to the distal. The force (in Ncm) necessary for loosing the screws (counter-torque force) was evaluated after the grip of the frameworks with 10Ncm torque with the use of a digital torquimeter (TQ-8800;Lutron). Mean values of marginal misfit were obtained for each framework using the single-screw test and direct visualization in a traveling microscope (120X). The values of marginal misfit were correlated with the counter-torque force values of the screws. Test t for pared samples was used to compare the situations. The mean marginal misfit value for situation (a) was 188 m (DP61,5) and for (b) 66 m (DP18,5). A significant difference was observed when comparing the situation (a) (5,78±1,03Ncm) with (b) (7,06±0,62Ncm) (p<0,01). For higher marginal misfit values, lower counter-torque force is necessary to loose the prosthetic screws in implant-retained frameworks.

## 354. EVALUATION OF THE MASTICATORY EFFICIENCY OF COMPLETE DENTURES USERS WITH TWO PROSTHETIC TEETH ARRANGEMENT TECHNIQUES

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This study evaluated the masticatory efficiency resulting of the use of two prosthetic teeth arrangement techniques to obtain balance in double complete dentures. Twenty four volunteers were rehabilitated in agreement with two groups: G1 - Conventional technique and G2 - Nóbilo's Balancing Ramps technique. The masticatory efficiency was evaluated thought the fractionating sieve method after the food comminution test in 15 and 30 masticatory cycles. It was done a comparison of cycles between the groups and between the cycles inside each group. The resulting masticatory efficiency values between the groups with 15 cycles were the same, and lightly greater with 30 cycles in the G1 group. Inside each group it was observed high correlation between the cycles. The analysis between the groups with Anova Test did not show significant statistical difference (p<0,05). The analyses done inside each group showed significant statistical difference (p<0,05) when it was used Pearson Correlation Test to evaluate the correlation between cycles, and with the T-Student Test comparing the cycles. It could be concluded a better food comminution pattern can be linked with the number of done masticatory cycles, relation that may be proven thought studies with a bigger number of masticatory cycles and a shorter time among them.

### 355. DENTURE TINTING – INCIDENCE AND PREVALENCE OF ALVEOLAR MUCOSA PIGMENTATION

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In dentistry, it is essential to restore functionally and esthetically the stomathognathic system of the complete edentulous individuals so as to guarantee the patient's comfort and his self-reliance. Thus, the staining which is contained inside the denture base is a significant detail. This study aimed to verify the oral mucosa coloring of dentate individuals, through the comparison to the acrylic resin specimens, which were made in different colors, in order to find both a reliable relationship between them, and a staining guide to the denture tinting process. The 64 specimens were made and used as an identifier guide for the alveolar mucosa colors while observed directly. Examinations charts were used to standardize the registration of the alveolar mucosa color and its various tints, as well as its diverse ischemic regions. As a result, almost 24 colors were not found in any volunteer. A pigment called 23 (light purple) was found in gingival mucosa while the pigment number 1 (light purple), and the pigment number 50 (dark purple) were found in superior alveolar mucosa and in inferior alveolar mucosa, respectively. As an ethnic feature, it was possible to notice the coloring was significant in black ethnic group in attached gingival region, while the ischemic regions were found mainly in white ethnic group in the inferior alveolar mucosa, at the attached gingival region.

### 357. EFFECT OF DENTURE CLEANSERS ON SURFACE ROUGHNESS OF RESILIENT DENTURE LINERS

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This study evaluated the effect of denture cleansers on surface roughness of resilient denture liners. Three liners, Luci Sof® (Dentsply), Molloplast-B® (Dentax) e Sofreliner® (Tokuyama), and the denture cleansers 0.5% Alkaline Hypochlorite (Medicinallis) and Efferdent® (Warner-Lamber) were used. Twenty specimens of each material were prepared (25X15XX3mm) and submitted to two denture cleansings approaches: 1) alkaline hypochlorite, for 20 minutes; 2) alkaline peroxide, for 30 minutes. This procedure was repeated 8 times a day, during 90 days (720 cycles). Surface roughness was evaluated after 0 (T1), 180 (T2), 360 (T3) e 720 (T4) cycles, in a profilometer Surfcorder SE 1700 (Kosaka–Laboratory). Data were subject to ANOVA and Tukey test (5%). For hypochlorite immersion, Luci Sof® mean values decreased significantly in T2, T3 and T4; Molloplast-B® increased roughness mean values increased roughness mean values significantly in T2 and T4. For peroxide immersion, Luci Sof® roughness mean values decreased significantly in T2; Molloplast-B® mean values decreased significantly in T3; Sofreliner® mean values increased significantly only in T4. Denture cleansers, in general, decreased surface roughness mean values for all materials. Molloplast-B® presented a linear behavior during all this in vitro study.

## 359. SPEECH-LANGUAGE PATHOLOGIST AND THE DENTISTRY: AN ASSOCIATION TO BENEFIT THE ELDERLY USING DENTAL PROSTHESIS

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The speech-language pathologist plays an important role together with dentistry when one deals with elderly. However, there is a shortage of specific and validated material to evaluate such population in Brazil. The aim of this study was to create and to validate a protocol for speech-language pathologist evaluation for elderly with dental prosthesis. After reviewing different protocols used in speech-language pathologist clinic, an instrument was proposed to evaluate the facial muscles. In the first stage, a pilot study was carried out, applying it in five elderly patients of the "Envelhecer Sorrindo" project (FO-USP). It was verified the content understanding and the adaptations of its form. In the second stage, the same protocol was submitted to a theorical validation process, being analyzed by four specialists in such areas, who ended up arriving to an accurate pattern. With the first phase, the structure of the protocol was modified by including closed and objective questions, as well as a self-perception index. With the second stage, it was achieved a etter format for speech-language pathologist evaluation of the elderly. In this way, the validation of the instrument was important for those who practice speech-language pathologist associated to Dentistry and deals with elderly patient because it does contribute to Gerontologic researches when one try to relate oral health to general health aging.

### 356. A TECHNIQUE FOR REPOSITIONING DENTAL ARCH IN COMPLETE DENTURES

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Despite the careful efforts in the confection of complete dentures prosthesis pledging the best techniques, almost always some occusal discrepancy when the same ones are installed. Occasionally, these discrepancies if present of form not to allow the intercuspation of teeth of prosthesis. In its majority, the error in the registers of the vertical dimension and centric relation are related. The objective of this work , is to suggest one technique to change the positioning of the inferior dental arc when it has a great difference enters the position of centric relation and of maximum intercuspation, observed at the moment of the installation of prosthesis. For such, with a spherical drill n° 8 in hand part, becomes a ridge separating the dental arc of the base of prosthesis without perforateing this. After that, utility wax is located in three points joining again the arc and the base, and is taken this set to the mouth, registering of correct form the positions of vertical dimension and centric relation through the methods of deglutition, phonetic and metric method. After the register, fills the other spaces with the wax of the conventional and the prosthesis is taken to the muffle for procedure of substitution of the wax for the thermosetting resin. The repositioning of the dental arc is one simple technique, of low cost, being this a practicable clinical option for the patient and the dentist.

### 358. ANTEROPOSTERIOR DIMENSIONAL STABILITY AMONG TEETH IN COMPLETE DENTURE.

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The purpose of this study was to verify the dimensional stability among teeth in dentures after water storage. Twenty maxillary complete dentures were prepared with the anterior teeth mounted in normal overlapping and the posterior teeth in Angle class I, in relation to lower stone cast teeth. Final flask pressing was made with the RS tension system and the curing cycle processed in water at 74°C for 9 hours. Distance measurements between right incisive to right molar (RI-RM) and left incisive to left molar (LI-LM) teeth were made with an Olympus comparator microscope with accuracy of 0.0005mm, after deflasking and 7, 30, and 90-days water storage. Data for distances ID-MD: deflasking (water=37.73±0.85 and water+bench=38.06±1.14; 7 days: water=38.18±0.50 and water+bench= $38.09\pm0.67$ ; 30 days: water= $38.55\pm0.66$  and 90 water=38.76±0.61 water+bench= $38.35\pm1.22$ ; days: water+bench=38.49±0.95) and IE-ME: deflasking (water=34.65±0.74 and water+bench=34.33±0.62; water+bench=34.10±0.51; water=34.17±0.44 days: and 30 water=33.76±0.90 days: and water+bench= $34.50\pm0.80$ ; 90 days: water=33.81 $\pm$ 0.70 and water+bench=34.04±0.48) were submitted to ANOVA and Tukey's test (5%). Except for the LI-LM distance in 30-days storage period, there was no significant difference among other distances influenced by the flask cooling.

### 360. THE EFFECT OF SEALER AND WATER STORAGE ON PERMANENT DEFORMATION OF A TISSUE CONDITIONER

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When they are used to treat inflamed, irritated, or distorted tissues or in implant therapy, tissue conditioners are required to function over relatively long time periods. This in vitro study evaluated the effect of sealer and water storage on permanent deformation one tissue conditioner. Sixty cylindrically-shaped specimens (12.7-mm diameter 3 19.0-mm height) were used for the deformation tests. Specimens were divided into 6 test groups (n=10), according to surface treatment (sealer application) and water storage (1 hour, 1 week and 2 weeks). Permanent deformation, expressed as a percent (%), was determined using ADA specification no. 18. Data were examined a analysis of variance and a Mann-Whitney test (α= 0.05). Significant differences were observed only after 1 week of water storage, for both groups. The surface treated group presented the highest permanent deformation percentage. Conclusions: This in vitro study indicated that the tissue conditioner evaluated is only useful for 1 week. After this period, the material must be replaced.

## 361. STUDY OF ELECTROMYOGRAPHIC ACTIVITY AND MASTICATORY EFFICIENCY IN DOUBLE COMPLETE DENTURES PATIENTS

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The aim of this study was to evaluate the link between the electromyographic (EMG) activity and masticatory efficiency resulting of two prosthetic teeth arrangement techniques to promote balance in double complete dentures. 24 subjects were rehabilitated: G1 - Conventional technique and G2 - Nóbilo's Balancing Ramps technique. The relation between the masticatory efficiency and the EMG activity symmetry of the temporalis muscles and masseter (M) in the mandibular rest (R) and isometric contraction in intercuspidation position (CIMI) was measured in the 3° month of prostheses use. The Myosystem I (Prosecon Ltda) was used. The masticatory efficiency was evaluated thought of the fractionating sieve of the food test in 15 and 30 cycles. In G1 group, it was mainly observed negative correlations between the EMG activity symmetry and masticatory efficiency in the R. In the CIMI, it was observed positive correlations between the variables with high intensity in the M muscles. In G2 group, in the R, positive correlations between the variables presented same values. In the CIMI, all the correlations were negative. Pearson Correlation Test showed significant statistical difference (p<0,05) only between M muscle, in the CIMI, and 30 cycles in the G1. Therefore it can be concluded a higher muscular balance promote a better food comminution, what it may be traduced in a better clinical performace of complete dentures.

### **363.** EFFECT OF THE FLASK COOLING ON THE DENTURE TEETH DISPLACEMENT AFTER WATER STORAGE

ZAMPIERI MH\*, CONSANI RLX, MESQUITA MF, SINHORETI MAC FOP-UNICAMP

The purpose of this study was to investigate the teeth displacement in maxillary complete dentures after water storage periods. Twenty dentures were made with the anterior teeth mounted in normal overlaping and the posterior teeth in Angle class I in relation to the teeth of the lower stone cast. After final pressing of the flasks the acrylic resin was cured in hot water cycle at 74oC for 9 hours. The deflasking of the denture was made after flask cooling in water-polymerization or in water-polymerization plus room storage for 3 hours. The distance measurement among I-I (incisor to incisor), M-M (molar to molar), RI-RM (right incisor to right molar) and LI-LM (left incisor to left molar) teeth were verified with an Olympus comparator microscope with tolerance of 0.0005 mm, after deflasking and water storage periods for 7, 30 and 90 days. The I-I (deflasking: water=7.1 and water+bench=7.2; 7days: water=7.1 and water+bench=7.2; 30 days: water=7.1 and water+bench=7.2; 90 days: water=53.0; and water+bench=53.1; 30 days: water=52.9 and water+bench=53.0; 90 days: water=53.0 and water+bench=53.1; and ID-MD (deflasking: water=37.7 and water+bench=38.0; 30 days: water=38.1 and water+bench=38.4); and IB-ME (deflasking: water=34.1 and water+bench=34.5; and water+bench=34.3; and water+bench=34.3; and water+bench=34.3; and water+bench=34.3 and water+bench=34.5; and water+bench=34.5 and water+bench=34.5; and water+bench=34.5; and water+bench=34.5; and water+bench=34.5; and water+bench=33.8 and water+bench=34.5; and water+bench=34.5; and water+bench=34.5; and water+bench=35.8 and water+bench=35.7 and water+bench=34.5; and water+bench=35.8 and water+bench=35.9 and water+bench=

## **365.** EFFECT OF CLEANSERS TREATMENTS ON HARDNESS OF RESILIENT DENTURE LINERS

MASTROFRANCISCO S, OLIVEIRA LV, MESQUITA MF, CONSANI RLX, HENRIQUES GEP, LIRA AF FOP-UNICAMP

This study evaluated the effect of brushing and denture cleansers on hardness of resilient denture liners. Thirty specimens (25x14x3mm) were made with Luci Sof (Dentisply), Molloplast-B (Dentax), or Sofreliner (Tokuyama) materials, which were submitted to mechanical brushing (MSEt) with extra soft bristle toothbrushes (Johnson & Johnson) and Sorriso dentifrice (Kolynos) at a race of 5.0 strokes per second (20,000 cycles) or to denture cleansers: alkaline peroxide, for 30 minutes or 0.5% alkaline hypochlorite preparation, for 20 minutes, which procedure was repeated 8 times a day, during 90 days (720 cycles). The specimens were evaluated before and after the cleanser procedures. The Shore A hardness test was evaluated in a durometer (Teclock GS-709A), with a penetrating load of 10N for 1 second. Obtained data for Luci Soft (brushing: before 43.80 and after 41.95; hypochlorite: before 42.30 and after 33.80 and peroxide: before 42.80 and after 36.65); Molloplast B (brushing: before 40.05 and after 35.10; hypochlorite: before 37.25 and after 28.85 and peroxide: before 37.20 and after 25.70); Sofreliner (brushing: before 26.35 and after 27.50; hypochlorite: before 29.90 and after 26.00 and peroxide: before 28.75 and after 25.75) were submitted to Wilcoxon-Mann-Whitney and Kruskal-Wallis tests (5%). Brushing decreased hardness only for Molloplast-B. Denture cleansers decreased the mean values for all materials, except for Luci Sof immersed in hypochlorite. Resilient denture liners sanitization should be done by immersion in denture cleansers.

### 362. FUNCTIONAL AND ESTHETIC REHABILITATION WITH TOOTH-RETAINED OVERDENTURE: A CLINICAL REPORT

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Despite recent developments in dental implantology, the conservative approach to root preservation is still valid. Roots maintained under the denture base preserve the alveolar ridge, provide sensory feedback and improve the stability of the dentures. Furthermore, with the use of copings and precision attachments, retention of the denture is provided. The aim of this article are to present step-by-step procedure and technique for the construction of overdentures and to discusse the treatment options, prosthetic designs, indications, and fundamental principles for the successful applications of overdentures. Maxilar and mandibular complete denture was performed by conventional technique. The O'rings-type abutments were fixed to mandibular roots canines to improve of mandibular complete denture. It was concluded that overdentures are a favored treatment modality for elderly patients with few remaining teeth.

### 364. REMOVABLE FIXED PROSTHESIS: SOLUTION FOR MAXILLA

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Prosthetic rehabilitation of the edentulous maxilla is a of the great challenger of the implanthodontics. The fixed prostheses are the first way for the prosthetic rehabilitation. However, there are risks of the esthetic compromising by spaces exposition to hygienization in the gingival region. Removable prostheses are sometimes omitted by the patients in relation to the less stability when compared to the fixed prosthesis. However the removable prosthesis showed advantages as removal, hygienization easiness and superior gingival esthetic. A rehabilitation of edentulous maxilla performed by a removable prosthesis retained on fixed metallic substructure supported by 6 fixtures and using detachable attachments system by accuracy fitting was proposed. The purpose was to associate the benefit of the conventional fixed prosthesis stability (metallic substructure that joint the implants) with the advantage of the remotion of the removable prosthesis (due to the incorporation of the removable prosthesis fixed by fits).

## **366.** COLOR OF ARTIFICIAL TEETH: ASPIRATIONS OF THE EDENTULOUS PATIENT BEFORE AND AFTER THE EXPLANATIONS OF THE DENTIST

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The color of artificial teeth can lead to the rejection of complete dentures (CDs) by the patient. It was investigated if the patient's aspirations related to the color of teeth are influenced by the explanation of the technical reasons of selection. In 2 sessions, 2 questions based on a scale of colors were applied to 69 edentulous subjects. In the session 1, the subjects chose the color of teeth preferred for their CDs and the color that would reject. After that, the technical reasons of color selection (skin color, sex and age) were explained and the questions were applied again. In the session 2, without new explanations, the questions were repeated again. To the analysis of the answers, the colors of the scale were divided into: clear (61 and 62), medium (65, 66, 67 and 68) and dark (69, 77 and 81). In the session 1, initially, 74.2% of the subjects preferred clear colors, 17.7% medium and 8.1% dark. As for the rejection, 9.1% rejected clear, 7.6% medium and 83.3% dark. After the explanations, 61.8% of the subjects preferred clear colors, 25.5% medium and 12.7% dark. As for the rejection, 9.3% rejected clear, 5.4% medium and 85.3% dark. In the session 2, 63.5% of the subjects preferred clear colors, 23.8% medium and 12.7% dark. As for the rejection, 12.7% rejected clear, 7.0% medium and 80.3% dark. It was small the influence of the technical explanations of color selection on the patient's aspirations.

## 367. EFFECT OF MICROWAVE DISINFECTION ON THE SHEAR BOND STRENGTH OF THE TOOTH-ACRYLIC RESIN JOINT

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This work verified the microwave disinfection effect on the shear bond strength of the tooth-acrylic resin joint. Five wax rectangular patterns (30x15mm) were included in metallic flasks with type III stone. The resulting mold in the stone was filled with laboratorial silicone, in which was included a molar acrylic tooth with a cylindrical wax (4x10mm) jointed to the tooth base. On the set was positioned a layer of laboratorial silicone, and the flask was fulfilled with type III stone. After 1 hour, the flask was opened, the cylindrical wax removed from the tooth, and the specimens made with Clássico thermopolimerized acrylic resin according to the experimental groups: 1 and 5 – tooth without treatment (control); 2 and 6 – bur abrasion; 3 and 7 – bur retention; 4 and 8 – monomer etching. The specimens (n=10) were polymerized in water at 74°C for 9 hours in automatic device and deflasked after water polymerization cooling. Specimens of the 2, 4, 6 and 8 groups were submitted to microwave disinfection in a microwave oven calibrated at 650mW for 3 minutes, emmersed in 150mL of water, Shear bond strength test of the tooth-acrylic resin joint was performed in an Instron machine calibrated for a crosshead speed of 1mm/minute. Data changed into kgf/cm2 were: group 1 without disinfection (control) 78,25; group 5 with disinfection (control) 56,28; group 2 bur abrasion without disinfection 108,17; group 6 bur abrasion with disinfection 90,61; group 3 bur retention without retention 107,71; group 7 bur retention with retention 77,39; group 4 monomer etching without disinfection 76,45 and group 8 monomer etching with disinfection 61,60. Obtained data were submitted to ANOVA and Tukey's test with 5% of significance level. Microwave disinfection decreased the shear bond strength values of the tooth-acrylic resin joint in all experimental groups.

### **369.** SWIVEL LOC SYSTEM FOR FIXED-DETACHABLE PROSTHESIS: A CASE REPORT.

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The majority of the edentate patients dreams with a totally fixed dentition. However an overdenture can have a better prognostic than a total fixed prosthesis, in the same way, a mixed prosthetic restoration, that combines implants fixed prosthesis with removable prosthesis, can present the best prognostic. To construct a fixed-detachable prosthesis, we must attempt to use a system that break the forces produced, allowing a joint between the prosthesis, so in this way, the removable part can remain implant retained and mucosupported. The mains indications for this type of prosthesis are: for patients who are not psychologically prepared to receive a complete removable denture such as an overdenture, and in cases of lip support absence. The advantages would be: provide masticatory function, aesthetic and adequate phonetic, mainly in cases with alveolar bone loss in the maxillary arc. In this work will be presented a fixeddetachable prosthesis using the Swivel loc system. This is an attachment that uses an active lock system, manufactured in surgical steel. These locks insert in niches constructed in manufactured bars made in acrylic for casting, indicated only for the cases in which abutments can support all the occlusal loading

### 371. IMPACT STRENGTH OF THE TOOTH-ACRYLIC RESIN JOINT UNDER EFFECT OF MICROWAVE DISINFECTION.

SILVA CR\*, CONSANI RLX, MESQUITA MF, CONSANI S. FOP-UNICAMP

This work verified the microwave disinfection effect on the impact strength of the tooth-acrylic resin joint. Five wax rectangular moulds (30x15mm) were embedded in metallic flasks with type III stone. The resulting impression in the stone was filled with laboratorial silicone, in which was included a molar acrylic tooth with a cylindrical wax (4x10mm) jointed to the tooth base. On the set was positioned a layer of laboratorial silicone, and the flask was fulfilled with type III stone. After 1 hour, the flask was opened, the cylindrical wax removed from the tooth, and the specimens made with Clássico thermopolimerized acrylic resin according to the experimental groups: 1 and 5 – tooth without treatment (control); 2 and 6 – bur abrasion; 3 and 7 – bur retention; 4 and 8 – monomer etching. The specimens of bur abrasion; 3 and 7 – bur retention; 4 and 8 – monomer etching. The specimens (and the specimens of 1 must be specimens of 1 must be specimens of 1 must be specimens of 3 minutes, immersed in 150mL of water. Impact strength test of the tooth-acrylic resin joint was performed in an Otto Wolpert Werke machine by Charpy system, with impact of 40 kpcm. Data changed into kgf/cm2 were: group 1 without disinfection (control) 12,31; group 5 with disinfection (control) 7,73; group 2 bur abrasion without disinfection 39,45; group 6 bur abrasion with disinfection 23,06; group 3 bur retention without retention 35,78; group 7 bur retention with retention 17,10; group 4 monomer etching without disinfection 14,00 and group 8 monomer etching with disinfection 7,17. Obtained data were submitted to ANOVA and Tukey's test with 5% of significance level. Microwave disinfection decreased the impact strength values of the tooth-acrylic resin joint in all experimental groups.

## 368. EFFECT OF AGING, SEALER AND INCORPORATION OF CITRATE ON BOND STRENGTH OF ACRYLIC-BASED RESILIENT DENTURE LINER

NUNEZ, J.M.C.\*, NAKAOKA, M.M., MESQUITA, M.F., HENRIQUES, G.E.P., CONSANI, R.L.X., OLIVEIRA, L.V. FACULDADE DE ODONTOLOGIA DE PIRACICABA

This in vitro study evaluated the effect of thermal cycling, the seal application and incorporation of citrate on bond strength of Eversoft® acrylic-based resilient liner.Thirty rectangular specimens (10 x 10-mm 2 cross-sectional area)of each material(Eversoft® and Experimental)were prepared and separated according to composition and treatment. Ten specimens served as controls and were stored in distilled water and not thermo cycled. The remaining twenty specimens were divided in two other groups: with and without seal application. Treatments were performed in a thermal cycler(MSCT-3plus)with temperatures from 5°C to 55°C and a 60-second dwell time. Mean bond strength, expressed as stress at failure(MPa),was determined with a tensile test using a universal testing machine at a crosshead speed of 5 mm/min. Analysis of failure mode, expressed as a percent (%), was recorded as either cohesive, adhesive, or both, after observation, and representative specimens were observed in a Scanning Electron Microscope(JSM 5600 PV). Data were submitted to analysis of variance and the Tukey test(5%). No significantly differences were demonstrated between Eversoft®(0.44 MPa) and Experimental(0.39 MPa) without thermal cycling. However, thermo cycling increased significantly Experimental bond strength mean values(0,55 MPa). Both materials, without thermocycling, presented 80% of cohesive failures. When submitted to thermocycling, 80% of the adhesive failures were observed for Experimental, and 40% of adhesive, and 50% of mixed failures for Eversoft® This in vitro study indicated that either thermo cycling or incorporation of citrate in Eversoft® resilient liner composition affects bond strength.

### 370. INFLUENCE OF WAX RESIDUES IN BOND STRENGTH OF ARTIFICIAL TOOTH-DENTURE BASE RESIN INTERFACE

MEDINA, M.\*; CONSANI, R.L.X.; MESQUITA, M.F; CARDOSO, L.; SINHORETI, M.A.C.; MACHADO, A.C.M. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The aim of this study was to evaluate the effect of wax residues in bond strength of acrylic teeth and a denture base resin activated by microwave energy. Five rectangular wax patterns (30x15x5mm) were embedded in plastic flasks with type III dental stone. The resulting moulds were filled with laboratorial silicone (Zetalabor), in which a molar acrylic tooth was included (36 Biotone IPN Vita) using a cylindrical wax (6x10mm) to join to the tooth base. The set was invested using laboratorial silicone and type III dental stone. After 1 hour, the flask was opened, the cylindrical wax removed from the tooth, and the specimens were made with a microwave acrylic resin (Onda-Cryl). The following groups were obtained: 1 - tooth base with no treatment (as control); 2 - tooth base trimmed using tungsten bur (MiniCut Maillefer); 3 and 4 - same as groups 1 and 2, however with wax residues. The specimens (n=10) were polymerized in 900W-domestic microoven following manufacturer's information. Specimens were deflasked after bench cooling. The specimens were stored in water at 37oC during 24h before mechanical test. The Charpy impact strength test was performed using an impact testing machine (Otto Wolpert Werke) set to 40 kpcm. Data were analyzed using Tukey test with 5% of significance level. The bond strength values (in kgf/cm2) were: group 1 (11.13); group 3 (4.99); group 2 (14.70) and group 4 (7.85). It could be concluded that residues of wax affected significantly the bond strength of artificial tooth to denture base resin.

### 372. OVERDENTURE BY O'RING SYSTEM - A ALTERNATIVE FOR PATIENTS WITH ACENTUATED REABSORPTION

CÁPUA, M.\*; CORRÊA, G.O.; CONTRERAS, E.F.R.; BESSON, T.; PETROCELLI JR., J.L. FACULDADE INGÁ - UNINGÁ

The rehabilitation through the overdenture using the o'ring system is a great alternative to reestablish the biologics factors, functional and aesthetic to the patients with stability and retention ausences. Patient L.P.S., 74 years, female sex, it sought Inga's dentistry high school complaining about ausences of stability and about masticatory difficulties. In the clinical examination, was note accentuated reabsorption of the alveolar edge, decrease in the mastigatory force and diction problems. The superior total denture and a inferior overdenture was planned with axial connections, connecting the male button implanted in the alveolar edge with the female button inserted in the total denture. In the lower jaw was planned to show and discuss the utilization of total denture, though in the overdenture in o'ring system, to rehabilitate of patient toothless, with alveolar edge reabsorption. It was concluded that this technique allows to the professional to ally the aesthetics of total denture with the stability and retention give for the o'ring system, with a satisfate cost.

## 373. EFFECTS OF SUPERFICIAL SEALER AND STORAGE OVER TENSILE BOND STRENGHT OF A TISSUE CONDITIONER AND AN ACRYLIC RESIN

TAKAHASHI, J.M.F.K.\*; OLIVEIRA L.V.; MESQUITA M.F.; HENRIQUES G.E.P.; CONSANI R.L.X.; DAROZ L.G.D. FACULDADE DE ODONTLOGIA DE PIRACICABA - UNICAMP

The use of tissue conditioners provides comfort and reduces attrition and cargo transmission on residual bone structures. The purpose of this study was to evaluate the effect of superficial sealer and storage time over tensile bond strength between the tissue conditioner (Coe Comfort®) and the acrylic resin (QC-20®). Sixty samples were made and divided in 6 groups: G1: without sealer and stored for one hour; G2: with sealer and stored for one hour; G3: without sealer and stored for one week; G4: with sealer and stored for two weeks; G6: with sealer and stored for two weeks. The samples were made using metal matrixes, which were included in flasks. The models printed on the silicone were filled with acrylic resin and tissue conditioner. The analysis of the kind of failure was registered in percentage (%), as adhesive, cohesive or both. The rehearsal of resistance of bond strength traction was performed on EMIC-DL500MF equipment, with speed of 5mm/minute. All data was analyzed by ANOVA and Mann-Whitney Test (5%). It was observed that the application of superficial sealer increased significantly the values of bond strength resistance on groups after one hour and one week of storage. Regarding the kind of failure, groups 1 and 2 presented 100% adhesive, groups 3 and 4 mostly cohesive and groups 5 and 6, 100% cohesive. It was concluded that the application of superficial sealer increases the values of

It was concluded that the application of superficial sealer increases the values of resistance to traction between the union of tissue conditioner and acrylic resin on the first hour and after one week of storage.

## 375. EARLY ATTENTION TO HEALTH PROGRAM: A MODEL OF INTERDISCIPLINARY PERFORMANCE

ANGELIM, A. B.\*; CARRASCOZA, K. C.; COSTA, L. S. T.; POSSOBON, R. F.; SCARPARI C. E. O.; MORAES, A. B. A. FACULDADE DE ODONTOLOGIA DE PIRACICABA

The Cepae-FOP-Unicamp (Center of Research and Odontologyc Support for Special Patients of the Odontology College/Unicamp) offers preventive support to patients between 0 and 5 years old. The interdisciplinary team of Cepae, composed by the following areas Odontology, Psychology, Nutrition and Phonoaudiology, develops researches and give health assistance to the community. During it's 13th years of performance, the investigations have shown a high level of exclusive breast feeding and the introduction of bad oral habits prevention (pacifier/feeding-bottle). The performance of Cepae begins at gestation period, trough the Orientation of the Pregnant Program. Fifteen days before birth, the mother and the baby start to join The Incentive of Exclusive Breast Feeding Group, that offers attendance during the first semester of the new born. After the 6th month, the child is examined with a gap of 2 months maximum. During each visit, the level of bacterial plats, the contents and nature of the diet are evaluated so as a training of oral hygiene and general orientation about alimentation and oral habits is given. All children pass trough an orthodontic and phonoaudiologyc evaluation by 3, 4 and 5 years old. When they reach the age of 5 years old, they are directed to other health services. This essay has the goal to show the development of the Early Attention to Health Program of Cepae as a model of preventive integrated care.

## 377. ORAL HABITS AND PHONOAUDIOLOGICAL CHANGES IN PARTICIPANTS OF PREVENTIVE PROGRAM

ZAMPIERI, M. A.\*; COSTA, L. S. T.; POSSOBON, R. F; CARRASCOZA, K. C.; QUINTEIRO, G.; INOCÊNCIO, L.B. FACULDADE DE ODONTOLOGIA DE PIRACICABA- UNICAMP

The use of pacifier, bottles and digital sucking promote changes in orofacial structure. In the search of a preventive action, this work aims to find out the prevalence of the phonoaudiological changes in children participants of the preventive program of occlusion problems from Odontologic Service for Special Patients and Reserch Center - CEPAE - FOP - UNICAMP. The participants were 70 children ages between 3 and 4 years, both genders, examined by the CEPAE Phonoaudiological staff to identify oral motricity disorders. The results showed that 57 children (81%) were oral breathers, of this, 59% presented tonsil hypertrophy, 16% had adenoid hypertrophy and 25% had the habit of oral breathers, 68% (39 children) had some type of sucking habit (pacifier and/or bottle), of this, 64% presented some kind of upper airway obstruction. Conclusion is that the higher incidence of phonoaudiological change was oral breathing, caused mainly by tonsil hypertrophy and the deleterious sucking habit, hence the vital importance of organizing and implementing an interdisciplinary staff to prevent or interrupt the development of these habits.

## 374. TAX OF BREASTFEEDING AND USE OF PACIFIER END MILK BOTTLE IN EXCLUSIVE BREASTFEEDING INCENTIVE GROUP.

COSTA, L.S.T.\*; CARRASCOZA, K.C.; POSSOBON, R.F.; TOMITA, L.M.; SCARPARI, C.E.O.; MORAES, A.B.A. FOP-UNICAMP

The aim of this study was investigate the impact of an Exclusive Breastfeeding Incentive Group (GIAME), developed by the Center of Research and Dental Treatment for Special Patients (Cepae/FOP/Unicamp) in stimulating breastfeeding and oral habits' reduction. The sample was divided in two groups: A (consisted of 120 mothers inserted in GIAME) and B (composed by 113 mothers who did not enjoy the GIAME). The results found in group A were collected during the GIAME's appointments, and the group B's data were collected by telephone when infants aged 6-7 months. A breastfeeding prevalence of 93% was observed for group A and 56% for group B, concerning infants aged 6 months. Exclusive breastfeeding, at the same infant's age, was 48% in A and 9% in B. Pacifier prevalence was 23% in A and 54% in B, also concerning infants aged six months. The baby's bottle prevalence, in the same age, was of 36% in the group A and 70% in the group B. GIAME's guidance on breastfeeding seems to be very effective in increasing the exclusive breastfeeding tax and in reducing use of pacifier and milk bottle.

## 376. MODIFICATION OF CHILDREN'S BEHAVIOUR DUE TO MATERNAL INFLUENCE DURING DENTISTRY TREATMENT FOR CHILDREN.

INOCÊNCIO, L.B.\*; TOMITA, L. M.; COSTA, L. S. T.; POSSOBON, R. F.; CARRASCOZA, K. C.; ZAMPIERI, M.A. CEPAE FOP UNICAMP

The behaviour of mothers can influence the behaviour of their children during their dentistry treatment. The goal of this research was to evaluate the behaviours of 10 mothers and their children during 10 sessions of dentistry treatment and to observe the relation between their categorys of behaviour. Every sessions were recorded in video tape with "bip" marks in each 15 seconds, that the behaviour's register woud happen. The results showed that the category of the mother named Caress could facilitate the behavioral adaptation of her child in the routine of dentistry treatment. The frequency of the category Control child, Intense Phisical Reaction and Intense Verbal Reaction, were reduced from 30 to the 60 session of attendment. However, it was observed that as soon as the Intense Phisical Reaction decreased, the reaction Hold Hand was increased. The categorys Phisical Reaction, Soft Verbal and Observing Proceeding had similar results. There weren't observed relations between the categorys Instruct Child and Offer Help and the behavioural categorys of the children. In this way, the maternal behaviour can provoke answers of not-collaboration of her children or can facilitate their adaptation in the dentistry treatment for children.

#### 378. EVALUATION OF MEASURES OBTAINED WITH TEM-PLATES IN IMPLANT PLANNING IN PANORAMIC RADIOG-RAPHY

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The templates used in implants planning correct the measurements by applying a single magnification factor, without considering the equipment used to acquire images or implant areas, and this can lead to incorrect measurements. The aim of this study was to evaluate radiographic measurements obtained with four different templates, and compare them with surgery findings. An evaluation was made of the panoramic radiographs of one 129 either fully or partially edentulous patients that had placed implants in the mandibular premolar or molar region. Implant planning was done using four different templates (Dentoflex, Conexão, Serson and Nobel). The measurements obtained with templates were compared with length of implant used in surgery. In 55.6% of the cases, there was no agreement between the measurements obtained with templates and the measurements of implants used in surgery. According to the statistical analysis, there was difference between the measurements obtained with the Conexão and Serson templates and the measurements of the implants used in surgery. In conclusion, implant planning with the use of templates can lead to incorrect measurements. Therefore, instead of using previously established templates for implant planning, we recommend the use of an adequate magnification factor that considers the area and the radiographic machine.

### 379. CRANIOFACIAL FIBROUS DYSPLASIA: CT ASPECTS OF AN AGGRESSIVE CASE

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A 23 years old female patient previously diagnosed as having craniofacial fibrous dysplasia (FD), was referred for a routine panoramic radiograph exam. The CT exam revealed an aggressive and rare case of hemicranial or hemifacial FD with the involvement of some structures (orbit superior spaces and etmoid cells of the right side of the skull); involvement of both sides of the skull for some structures (sphenoid and pterigoid process); and the unilateral involvement of the squamous portion of the temporal bone. Despite the severity of the lesion, the patient did not complain about cosmetic deformities or function disorders, or any complain about vision or audition loss.

## 381. Imaging diagnostic to evaluation of sialolith in the parotid gland

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Salivary calculi or sialolith is a calcified structure that develops in the interior of the salivary ductal system decurrent of the calcium precipitation and lack of protective colloid that inhibit salivary secretion. It occurs preferentially in the major salivary glands. The sialolith could be round, oval or elongated varying of some millimeters to 2 cm or more of diameter. The involved region could contain one or more calcified structures. The small amount of saliva that is excreted is usually muddy. The diagnose of this pathology is based on the clinical and imaging findings: extra-oral and occlusal radiographies, ultra-sonography (US) and sialography, with contrast introduction. The therapeutic varies in accordance to the size of the calculi. The small ones are eliminated by salivary flow stimulation. The bigger ones are removed by surgical procedure. We report a case of a patient MVL, 36 years-old, female, referred to the Stomatologic clinic of the School of Dentistry- PUC Minas, complaining of swelling in the left side of the mandible and pain while eating something acid. Panoramic radiography, AP of Towne, occlusal, sialography and US were requested, detecting sialolith in the right parotid gland.

## 383. RADIATION PROTECTION IN ACCORDANCE WITH BRAZILIAN LAW: HOW IS DENTISTS' ATTITUDE TOWARDS IT?

FREITAS, D.Q.\*; GÓES, L.A.; AZEVEDO, C.M.; PEDROSA, É.F.C.N.; WORMSTALL, C.; ALMEIDA, S.M. FOP - UNICAMP

The aim of this study was to perform a survey of private dental offices about dentists' knowledge and attitudes with regard to radiation protection and to compare data with the recommendations of Brazilian law. One hundred and fifty randomly chosen dental offices in São José do Rio Preto – SP were visited to analyze the radiological installations and to interview the professionals to assess their knowledge about Brazilian law. Of these, 26% did not know the law; 23% did not review previous radiographs of the patient; 21% did not use leaded aprons on patients; 49% did not use film holder; 58% still used "sight processing"; 93% used E-speed or F-speed film, however average exposure time was 0.5 s.; 14% of equipment had pointed cone and 83% had manual timer; 17% of the dentists did not take precautions to protect themselves during patient exposure and 64% still used timer with delay. In conclusion, there is a general lack of knowledge about radiation protection. An educational program in dental radiography would help to change dentist' attitude towards the use of ionizing radiation.

# 380. odontogenic keratocist tumor: a focus about the new classification of the world organization of the health (who).

LOURENÇO, N.N.\*; RODRIGUES, L.N.; CAMARGO, G. A. L.; RUFFEIL, C.M.; FISCHER, I.R.R.; DAMANTE, J.H. FACULDADE DE ODONTOLOGIA DE BAURU

In the classification of 1992 of the World Organization of the Health (WHO), the Odontogenic Keratocist tumor (OKT) it was contained among the odontogenic development cists. Based in recent studies, the new classification of the odontogenic fumors of 2003 brings the odontogenic keratocist tumor among the tumors of odontogenic epithelium with ripe fibrous matrix without ectomesênquima odontogênico. Local aggressiveness and recurrence are frequently observed and they are incompatible with the characteristics of maxillaries cysts. Microscopically, the discharge mitotic activity of the epithelium, the active growth of the conjunctive fabric and the multicentric pattern proliferation exhibited by some OKT healthy outstanding differences with other cysts of the maxillaries. It is added this, the immunocytochemical study of the specimens showing positive demarcation for proteins related with neoplastic potencial. On the other hand, the loss of suppressor tumors genes has also been observed through genetic researches in bearers of OKT. Like this, the behaviors doctor and microscopic of the lesion they sustain the comparison with benign tumors originating from of the odontogenic fabrics, especially, with the ameloblastoma (adamantioma). This work has as objective presents the new classification of OMS, through clinical images, radiographic and histopatological that illustrate the aspects that characterize the odontogenic keratocist tumor as a neoplastic.

## 382. EVALUATION OF GHOST IMAGES GENERATED BY THE HARD PALATE AND NASAL FOSSA FLOOR ON DIGITAL PANORAMIC IMAGES

MELO, D.P.\*; RAMOS, F.M.M.; PONTUAL, A.A.; DANTAS, J.A.; TOSONI, G.M.; ALMEIDA, S.M. FOP/UNICAMP

The aim of this work was mapping the hard palate and the nasal fossa floor in the digital panoramic images, identifying the structures that participate in the formation of their images. One dry hemiskull was used. On the hard palate, in the area of the intermaxilar suture, a metallic sphere was positioned in the incisive foramen before the first x-ray exposure. Subsequently, the sphere was positioned 5 cm posterior to the incisive foramen, moved towards to the posterior nasal spine and was exposed again. This process was repeated nine times until the last image, represented by the sphere positioned in the posterior nasal spine, was performed. All images were interpreted by two radiologists. In the digital panoramic image, generated by the Instrumentarium apparatus, the most superior image represents a ghost image of the structures located in the posterior portion of the hard palate and nasal fossa floor. The sphere, when positioned more posterior, forms a triple image and the group of these images - real double image and ghost image - corresponds to what is considered as double image of the anatomical structures hard palate/nasal floor. The inferior line corresponds to the junction of the single image of the anterior structures with the double real images of the posterior structures.

#### 384. TMJ DISK ADHESION - CASE REPORT

CASANOVA, M.S.\*; FARIAS, D.A.; MELO, D.P.; DANTAS, J.A.; HAITER-NETO, F.; CAMPOS, P.S.F. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP; FACULDADE DE ODONTOLOGIA - UFBA

The aim of this paper was to present a case report of anchored disc phenomenon of the TMJ. A 51-year-old patient female complained of casual and painful episodes of bilateral otalgy over the last 10 years. There is no history of TMJ pain or sounds. Clinically, the patient presented a limitation of mouth opening, left deviation of the mandibule with no correction in the end of the movement. The initial diagnosis was a partial anterior disc displacement with reduction of right TMJ. On the left TMJ, there was a suspicion of a partial anterior disc displacement, disc adhesion and condyle hipomobility. The Magnetic Resonance images confirmed the diagnosis.

## 385. THE IMPORTANCE OF THE COMPUTED TOMOGRAPHY IMAGES ON THE MIDFACIAL FRACTURES DIAGNOSIS

GUEDES, F.R.\* ; GUEDES, A.M.L. ; AMBROSANO, G.M.B. ; ALMEIDA, S.M. ; BÓSCOLO, F.N. ; HAITER NETO, F. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Facial trauma is clinically significant because they are often complex in nature and it can result in serious functional and cosmetic sequelae to the patients, this makes accurate diagnostic evaluation essential. During many years the only image method available, for the diagnosis of the midfacial factures, was the conventional radiographic methods that has many limitations principally in cases where some bones of the face are involved. However, after the introduction of the computed tomography images, the diagnosis became more accurate and trustworthy due to possibility of a detailed evaluation of all the affected regions in different plans and three-dimensional reconstructions that assist the surgical planning. This work has the objective to present the advantages of the use of the computed tomographic images by means of the presentation of cases of facial trauma in the midface region, demonstrating as the association of the axial, coronal and three-dimensional images, can assist in the diagnosis and treatment of the traumatized regions.

## $387.\ \mathrm{EWING'S}\ \mathrm{SARCOMA}\ \mathrm{OF}\ \mathrm{THE}\ \mathrm{MANDIBLE};\ \mathrm{A}\ \mathrm{CASE}\ \mathrm{REPORT}\ \mathrm{WITH}\ \mathrm{IMAGING}\ \mathrm{FINDINGS}.$

LOPES, S.L.P.C.\*; COSTA A.L.F.; ALMEIDA S.M.; CENDES F.; ZANARDI V.A. UNIVERSIDADE ESTADUAL DE CAMPINAS

Introduction: First described in 1921 by James Ewing, Ewing's sarcoma (ES) or Ewing's tumor is one of the most aggressive bone tumors known. Ewing's sarcoma is an uncommon intraosseous malignant tumor of questionable pathogenesis that occurs in the childhood and young adults.

Case Report: A 14-year-old white male boy was seen in Boldrini Children's Center, Campinas, with complain of swelling in the right mandible region. Some different kinds of imaging were obtained (Radiographies, CT, MRI and scintigraphy). The histopatologic findings revealed a malignant neoplasm: Ewing's Sarcoma of the mandible. After the treatment, a new CT and scintigraphy were the imaging modalities applied in order to follow-up the lesion. The CT showed a substantial reduction in tumor volume (63%) and this was comproved by the scintigraphy, where there was a decrease uptake of the 99mTc by the tumor.

Conclusion: This related case is important once it present different modalities of images of the Ewing's sarcoma in rare form as a primary tumor of the mandible.

### 389. THE RADIOGRAPHIC MAPPING OF THE HARD PAL-ATE AND NASAL FOSSA FLOOR ON DIGITAL PANORAMIC

MENEZES, A.V.\*; MELO, D.P.; RAMOS, F.M.M.; DANTAS, J.A.; BÓSCOLO, F.N.; ALMEIDA, S.M. UNICAMP

The aim of this work was mapping the hard palate and the nasal fossa floor in the digital panoramic images, identifying the structures that participate in the formation of their images. One dry skull and one dry hemiskull were used. On the hard palate, in the area of the intermaxilar suture, a metallic sphere was positioned in the incisive foramen before the first x-ray exposure. Subsequently, the sphere was positioned 5 cm posterior to the incisive foramen, moved towards to the posterior nasal spine and was exposed again. This process was repeated ten times until the last image, represented by the sphere positioned in the posterior nasal spine, was performed. All images were interpreted by two radiologists. In the digital panoramic image, generated by the Instrumentarium apparatus, the most superior image represents a ghost image of the structures located in the posterior portion of the hard palate and nasal fossa floor. The sphere, when positioned more posterior, form a triple image and the group of these images – real double image and ghost image – corresponds to what is considered as double image life. the anatomical structures hard palate/nasal floor. The inferior line corresponds to the junction of the single image of the anterior structures with the double real images of the posterior structures.

#### 386. CEPHALOMETRIC EVALUATION OF A PATIENT WITH CLEIDOCRANIAL DYSOSTOSIS

NEVES, E.G.\*; CALDAS, M.P.; RAMOS, F.M.M.; GUEDES, F.R.; HAITER-NETO, F.

FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The cleidocranial dysostosis is an autosomal dominant disease, with unknown origin and can be associated with heredity. The signs of cleidocranial dysostosis are osseous alterations in the clavicula, pelvis, pubic bone, thorax, skull and face. The craniofacial alterations are frontal and parietal boss, nasal bone absence and muscular hypoplasia. However, the most clinical sign characteristic is the presence of supernumerary teeth, deciduos teeth retention and delay or fault of the permanent teeth eruption. A 9-year-old boy was referred to the Radiological Clinic of Piracicaba dental school - Unicamp for radiographic documentation. On the panoramic radiograph it was possible to observe eight supernumerary permanent teeth and one mesiodens deciduous tooth. A cephalometric analysis was carried out in order to make orthodontic, craniofacial growth and development pattern evaluation. Values of angles and planes were analyzed and compared with the mean pattern values. The cephalometric analysis showed relevant characteristic of cleidocranial dysostosis: enhance anterior relation of the jaws, mesio- facial growth pattern and reduced anterior facial height. Thus, it was possible to conclude that a cephalometric analysis is very important to early intervention of an orthodontist in order to avoid esthetics and functional complications in the future.

#### 388. COMPARATIVE EVALUATION AMONG DIFFERENT MA-TERIALS TO REPLACE SOFT TISSUE IN ORAL RADIOLOGY RESEARCHES

CALDAS, M.P.\*; RAMOS, F.M.M.; AMBROSANO, G.M.B.; MANZI, F.R.; HAITER-NETO, F. FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The aim of this study was to establish which material better simulate soft tissues in Oral Radiology researches. The sample was composed by twenty patients referred to take periapical radiographs of lower left molars in the Oral Radiology clinic of Piracicaba Dental School. Using a densitometer it was possible to determine the soft tissue relative contrast of the patients and the average of these values were used as reference. Four different materials (acrylic, wax, wood and water) were selected to simulate the soft tissue of the face. Each material was produced in seven different thickness and the materials were attached on a dried skull in order to obtain the images. Using the same densitometer it was determined the materials radiographs relative contrast and compared with the reference values. Kruskal-Wallis test was applied (p<0,05). The specific thickness of the tested materials, which did not present significant statistical difference with the patient tissue, were selected. The results showed that 15mm of acrylic, 24mm of wood, 40mm of wax and 25mm of water promote contrast similar to that observed in the patients and in these specific thickness, the tested materials did not present significant statistical difference among them. It was possible to conclude that these materials could be used as soft tissue substitute materials in Oral Radiology researches.

#### 390. CONE-BEAM COMPUTED TOMOGRAPHY APLLIED TO EVALUATE THE RELATIONSHIP BETWEEN HORIZONTAL CONDYLAR ANGLE AND MORPHOLOGICAL CHANGES AND MANDIBULAR FOSSA THICKNESS IN PATIENTS WITH TEMPOROMANDIBULAR DISORDERS

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The authors compare horizontal condylar angle (HCA) associated to morphological changes in condyle, joint space and roof of the mandibular fossa thickness in patients with temporomandibular disorders (TMD) using axial (AT), lateral (LT) and frontal tomograms (FT) assessed from a cone-beam computed tomograph (CBCT). Images from 244 patients with TMD scanned using CBCT were analyzed, and linear and angular measurements taken from temporomandibular joint (TMJ) structures. Both mandibular condyle and fossa were studied in terms of normal features (NF), and morphological changes related to osteoarthritis (OA) including flattening, osteophyte formation, erosion, subchondral sclerosis and cyst formation. A grading system was used to quantify the osteoarthritis severity (OS). Condylar position (CP) within the mandibular fossa was evaluated by measures of joint space values and condylar dimension (CD) through width and length. The roof of the mandibular fossa thickness (MFT) was measured and the horizontal condylar angles (HCA) compared to determine the presence of asymmetry. We used the statistical analysis to correlate HCA and these 5 factors (NF, OS, CP, CD and MFT) concluding that the increase on HCA are directly related to morphologycal changes on OA

# 391. ANCHYLOSIS OF CORONOID PROCESS OF THE JAW: REPORT OF A CASE AND DESCRIPTION WITH CONVENTIONAL IMAGES AND COMPUTERIZED TOMOGRAPHY WITH 3D RECONSTRUCTION.

EID, N.L.M.\*; LOPES, S.L.P.C.; AQUILINO, R.N.; MOTA, V.C.; HAITER-NETO, F.

FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

The anchylosis of coronoid process of the jaw is an uncommon pathology resultant of its fusing with the base of the skull, jaws bones, sphenoid and/or zygomatic, causing anatomic and clinics alterations. Trauma and infection are the main etiological factors of this pathology, which has as treatment protocol the surgical therapy associated to the prolonged physiotherapy. This work reports the case of a 28-year-old man that suffered trauma for fall six years before, with 3 millimeters of buccal opening limitation and absence of painful symptomatology. After the clinical examination, radiographic images, panoramic and lateral teleradiography, had been gotten and after evaluation of the same ones, CT images (with reconstruction 3D) had been requested. The conventional radiographys had shown a suggestive radiopaque image of fusing of the right coronoid process to the region close zygomatic arc and right maxilla. The TC images had evidenced fusing of the right coronoid process of the jaw to the region of base of the skull. The proposed treatment was the ipsilateral coronoidectomy, under general anesthesia with naso-traqueal intubation, assisted for the fibrolaringoscopy due to limitation of the buccal opening and physiotherapy sessions.

## $393. \ \mbox{Central Hemangioma of the mandible in a child: a case report$

RAMOS, F.M.M\*; MANZI, F.R.; OLIVEIRA, A.C; JEUNON, F.A.; SILVA, E.C.; ALMEIDA, S.M. FACULDADE DE ODONTOLOGIA DE PIRACICABA

The aim of this report is to describe an interesting case of mandible hemangioma in a child, emphasizing the clinical and radiographic features, as well as the employed treatment. A 7 years-old-boy was referred to a hospital because an intense gingival bleeding in the left lower first molar distal region. Clinical examination showed painless swelling in the left mandibular region, firm on palpation, causing facial asymmetry. The panoramic radiograph showed an osteolytic lesion, with poorly defined and irregular margins, involving the left inferior molar region. A selective angiography of carotid and vertebrae-basilar system was performed and it was possible to observe an arteriovenous malformation in left mandibular region concluding the diagnose of central hemangioma. In order to avoid hemorrhage, it was performed an embolization in some vessels. Two and three months after the first intervention, the patient returned to the hospital with an acute anemia episode, being submitted to another embolization and direct punction of the lesion with injection of Histoacryl that completely occluded the venous portion of the lesion. At follow up, 1 year and 7 months later, the patient showed complete bone healing.

### 395. DIAGNOSIS OF SECONDARY CARIES WITH DIFFERENT RADIOGRAPHIC SYSTEMS

CRUZ A. D.\*; AMBROSANO G. M. B. ; BÓSCOLO F. N.; ALMEIDA, S. M. FOP UNICAMP

The purpose of this study was to compare the accuracy diagnosis between digital and conventional radiographic systems evaluating simulated secondary caries lesion in different composite resin restoratives. Fifty caries-free teeth were random divided into five sets (Filtek Z250, TPH Spectrum, Charisma, Herculite XRV e Tetris). MOD cavities were made in each tooth and after it were prepared caries lesions of two sizes and depths with round burs. The teeth were restorated with composite resin of the set referent and after it were made radiographic exam. Five systems, DenOptix, Digora blue, Digora white systems and \"E\" and \"F\" films were used for obtained bitewing radiographic images. Six radiologists were calibrated for recorded simulated caries using five-point confidence scale. The results among examiners were analyzed by Kappa test and among systems, restoration materials and lesion size by Kruskal-Wallis test (a=0,05). Significant differences were observed between the lesions and between the systems, however no significant differences were observed between the restoration materials. Small radiopacity differences observed in the restoration materials it were not able to change the caries diagnosis in the radiographic systems evaluated, it is independent of the lesion size.

### 392. IMAGE'S MAGNIFICATION IN PANORAMIC RADIOGRAPHIES OBTAINED IN FOUR EQUIPMENTS

OLIVEIRA, L.B.\*; AMADEU, V.S.; MARTINES, M.S.; MORAES, M.; HAITER-NETO, F.; FREITAS, D.Q. UNIRP - FOP/UNICAMP

The vertical magnification of panoramic image is relatively constant. Then it is the possible the realization of measures for implant planning, since magnification is known. The manufacturer of the equipment considers a single magnification factor for all regions, which can produces errors. The aim of this study was to evaluate the magnification of images of four panoramic equipments: Ortopantomograph OP 10, Ortopanthomograph OP 100, PM 2002 CC Proline and Intramax Gnatus. Panoramic radiographs were taken of seven dry edentu-lous skulls with metallic markers in regions of central incisor, canine, premolar and molar, superior and inferior. In the images, the vertical measures of the markers were obtained with caliper and the magnification of each area was calculated, when it was compared with the manufacturer's one. In the OP 10 images, there was difference in all regions, except in the superior molars; in the PM 2002 images, the measures were not different in the regions of superior and inferior molar; in the Gnatus images, there was difference in all regions. Magnification of OP100 images was not differed from the manufacturer one in all regions. In conclusion, in the majority of equipments, magnifications were different of the ones of the manufacturers, which can vary according region and equipment. Therefore we recommend the use of markers of known size for obtain real magnification.

### 394. ANEURYSMAL BONE CYST OF THE MANDIBLE: A CASE REPORT

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The aneurysmal bone cyst is a pseudocyst, no odontogenic that affect long bones and spine, when affect oral cavity, it has choice of the jaw, angle and ramus regions. It affects usually children and adults. Clinically is assyntomatic, causing hyperplasia and can lead to fractures. Radiographic features are imagens radiolucent, uni or multilocular, with well defines margins, can displace and resorb tooth and ocurr unilateral, in the radiography mandible's PA can observer expansion bone cortical in the shape ballon feacture of injury. This cyst can associate with ossifying fibroma or fibrous dysplasia. Diferencial diagnostic is realized between central granuloma giant cell, ameloblastoma or cherubism. Histologically, there is proliferation localized and overdone of vascular tissue with giant cells. The treatment is curettage and parcial remove of injury, can need bone graft for remodelation esthetics. The case of a 7-year-old boy with growing in the right side of the mandible with a rapid evolution and suspect malignant neoplasia. The patient was treated surgically and the material collected was sended for histologic exam that showed an aneurysmal bone cyst.

### 396. VERIFICATION OF DENTAL X-RAY MACHINE ACCORDING TO THE RADIOLOGICAL PROTECTION NORMS

VALE R. K. S.\*; CRUZ A. D.; ALMEIDA S. M.; BÓSCOLO F. N. FOP-UNICAMP

The purpose of this study was to evaluate the adequacy of dental rays-X machine, used to intraoral radiography, according to radiological protection norms thought of the verification collimation system, the used or not film-holder, distance focus-cones extremity, nominal kVp, form and length cones. The relation of the field radiation size praised on governmental decree 453 just in 38% of the Xray machine were in agree with demanded values, 32% with accepted values, however, into 32% machine 50% not used film-holder devices, thus it was in disagree with governmental decree. With radiation field increase occurred also increase the radiation interactions with cone extremity. The relation of the focus-cone extremity distance and nominal kVp of the machines were observed when kVp increase the adequacy to governmental decree 453 of the X-ray machine increase too. The conclusion that there are imperfections on collimation system of many machines evaluated and the filmholders systems are not used always it are necessary. The relation existent between focus-cone extremity distance and nominal kVp is inadequate to governmental decree 453 in all machines, remitting the inefficiency of the X-ray machine quality control program, in the Piracicaba's city, and the it is not accomplishment of the law.

### 397. IMPORTANCE OF THE NEEDLE ASPIRATION IN INTRA-BONY LESION: CASE REPORT OF A CENTRAL HEMAN-

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Hemangioma is a benign proliferation of arteries, capillary or veins and probably represents a hamartoma rather than a neoplasm. The central hemangioma is a rare lesion, asymptomatic, often noticed between 10 and 20 years, more common in the mandible and in women, without characteristic radiographic image, whose surgical removal can lead to important hemorrhages. For this reason the needle aspiration is indispensable in intra-bony lesions. The present clinical case is of patient M.F.F., men, white race, with 15 years, that looked for the Center of Specialized Attendance of Oral Diagnosis (CAEDO) with radiolucent lesion with dome-like projections and ill defined in the posterior region, close to the mandible channel, noticed in panoramic x-ray with orthodontic purpose. The lesion was painless and it extended from right lateral incisive to right second bicuspid. There was not clinical complaint associated to the lesion, but there was a trauma history. On x-ray we noticed connection between the lesion and the mandible channel. The diagnostic hypotheses were traumatic cyst and central hemangioma, not discarding malign neoplasm. We made needle aspiration that produced expressive bleeding. The patient was guided for angiography to guide to an adequate treatment that can be surgical resection, cryotherapy or injection of sclerosing solutions.

#### 399. ORAL MANIFESTATION OF DARIER DISEASE

BERNABÉ, D.G; BENETI, I.M\*; KAWATA, L; MORAES, N.P; CRIVELINI, M.C; BIAZOLLA, E.R. FACULDADE DE ODONTOLOGIA DE ARAÇATUBA-UNESP

Darier disease presents dominant genetic character, being an uncommon genodermatosis. The clinical signs are represented by several hyperkeratotic papules primarily affecting the head, neck, thorax and less frequently the oral mucosa. The oral lesions are asymptomatic and represented by multiple firm papules with normal, whitish or reddish color, primarily affecting the palatal and alveolar mucosa and could also appear in tongue. It is a rare disease with prevalence of 1:100.000 inhabitants. A 35 year-old female, with cardiac disease, smoker, present to the Stomatology clinic of São Paulo State University with lesion complaint in the mouth. Ectoscopy showed several reddish papules in head, neck and thorax. The oroscopy evidenced numerous white papules of rough texture in hard palate and alveolar edge and white keratotics plaques in right alveolar edge. The patient reported that his daughter presented the same skin signs. Biopsy was performed in palate for histopathology examination that shows acantholytic and prolonged epitelial crests. Exerese of alveolar edge lesion showed histopathology diagnosis of keratosis follicularis. The clinical examination, microscopic confirmation associated to family history allowed clinical-histopathological diagnosis of Darier disease. The patient was then referred to a dermatologist. The patient has been followed.

#### 401. ODONTOGENIC LESION IN MANDIBLE: DIAGNOSIS AND TREATMENT

CUNHA, C.O.; RUBIRA-BULLEN, I.R.F.; TEIXEIRA, R.C.; LIMA, M.C.; NOGUEIRA, R.L.M. ; ZANDA,M.J. UNIVERSIDADE DE SÃO PAULO

A 14-year-old girl, was referred to the Oral Medicine Clinic complaining for mandibular growth started 2 months earlier. In the physical exam there was a nodular lesion, in the left mandibular angle. Radiographically, there was a circumscribed radiolucency surrounding inferior molars. An incisional biopsy was performed and the microscopic examination showed the final diagnosis of unicystic ameloblastoma. The tumor was treated by marsupialization with posterior enucleation. Marsupialization is a less traumatic procedure with less cost. The patient is under follow up for two years without recurrence. Ameloblastoma is the most common clinically significant odontogenic tumor. Ameloblastomas are odontogenic tumors of epithelial origin. There are three different clinicoradiologic situations, which deserve separate consideration because of differing therapeutic considerations and prognosis. These are: multicystic, unicystic and peripheral. More than 90% of these are unicystic ameloblastomas are found in the mandible and could be associated with pain. Enucleation, resection or marsupialization are the most frequently types of treatment.

#### 398. SURGERY OF CANCER OF JAW

SEVERO, G.P.C.\*; NERY, L.R.; LAUTENSCHLÄGER, G.A.C.; MUNHOZ, E.A.

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The buccal cancer is the 5° more common type between men and 6° between women and represents approximately of 5% of the total of incidence of cancer worldwide. The risk of the carcinoma bucal it increases with the age, mainly in men. Squamous cell carcinoma is multifactorial. It does not have an agent or causer factor isolated, but even intrinsic and extrinsic factors can be in activity. The extrinsic factors include the external agents, as the tobacco smoking, alcohol and solar radiation; and intrinsic they include the systemic or generalized states, as the generality malnutrition or anemia for iron deficiency. Many buccal squamous cell carcinomas they have been registered associates or preceded for premalignant injuries. In this case a 80 years old white woman, was referred by her dentist for treatment in the Stomatology clinic with complaint of hurt caused by protesis has 6 months. To the inspection, it was an fissured ulcer with raised edges, area of central necrosis, in fiction; fixture, regular contour, measuring approximately 3 cm, located in superior, posterior and deep rim alveolar of ridge, in the region of tuber. Diagnosis hypothesis was of squamous cell carcinoma. It was become fullfilled biopsy and the part was ordered for histopatologic examination. The final diagnosis it was of well differentiated squamous cell carcinoma. The patient was referred for the SOPC for surgery treatment.

#### 400. PLEOMORPHIC ADENOMA OF THE PALATE – REPORT OF A CASE.

OLIVEIRA, T.L.\*;ALBUQUERQUE, D.F.;SANT'ANA, E.;ARAUJO, M.R.;LAWALL, M.A.;CONSOLARO, A. FACULDADE DE ODONTOLOGIA DE BAURU

Salivary gland tumors are rare. The pleomorphic adenoma or benign mixed tumor is a salivary gland neoplasm which occurs mainly in the parotid gland, followed by the submandibular gland and minor salivary glands, in which the most frequent location is the palate. A case of a female patient, 44 years old who had a sessile nodule, resilient, located on the paramedian limit between hard and soft palate, asymptomatic, it was the same color of normal mucosa, measured 2 cm of diameter and had a three months evolution. The presumptive diagnosis was pleomorphic adenoma, adenocarcinoma or mucoepidermoid tumor. After the incisional biopsy, microscopy showed, in the depth, neoplastic formation encapsulated, constituted of proliferation of mioepithelial cells, some fusiforms and plasmocyt-like cels arranged in pilles and cord in a hialin matrix, which led to the diagnosis of a pleomorphic adenoma. Thus, a chirurgical excision was performed. The patient is fine, without recurrence in her 5-month follow up.

#### 402. DIAGNOSTIC IMAGING OF OSTEOARTHROSIS IN ATM: CASE REPORT

CENTURION, B.S. ; ALBUQUERQUE, D.F. ; ARAÚJO, M.R. ; RUBIRA, C.M.F. ; CONTI, P.C.R. ; DAMANTE, J.H. FACULDADE DE ODONTOLOGIA DE BAURU FOB-USP

Osteoarthrosis is a not-inflammatory arthritides of unknown cause that can injury any joint of the body. Its prevalence increases from 30 years of age. It is more common in knee joints, pelvic waist, vertebral column and hands affecting, also, the TMJ. Pathogenesis of osteoarthrosis involves the joint as a whole, in a process of focal and gradual loss of the articular cartilage and the bone remodelling as a consequence to the extreme forces applied to the joint. The process of remodelling of the TMJ occurs throughout time, being considered abnormal when followed by clinical symptoms and radiographycs signs. A 74-year-old woman presented to our clinic complainning of pain, limitation of mouth opening and clicking in the TMJ for 6 months. The patient already used interoclusal plate and related treatment for chronic anemia. The panoramic images and tomography scan made little contribution to the anatomical evaluation of bone structures. However, in the computed tomography, the axial and coronal cuts had shown irregularities of the condyle cortical bone and narrow of the left joint space, with presence of osteophytes, cystslike radiolucency. The diagnosis was ostearthrosis on the left condyle.

### 403. CELLULAR NEUROTHEKEOMA AFFECTING THE ORAL CAVITY FLOOR: CASE REPORT

CARDOSO, C.L.\*; NERY, L.R.; LAUTENSCHLÄGER, G.A.C.; BALASSIANO, K.Z.; CONSOLARO, A.; RUBIRA-BULLEN, I.R.F. FACULDADE DE ODONTOLOGIA DE BAURU - USP

Neurothekeoma, first described in 1969 by Harkin and Reed as a rare neoplasm of peripheral nerves, which is characterized as a benign lesion. Clinically it is presented as a rare cutaneous lesion, with few described cases in the oral mucosa. This work reports a case of cellular neurothekeoma located on the floor of the mouth, the first at this site. The lesion was present in a 60year-old female patient, leucoderma, as a nodule pedunculated with approximately 10mm of diameter, for 9 months. The diagnostic hypothesis was of related traumatic injury to the use of removable prosthesis. Excisional biopsy was performed and it was sent for morphologic analysis. The microscopy showed oral mucosa constituted of hyperplasic stratified squamous epithelium with parakeratinization. Underlying in the submucosa, proliferation of spindle rounded cells with large and vacuolated nuclei in a collagenous stroma and focal areas of myxomatous stroma with small cells with star format were observed. Fibrils with storiform standard were also noticed. To the immunohistochemistry it was observed that the neoplastics cells had expressed positive marking for NKI-C3 and S-100, denoting neural histogenesis of the lesion. Cellular Neurothekeoma is an unusual benign neoplasm which, despite its name, is of uncertain origin. It was, however, completely excised and in a 6 months follow up, no recurrence was observed.

## 405. ORAL ERYTHROLEUKOPLAKIA – CLINICAL AND HISTOPATHOLOGICAL ASPECTS OF A POTENTIALLY MALIGNANT LESION.

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The erythroleukoplakia is considered a clinical variant of the erythroplakia because clinically it is presented as an erythroplasic plaque with several spread little leucoplasic areas. The objective of this work is to present a case with its clinical and histopathological features, the treatment choice and follow-up of a lesion considered of high risk to become malignant. Clinical case: White patient, female, 49 years-old, presented during oral examination white plaques spread in red areas of the soft palate ranging over the retromolar area. Incisional biopsy was performed in two different areas of the lesion and this material was referred to microscopic examination were a keratinized stratified epithelium with severe dysplasia was diagnosed as erythroleukoplakia. The remaining lesions were removed by eletrocauterization and no medication was assigned. The patient got directions about quitting smoke and nowadays is free of oral lesions.

### 407. RHINOLITH- REVIEW OF THE LITERATURE AND CASE REPORT

PINTO, L.S.S.\*; CAMPAGNOLI, E.B; AZEVEDO, R.S.; TOTTI, V.; HIPÓLITO JR., O.; JORGE, J. FOP-UNICAMP

Rhinoliths are calcified masses that form within the nasal cavity. It occurs because of the solidification of mucus, debris or foreign objects by mineral salts. It can be seen on radiographs as a radiopaque object in the nasal fossa and may be misdiagnosed with several pathologic entities. This article reports a case of a 54-year-old woman that complained of ulceration in the hard palate for one month. Intraoral examination disclosed a palatal fistula. Periapical, occlusal and panoramic radiographs, and a computerized tomography revealed an irregular calcified body. With a clinical diagnosis of rhinolith, the patient was referred to surgical procedure, and the material was submitted to histopathological study, which showed calcified areas, necrotic connective tissue with inflammatory cell and small crystals. Scanning Electronic Microscopy showed high amounts of calcium and silicon. The patient is under follow up, without recurrence. It is important that dentists recognize this entity, because it may be discovered accidentally on a routine dental radiograph or by a palatal perforation, as seen in this case.

#### 404. INFECTED LESION IN THE JAW

BERNINI, G.F.; NERY, L.R.; MUNHOZ, E.A.; MOREIRA, C.R.; LAUTENSCHLÄGER, G.A.C.; SANT'ANA, E. FACULDADE DE ODONTOLOGIA DE BAURU FOB-USP

Patient melanoderma, 53 years, was attended with "purulent secretion in the gingiva" and historical of extraction in the area 8 months ago. To the inspection it presented a little swelling in the left side of the mandibula and a small fistula draining pus. The panoramic radiograph revealed a lesion of mixed radiopacity in the region of inferior right molars, measuring 2 cm of diameter; another radiopaque lesion in the area of left premolars, with 6mm of diameter - both well delimited; and other radiolucent lesion with central radiopacity and radiopaque halo, measuring 1,5 cm of diameter. The presuntive diagnosis was infected cemento osseous dysplasia, infected periapical cyst in association with cemento osseous dysplasia and osteomyelitis. After antibiotic therapy, were accomplished biopsy and curettage of the area. Microscopic exam presented areas calcified in trabecular form, presence of bacterial biofilm, hemorrhagic content and necrotic remains. In the granulation fabric removed was observed intense inflammatory infiltrated and areas of calcification. The microscopic characteristics add to the clinical and radiographic findings was compatible with the diagnosis of secondary suppurative osteomyelitis in the fibro-osseous lesion, suggestive of cemento osseous dysplasia.

#### 406. MULBERRY-LIKE ULCERATION: CASE REPORT

FRANCISCONI, M.F.\* ; MARCATO, P. ; NERY, L.R. ; COSTA, M.R.S.N. ; RODRIGUES, M.T.V. ; DAMANTE, J.H. FACULDADE DE ODONTOLOGIA DE BAURU - USP

A 40 year-old white man, smoker, complained about "inflammation in the mouth". Five months ago, after dental extractions, there was emergence of ulcerations. Extraoral physical exam revealed swelling of the 1/3 left inferior of the face, close to the left labial commissure; one mobile, hard and painful submandibular node, and macroqueilia. Intraoral physical exam could be observed extensive mulberry-like ulceration areas, in the labial commissurae, in the superior lip and in the alveolar ridges. The presumptive diagnoses were paracoccidioidomycosis and squamous cell carcinoma. Incisional biopsy by punch was made in the inferior anterior alveolar ridge. The microscopic exam revealed fungal sporulation, bluish-colored nuclei, birefringents capsules surrounded by a granulomatous process. An AP thorax radiograph revealed lung image with aspect of butterfly wing. The microscopic features proved the first diagnosis hypothesis. The treatment was based on antifungal drugs (Anfotericin B (I.V.), Itraconazol), nutritional complementation, smoke and alcohol restriction; being respected the therapeutic outline of two phases: attack and maintenance.

### 408. STUDY ABOUT ORAL HEALTH OF ERDERLY PEOPLE OF THE SÃO FRANCISCO HOME

OLIVEIRA, A.C.M.\*; ROSSATO, C.; MASSUCATO, E.M.S.; MONTANDON, A.A.B.; OLIVEIRA, M.P. FACULDADE DE ODONTOLOGIA DE ARARAQUARA - UNESP

The increase of the brazilian aged population has placed in evidence physiological processes of this age band, adding resources to minimize or to delay undesirable alterations. The aim of this study was to evaluate the oral conditions of 76 aged of the São Francisco de Assis Home of the city of Araraquara. The patients was examined at the own place where was acquired anamnesics data and realized oral examination. The majority of the patients was female (61,8%) and the age average was 76 years old. About systemic alterations, 92.4% of the aged presented a kind health problem, being cardiovascular alterations (43,3%) and psychiatric/neurologic disorders (28,9%). About medicaments, the most used ones was the antihypertensives and the psychiatric drugs, significated 28.1% and 24,0%, respectively. About the oral hygiene, was observed that 34.7% said to clean the oral cavity three times per day, but was observed bad conditions of oral hygiene and the removable prosthesis in the majority of the patients. Also the injuries and/or alterations in oral mucosa was analyzed, being the most prevalent: actinic cheilitis (13,4%), depapilated tongue (10,4%), the coated tongue (10,4%) and candidosis (6,6%). Therefore, this study raised the aged oral conditions intenting to institute an orientation program directed to this population objectiving the improvement of aged life quality.

### 409. CRYOSURGERY – OPTION IN THE TREATMENT OF VASCULAR LESIONS

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The cryosurgery consists of the application of an agent cryotherapic (liquid nitrogen, mainly) with the purpose of provoking selective necrosis in the tissue. It happens a fast transfer of heat of the skin or of the mucous membrane in direction to the applied nitrogen, beginning like this a necrosis of tissues. The transformation of water in ice takes to the loss of liquids and it generates an osmotic gradient in the cellular membrane, creating an irreversible damage. The low temperatures provoke vasoconstriction and aggression of tissues, promoting aggregation of platelet and necrosis ischemic. Among other indications, the cryosurgery can be used for the treatment of small hemangiomas and other vascular lesions. The hemangioma is considered a hamartoma, being more common in newly born and in the childhood, could also happen in adults. We told the case of a patient leukoderma, 28 years old, with complaint of a pit in the mouth "and 3 year-old duration The lesion increased of size and it had purple coloration. To the loco-regional inspection it was noticed vascular lesions of 1 cm, in the inferior lip and in the labial joint. The diagnosis hypothesis was of hemangioma. The proposed treatment was the cryosurgery through application of 2 cycles of 30 seconds with interval of 5 minutes. After 3 weeks of reapply was accomplished and the resolution of the case happened in 6 weeks without relapse

### 411. LICHEN SCLEROSUS ET ATROPHICUS OF THE ORAL MUCOSA

AZEVEDO, R.S.\*; TOTTI, V.; ALMEIDA, O.P.; COLETTA, R.D.; JORGE J FACULDADE DE ODONTOLOGIA DE PIRACICABA - UNICAMP

Lichen sclerosus et atrophicus is an uncommun mucocutaneous chronic inflammatory disorder of uncertain aetiology that most frequently affect the female genitalia. Extragenital lesions occur in 15-20% of patients, but the oral mucosa is rarely involved. To date, there are 19 cases reported in the English language literature that affect oral mucosa and are histologically verified, with only 10 of them exclusively involving oral cavity. We describe a case of a 19-year-old white man that was referred to Orocentro because of a 8 months painless lip white macules. Clinical examination showed two whitish macules on the right buccal mucosa and lower lip. The clinical differential diagnosis was scleroderma, vitiligo and leukoplakia. The incisional biopsy showed atrophic stratified squamous epithelium, focal degeneration of the basal cells, subepithelial hyalinization and an underlying band-like mononuclear inflammatory infiltrate. Verhoeff's stain showed scarceness of elastic fibers in the superficial lamina propria and immunohistochemical was positive for S100 in some clear basal cells. The diagnosis of lichen sclerosus et atrophicus diagnosis was established. The patient is assymptomatic, after a 1-year follow-up and has no cosmetic concerns. The present case exemplifies the clinical and pathologic features of this rare oral lesion and contributes to the differential diagnosis and identification of new cases.

#### 413. DIFFICULTY OF NECK PALPATION IN CASES OF RE-GIONAL METASTASIS IN ORAL TUMORS-CASE REPORT

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A 60-year-old caucasian man presented to the Oral Oncology Center of the Araçatuba College of Dentistry - São Paulo State University with a chief complaint of "lip's wound". In the history, he told that the lesion appeared 6 months ago due to an accidental contact with caiacol, followed by lip's trauma. Physical examination revealed ulcerated lesion of approximately 3 cm of diameter, located in middle line of lower lip, with raised borders, red-white surface, infiltrative aspect, well defined limits and hardened base. With clinical diagnosis of squamous cell carcinoma, an incisional biopsy was made. The histological examination confirmed the diagnosis and lesion was classified as T2N0M0. The patient was submitted to a surgical resection. In 3° postoperative month, was identified level I bilateral submandibular lymphadenopathy. The aspiration punction with fine needle was compatible with squamous cell carcinoma. The bilateral supraomohyoid neck dissection was performed. The histological examination showed bilateral lymph node with metastasis being classified as pT2N2cM0. The patient was directed to radiotherapy and has been followed up without lesion evidences. In this paper difficulty of neck palpation in cases of regional metastasis in the oral tumors is emphasized.

### 410. POTENTIALLY MALIGNANT EPITHELIAL LESIONS IN PATIENTS OF AN ORAL MEDICINE CLINIC

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Studies around the world have showed wide variation of the rates of malignant change of potentially epithelial malignant lesions (PMELs). The malignant transformation depends on an association of factors including tobacco, alcohol and ultraviolet exposure. The aim of this study was to identify the clinical profile of patients with PMELs admitted in a clinic of oral medicine. 1,789 clinical files of the Oral Medicine Service (Araraquara Dental School – UNESP) between 1994 and 1998 were evaluated and 192 records (10,7 % of the total sample) of leukoplakia (38), lichen planus (90) or actinic cheilitis (93) were found. The information were transferred to a codified form and inserted in a database of the Epi Info 3.3.2 software. The mean age of the diagnosis was 50,8 years old to lichen planus (LP), 52,8 to actinic cheilitis (AC), and 58,7 to leukoplakia (L). The male/female proportion was 1,9 to L; 1,8 to AC; and 0,5 to LP. The main symptomatic oral lesion was LP. The lip (44,7%) is the most frequent oral site to L, while for LP the more affected site is the buccal mucosa (65,5%) in both genders. For all three PMELs the male were more exposed to tobacco and alcohol than the female. Chronic ultraviolet exposure reach elevated rates for males with AC, LP and L. Based on the results we can conclude the PMELs in this sample are closely associated to the risk factors exposure, affecting mainly white male older than 50 years.

### 412. ASSOCIATION BETWEEN USE OF SYSTEMIC DRUGS AND ORAL LICHEN PLANUS.

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Lichen planus is a chronic inflammatory condition characterized by an erosive eruption on the skin. At the mouth, it can assume several clinical forms such as plaque, reticular, bullous or even ulcerations. The etiology is unknown, however immunological mechanisms seems to be involved on its development. Therefore, ingestion of some systemic drugs can also have an influence. The aim of this study was to analyze the association between the use of systemic drugs and the presence of oral lichen planus (OLP). Patients files from the Oral Medicine Service – F.O.Ar. – UNESP, from the period of 1992 to 2004, with diagnosis of OLP were analyzed. The information collected from the patients was: demographic characters, personal habits, and presence of systemic diseases, use of systemic drugs and the clinical aspects of the oral lesions. All the data was processed on Epinfo Program that allowed us to provide the statistics results. The majority of the patients with OLP were male (55.5%), white (91%) with ages between 40 and 60 years (44%). 63.3% of the patients were under drug therapy which can be involved on the development of OLP. These results agree with the literature, demonstrating that there is a relation between the presence of lichen planus lesions on the oral mucosa and the ingestion of systemic drugs.

### 414. SQUAMOUS CELLS CARCINOMA OF TONGUE: CASE REPORT.

JABUR, R.O.\*; OLIVA, M.A.; BUZZA, C.M.; ROSA, A.L.; BRENTEGANI, L.G.; LACERDA, S.A. FACULDADE DE ODONTOLOGIA DE RIBEIRÃO PRETO - USP

The squamous cells carcinoma is the most common of mouth cancers. The incidence of mouth cancer has been increasing in whole world accompanying the increase in tobacco and alcoholic drink consumption. Porto Alegre presents high rates of incidence of mouth cancer (8,3/100.000 in men and 1,4/100.000 in women), being among the most elevated rates of the world. The occurrence of mouth cancer in the five regions in Brazil demonstrates the high incidence rate in the masculine population, in São Paulo (7,6/100.000) and, in the feminine population, in Natal (3,3/100.000). The estimative for 2006, for the state of São Paulo is 17,2/100.000 cases for men and 4,17/100.000 for the women. The present case belongs to a 71 year-old man, white race, looked for the Center of Specialized Attendance of Oral Diagnosis (CAEDO) with lesion tongue apices with 2 months of evolution. He complains about bleeding and local ardência during the feeding. Ex-smoker and he deny ingestion of alcoholic drink. Positive medical history for prostate cancer treated 4 years ago, diabetes and hypertension. The incisional biopsy was made and the hystopathological exam showed moderately differentiated squamous cells carcinoma (G2) and the clinical classification is cT4aC1 cN1C1. The patient was guided for the oncology of HCFMRP for treatment.

### 415. SURGICAL TREATMENT OF ACTINIC CHEILITIS: CASE REPORT

FREITAS, D.J.\*; SILVA, A.P.B.R.; BERNABÉ, D.G.; KAWATA, L.T.; SOUBHIA, A.M.P.; BIAZOLLA, E.R. FACULDADE DE ODONTOLOGIA DE ARACATUBA-UNESP

The actinic cheilitis, also known as exfoliative cheilitis, solar cheilosis or actinic keratosis, is an alteration of the labial semimucosa, having as etiological factor the extreme and chronic exposition to the solar radiation. The lesion is more prevalent in male, in a ratio malefemale of 10:1 and caucasians. The treatment can be pharmacologic or surgical depending on the clinical characteristics. A 58-year-old caucasian man, from Valparaiso-SP, was referred to the Stomatology Clinic of the Araçatuba College of Dentristy - São Paulo State University, by his dentist, to evaluate a lesion in the lower lip with duration of 6 months. The patient used to smoke straw cigarettes. In the physical examination, a white crusty lesion was observed compromising all the lower lip with red-white color and ulcerated areas. With diagnosis hypotheses of actinic cheilitis and squamous cell carcinoma, vermilionectomy was made. The result of the histological examination was actinic cheilitis. The patient was guided to use protective solar labial and to make use of cap during activities with solar exposition, as well as to abandon the vice of smoking.

#### 417. BASAL CELL ADENOMA- CASE REPORT

CIRELLI, C.H.\*; DIB, L.L.; COSTA,C.; MAGDALENA,E.; FERNANDES,S.; BORBOLLA,R.R. UNIVERSIDADE PAULISTA

The basal cell adenoma (BCA) is a benign tumor of the salivary glands that are usually found in the parotid, it is rare in the palate and in young patients. It is presented as a movable mass, of slow growth, with prevalence of 2:1 for the feminine gender. Histological features consist of multiple islands and strings of epithelial cells supported by a small amount of fibrous stroma.

The present work aims to report a case of a 78 year-old caucasian male, that showed up at the University Paulista Semiology Clinic, reporting an asymptomatic lesion in the superior lib, left side. The physical exam verifies a painless sub-mucous nodule and a firm consistency. An excisional biopsy was carried out and the histological results revealed basal cell adenoma. The case has been followed since 05/2005, without recidivate signs.

#### 419. DERMATOMYOSITIS AND LICHEN PLANUS-LIKE MU-COSITIS: AN ASSOCIATION OR A CLINICAL MANIFESTA-TION?

PEREIRA, T\*; NAVARRO, C.M.; ORTEGA, R.M.; SPOSTO, M.R. FACULDADE DE ODONTOLOGIA DE ARARAQUARA - UNESP

Dermatomyositis (DM) is an inflammatory disease affecting striated muscle and skin eventually. It occurs mainly in patients between 50 and 60 years old. Oral manifestations are rare, etiology is unclear and some authors have reported paraneoplastic DM. The aim of this report was to present the oral lesions of a patient with DM admitted in the Oral Medicine Service (OMS) – UNESP. A 56- year-old female came to the OMS complaining of painful "aphthae" of 4month duration on oral mucosa and attributing it to her removable prosthesis. The most significant anamnestic findings were hypothireoidism and DM diagnosed 8 years previously. DM was submitted to corticosteroid therapy during 5 years; afterwards the medication was suspended. The tongue showed fibrous consistency with atrophic aspect resembling a scar. White patches associated with erythematous areas on buccal mucosa were also observed bilaterally. The appearance of the mucosae was suggestive of oral lichen planus (LP). Histological analysis revealed lichen planus-like mucositis. Symptoms were controlled with topical Beclomethasone Dipropionate (Clenil). In this case, lesions did not fill all histological parameters for LP diagnosis. Oral lesions mimicking LP can be local manifestations of systemic DM. Further laboratorial techniques might provide additional support to clarify whether the oral lesions are an association or a manifestation of DM.

#### 416. SURGICAL TECHNIQUES FOR REMOVAL OF DEEP MU-COCELE: TWO CASES REPORTS.

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Mucocele is a common lesion that results of the rupture of a salivary gland duct and spillage of mucus into the surrounding tissue. They are common lateral to the middle line of inferior lip and they are generally related the habit of biting the labial mucosa. It is common in young adults and can be superficially or deeply located. When superficial it can rupture, form an ulcer that heals in some days. When deeper it should be surgically removed together with the gland that feed the lesion to avoid recurrence. Depending on the size, location and depth, the surgery can leave scar. This work exhibit two surgical techniques, being the first one of deeper lesion that needed suture in plans and another with incision in internal lip face, occlusive suture and repair without sequels. The first case is of C.A.M. man, white race, 13 years that looked for the University of Franca for orthodontic treatment and, in the screen, vesicle lesion was detected in inferior lip, with one month of evolution, and history of accidental bite. The second case is of J.S., man, white race, 13 years that looked for Dentistry School of Ribeirão Preto-USP with vesicle lesion in inferior lip, with 6 months of evolution and trauma history. After seven days is evident the difference among the proposed techniques.

### 418. SQUAMOUS CELL PAPILLOMA ON PALATE OF A CHILD

ORTEGA, R.M.\*; NAVARRO, C.M.; SPOSTO, M.R.; ANDRADE, R.C.; GIRO, E.M.A.; PEREIRA, T. FACULDADE DE ODONTOLOGIA DE ARARAQUARA - UNESP

Papillomatous epithelial proliferations associated with HPV infection are known to affect predominantly sexually active adults, whereas skin warts are usually associated with younger individuals. The authors present the clinicopathological pattern of a squamous cell papilloma (SCP) in a child. A 4 years old white girl was attended at the Oral Medicine Service (OMS) of the Araraquara Dental School – UNESP, complaining of an aasymptomatic oral lesion present on the palate. The clinical examination showed a 2 cm partially pedunculated oral lesion on the edge of hard and soft palate with rose-coloured papillary surface. The appearance suggested reational hyperplasia or condyloma as diagnosis hypothesis. Surgical excision was performed to microscopic analysis. The histological examination showed narrow stalk below a epithelial mass with numerous blunted and pointed surface finger-like projections. The covering squamous epithelium showed normal maturation pattern with no basal hyperplasia. Koilocytes were not observed in the epithelium. The microscopic pattern was typical of SCP. This report presents a SCP in an unusual age, suggesting the investigation of different modes of transmission, including perinatal transmission, auto and hetero-inoculation, sexual abuse and transmission via fomites.

### 420. MULTIPLE SUPERNUMERARY TEETH IN NON SYNDROMIC PATIENTS

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Supernumerary teeth are those that are additional to the normal complement. They have been described in both the primary and the permanent dentition. Multiple supernumerary teeth (five or more) in non syndromic patients are a rare condition. The purpose of this study was to evaluate four female non syndromic patients, with five or more supernumerary teeth, by general and local clinical examinations and by the periapical, occlusal and panoramic radiographs. Subsequently, the patients' data were collected for the number of supernumerary teeth, their localization, shape, position and association to pathology. 25 supernumerary teeth were found, 12 in the mandible and 13 in the maxilla. In the mandible, 11 were in the premolar region and only 1 was distomolar. In the maxilla, there were 2 in premolar area, 4 distomolar, 4 canine and 3 in the incisive region. From the total, 22 were supplemental and only 3 were found in a conical shape. Were observed 20 included teeth, one showed radiolucent area that suggested a dentigerous cyst and 4 a widened follicular space. We could conclude that mandible and maxillary were equally affected; the most observed morphology was supplemental, being that 20 teeth were impacted, however only few caused development anomalies and/or pathologies.

### 421. Burnig mouth syndrome (BMS): Review of Literature and case report

TESSAROLLI, V.\*; CHINELLATO, L. E. M. ; ARAÚJO, M. R. ;ALBUQUERQUE, D. F. ; ROCHA, C. A. FACULDADE DE ODONTOLOGIA DE BAURU (FOB-USP)

Burning mouth syndrome is a chronic pain syndrome that mainly affects middle-aged / old women with hormonal changes or psychological disorders. Affected patients often present multiple oral complaints, including burning, dryness and taste alterations. This condition is probably of multifactor origin, often idiopathic. Etiopathogenesis is enigmatic and a large number of patients probably involve interactions among local, systemic, and psychogenic factors. In the other cases, new interesting associations have recently emerged. Tipically, patients note increasing symptoms through the day and into evening. Conditions that have been reported in association with burning mouth syndrome include chronic anxiety or depression, various nutritional deficiences, type 2 diabetes and changes in salivary function. The differential diagnosis is based on the exclusion of orofacial chronic pain conditions and painful oral diseases exhibiting mucosal lesions. BMS treatment is still unsatisfactory, and there is no definitive cure. Therefore, a multidisciplinary approach is required to offer a better control to the condition. There is no clear consensus on the etiology, pathogenesis or treatment of BMS. We discusse here several aspect of BMS, updates current knowledge, provides guidelines for patient management, and it will be illustrated two cases of BMS.

### 423. MAXILLARY SOLID AMELOBLASTOMA: CASE REPORT

VASCONCELOS, B.N.\*; COSTA, M.D.M.A.; DURIGHETTO-JÚNIOR, A.F.; DURIGHETTO, I.L.; BATISTA, J.B.; PAIVA, L.T.M. FACULDADE DE ODONTOLOGIA - UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Ameloblastomas are tumors of slow growth, locally invasive, with benign course in the majority of cases. Amongst the odontogenic epithelial tumors it is responsible for 10% of all odontogenic tumors and 1% of all the tumors and cysts of the jaws. Radiographic images of solid ameloblastoma shows unilocular radiolucent image with irregular edges, being able to be confused with the cystic lesions and solid tumors. Patient FAC, male, 21 years, presented to UFU with complaint of volumetric increase in the posterior mandibular area, noticed 6 months ago. Intraoral aspect shows loss of buccal fórnix, swelling in palate and in the region of tooth 16 shows soft tissue with vegetating aspect. Radiographic images shows intense bone destruction of the region, "tooth floating" aspect and absence of the wooden floor of the maxillar sinus had been carried through to maxila. The clinical and radiographics aspects suggested malignant tumor. Incisional biopsy was performed showing epithelial proliferation with ameloblastoma diagnosis. The occurrence of solid ameloblastoma in young patients, committing the maxilla is uncommon. The treatment choice depends on the type of the tumor, anatomical localization, histological type and lesion extension characteristics, as well as of the age and understanding of the patient.

#### 425. PARACOCCIDIODOMYCOSIS: CASE REPORT

SOUSA, M.A.F.\*; COSTA, M.D.M.A.; DURIGHETTO-JÚNIOR, A.F.; DURIGHETTO, I.L.; BATISTA, J.D.; GUIDI, R. FACULDADE DE ODONTOLOGIA - UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Paracoccidiodomycosis is an infection caused by Paracoccidioides brasiliensis fungi that is present in hot and moist areas, particularly in Brazil, and so it's endemic in some areas of São Paulo, Rio de Janeiro and Minas Gerais states. Clinical case: A.F.S.A., female, 47 years old, attained to UFU for a inferior lip and alveolar ridge lesions assay which were evolving for the last 6 months. On extra-oral clinical exam it was observed a volumetric increase of inferior lip that was covered by a very dry mucosa. Intra-oral exam revealed an extensive ulcerated lesion, without precise delimitation, of erythematous aspect, and granulated surface offering strawberry aspect. Lesion extended from intern lip mucosa, to buccal fornix, gingival ridge, lingual mucosa and part of mouth floor. In face of the described clinical case it was suggested diagnosis hypothesis of Paracoccidiodomycosis. For diagnose confirmation an incision biopsy was done on gingival ridge area that confirm purposed diagnosis. Patient was sent to infectious maladies service of UFU's Clinics Hospital for treatment. Itraconazol 200mg was prescribed once a day during 6 months, resulting in total remission of oral manifestations. Due to relatively early signs and symptoms remission before treatment end, a great risk of treatment abandon exists, needing rigorous periodic control.

## 422. SYNCHRONIC SQUAMOUS CELL CARCINOMA OF SOFT PALATE AND PAROTID BASAL CELL ADENOCARCINOMA. CASE REPORT.

GUEIROS, L.A.\*; MATA, G.M.; CORRÊA, M.B.; ALMEIDA, O.P.; LOPES, M.A. FOP - UNICAMP

INTRODUCTION. Squamous cell carcinoma (SCC) represents 95% of the oral malignant neoplasias, being most prevalent in the lateral border of the tongue and floor of the mouth. Basal cell adenocarcinoma (BCA) is an uncommon malignant salivary gland neoplasia which affects specially parotid. CASE REPORT. A 48-year-old male patient who sought for dental assistance at the Orocentro - FOP/UNICAMP, complaining of asymptomatic right parotid enlargement, with 10 years of evolution. Intra-oral examination showed an asymptomatic ulcerated lesion in the soft palate, highly suggestive of malignant neoplasia. A fine needle aspiration biopsy (FNAB) of the parotid lesion and in incisional biopsy of the intra-oral lesion were performed, with the specimens submitted to histopathologic examination. The FNAB revealed a tumor of basal cells and the hypothesis were basal cell adenocarcinoma, basal cell adenoma and adenoid cystic carcinoma. The incisional biopsy of the intra-oral lesion revealed a SCC. The patient was submitted to a total parotidectomy and a radical resection of the palatal lesion. The microscopic evaluation of the surgical specimen of the parotid revealed the diagnosis of BCA. CONCLU-SIONS: We emphasize the importance a criterious clinical analysis and the effectiveness of FNAB of head and neck lesions, including those related to salivary gland.

### 424. PRIMARY AND TERTIARY HYPERPARATHYROIDISM: TWO CASES REPORT

CASTRO, D.M.M.\*; COSTA, M.D.M.A.; DURIGHETTO-JÚNIOR, A.F.; DURIGHETTO, I.L.; BATISTA, J.D.; GUIDI, R. FACULDADE DE ODONTOLOGIA - UNIVERSIDADE FEDERAL DE UBERLÂNDIA

Hyperparathyroidism is a condition caused by high circulating levels of parathyroid hormone (PTH). It is now classified into 4 types: primary, secondary, tertiary and ectopic hyperparathyroidism, according to ethiopatogeny. Delayed manifestations include: Alterations of alkaline fosfatase and calcium levels, trend to formation of kidney stones, bone alterations especially in jaws as a tarnished glass aspect and loss of the lamina dura of teeth, beyond the formation of extensive bone disease called "brown tumor of the hyperparathyroidism". This work reports two different clinical cases of hyperparathyroidism, one primary and other tertiary, with its respective clinical and radiographic aspects, diagnostic and treatment. Some times the brown tumor is the first complaint of the patient, and an important sign for the disease diagnosis. Thus, in the presence of bone injuries with "central giant-cells lesions" diagnosis, the professional should pay attention to clinical inquiry, including measurement of PTH levels, calcium, alkaline fosfatase, parathyroid cintilography so that the treatment is directed to the specific cause of the disease, preventing with this the unnecessary surgical treatment of bony injuries wrongly misdiagnosed as central giant-cells lesions.

## **426.** MUCOCELE - CLINICAL AND HYSTOPATHOLOGICAL ANALYSIS AND CASE REPORT.

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Mucocele is a common oral mucosa lesion, caused by the rupture of the salivary gland duct and following shedding of mucin inside soft tissues. The main etiological factor is related to trauma that causes the rupture or obstruction of the excretory duct of the salivary gland involved. It's preferential location is the lower lip, but it also can be found in the ventral region of tongue, palate and cheeks. The aim of this work is to present the clinical and hystopathological characteristics of a high incidence lesion, to familiarize the dentist surgeon to it's etiology, and so propose the correct diagnosis and adequate treatment to the patients. A leukodermal patient, female, complained of a "water bubble in the mouth". During the anamnesis, she related that the lesion had appeared after a bite and had a evolution time of 5 months. In the intraoral exam, it was observed a submucous nodule in the right cheek mucosa, extending to the lip commissure with approximately 2 cm of diameter, flat surface, flaccid and without pain to palpation. When all data, anamnesis and clinical characteristics of the lesion were put together, the clinical diagnosis was of mococele. The initial conduct was the realization of excisional biopsy, with the material sent to hystopathological analysis, which confirmed the diagnosis. The patient is in follow-up, with no signs of recurrence.

### 427. PERIPHERAL GIANT CELLS GRANULOMA COMPROMISING OSSEOUS TISSUE

RIBEIRO, ACP; SILVEIRA\*, CS; SIMONATO, LE; PIRES-SOUBHIA, AM; CASTRO, AL.

FACULDADE DE ODONTOLOGIA DE ARAÇATUBA – UNESP.

The giant cells granuloma is of proliferative nature, not neoplasic and of unknown etiology. It undertakes mostly in the third decade of life of patients, usually in the anterior region of mandible. The lesion can be placed in the periphery (Peripheral giant cells granuloma) or inside alveolar bone (Central giant cells granuloma), both involving trauma, not being observed in other regions but alveolar bone of maxillas, except when part of the systemic involvement of tumor kind or as a manifestation of Hyperparathyroidism. The central kind, most of times, is asymptomatic, being detected in the routine radiographic exam, where it can be observed radiotransparency, uni or multilocular, that however are not specific for diagnosis confirmation. The peripheral kind are bounded to discomfort or pain, depending of the participation of irritable local factors in the process. The present report aimed to present a mist case, with peripheral tumoral granulomas involving the inferior alveolar bone region of right side, extending through lower osseous tissue with suggestive aspect of central lesion. It is presented a therapeutic protocol, commenting the prognosis.

#### 429. SINONASAL UNDIFFERENTIATED CARCINOMA

ALMEIDA, A.S.\*; HIRAOKA, K.; DENDENA, E.R.; RIBEIRO JÚNIOR, N.V.; PEREIRA, A.A.C.; HANEMANN, J.A.C. UNIVERSIDADE FEDERAL DE ALFENAS

The Sinonasal undifferentiated carcinoma is a rare highly aggressive evil neoplasia that affects nasal cavity and paranasal sinus. Patient with this disease they possess a poor prognostic due to the aggressiveness of the lesion, fast invasion of noble and vital structures, as well as difficulty in the planning and execution of the treatment. Patient D.O.S., male, 38 years old, directed to the Clinic of Periodontics of UNIFAL-MG, in 2005 April, for lesion evaluation in the hard palate that had appeared approximately there is one month. In the clinical exam presence diffuse swelling was verified, with ulcerated areas, located on the right side of the hard palate, surpassing the medium line, extending later even close to the uvula. The lesion provoked expansion of the vestibular cortical exam in the subsequent area of jawbone, being accompanied of pain in the right hemi-face and nasal coriza. The evaluation of x-ray exams revealed compromising of the maxillary sinus with destruction of bony structures. An incisional biopsy was accomplished, with histopathologic and immunohistochemical evaluation, that showed to treat of a Sinonasal undifferentiated carcinoma. The Computerized Tomography revealed lesion in the right maxillary sinus, with extension for orbit, hard palate and cranium base. The accomplished treatment was the maxillectomy partial right followed by radiotherapy. The patient died later 11 months.

## 431. CYTOLOGICAL EVALUATION OF ORAL LESION CAUSED BY THE PARACOCCIDIODES BRASILIENSES: CASE REPORT.

VIEIRA, B.B.\*; SOUZA, M.A.; FREITAS, R.A.L.; LEITE, R.A.; CAMPOS, A.A.; LACERDA, S.A. FACULDADE DE ODONTOLOGIA DE RIBEIRÃO PRETO - USP

The paracoccidiodomicosis is an opportunist disease, endemic in the Latin-American countries occurring, mainly, in men that live in country areas. The human infection occurs by accidental exposing to the Paracoccidiodes brasilienses, which happens mainly for the inhalation. The principal clinical form of this infection is characterized by lung lesions, lymphadenitis, oral lesions and gastrointestinal tract. The diagnosis of the illness is accomplished typically by culture, serology and histopathology. The objective of this work was to demonstrate the diagnostic value of exfoliate cytology in lesions of Pb mycosis. Patient of the masculine sex, 32 years old, resident on rural zone, looked for the Dentistry School of the University of Franca, presenting mulberry-like lesion in inserted gum, hard and soft palates. Cytologic smears were made, fixed in 95% ethyl alcohol, colored with H/E and Grocott-Gomori-Matenamine-silver (GMS). In H/E coloration it was seen epithelial cells, lymphocytes, macrophages and giant cells type Langerhans. In the coloration GMS, was seen the presence of the fungi in the form of "Mickey Mouse." In spite of not being a method routinely used, the exfoliate cytology present good results and it is possible the routine use in the diagnosis of Pb mycosis.

#### 428. PLEXIFORM AMELOBLASTOMA IN TEENAGER

HIRAOKA, K.\*; ALMEIDA, A.S.; SANTOS, C.N.; ROCHA, A.C.; PEREIRA, A.A.C.; HANEMANN, J.A.C. UNIVERSIDADE FEDERAL DE ALFENAS

Patient Y.R.M., 13 years old, caucasian, from Itanhandú-MG, he came to the Stomatology Clinic of Unifal-MG directed by a surgeon-dentist of your origin city for lesion evaluation in jaw. During the anamnesis, the patient's grandmother told to have observed facial asymmetry the about five months and that this went increasing progressively. The intraoral exam revealed a enlargement presence in the subsequent area of jaw on the left side, provoking displacement of the 37 for lingual, accentuated mobility of the 37 and discreet of the 36. The mucous membrane came normocolored with an area hyperkeratotic corresponding to the dental occlusion. To the x-ray exam it was noticed the existence of lesion radiolucide, multilocular, involving every branch mandibular and subsequent area of the body of the jaw on the left side, provoking reabsorption radicular of the teeth 36 and 37, and displacement of the germe of the 38. It was suggested as diagnosis hypotheses Ameloblastoma, Odontogenic Keratocyst and Apical Periodontal Cyst. We took place a puncture aspirative, being this positive one for liquid content, of red coloration and, soon after, incisional biopsy. The histopathologic diagnosis was of Plexiform Ameloblastoma. The patient was directed for treatment in the Service of Oral Surgery of the South Regional Hospital, where he underwent a conservative treatment through vigorous curetage of lesion.

#### 430. MUCOCELE: PHENOMENON OF MUCUS EXTRAVA-SATION

COSTA, L.G.\* ; FIOR, F.A. ; LIMA, E.M. ; COUTO FILHO, C.E.G. UNIVERSIDADE FEDERAL DE ALFENAS

Patient S.S.F., 17 years old, male, caucasion, student, sought the Clinic of the Course of Updating in Oral Surgery of ABO-Alfenas/MG, complaining about volumetric increase in the lip. To the clinical initial exam a lesion nodular could be observed, of base sessile, flat surface, color similar to the mucous membrane surrounding, not ulcerated, asymptomatic, flaccid to the touch, measuring 13mm diameter approximately and located in the right inferior lip. During the anamnesis the patient told historical of trauma three months ago and the lesion non-regressed nor drained. By the found clinical characteristics, the probable clinical diagnosis of the lesion was of Mucocele. It was made excisional biopsy and the diagnosis was confirmed through the histopathological exam.

#### 432. DENTIGEROUS CYST

PARANAIBA,L.M.\*; GHAGAS, A.C.; ALVES, C.; MOURA, C.F.; MARCUCCI, M. HOSPITAL HELIÓPLIS DE SÃO PAULO

The patient J.D.R., 48 years old, from Paraná came into the Estomachology Department of the Heliópolis Hospital complaining of swelling of the face and gum which he had been noticing for the previous six months. During the anamnesis the patient indicated having difficulty breathing and the presence of a yellowish, bloody discharge from the mouth. During an external examination, facial assymetry was detected with an enlarged right nostril. At palpation the patient presented a "return shock" reaction. Through the oroscopy we detected a considerable increase of the right alveolar ridge and the mid-palat hard to the touch with normal mucosa covering as well as normal coloration. The panoramic X-ray showed a wide radiolucid picture with well defined edges involving three dental elements reaching its superior portion, the orbit floor. The computorized tomography showed a well defined extensive hypodense unilocular area covered with fine bony cortical with the presence of dental roots in the inside taking over part of the right jaw, invading the nasal cavity and pushing onto the orbit floor. Based on invading the hasal cavity and pushing onto the orbit floor. Based on clinical and characteristic imagery, the hypothetical diagnosis was of dentigerous cyst and tumor. An aspirative punction was done which collected a large amount of a bloody fluid. After that we proceeded with an incisional biopsy with a result compatible with the diagnosis of Dentigerous Cyst. The patient was proservation.

### 433. CLINICAL FEATURES AND MANAGEMENT OF ORAL LICHEN PLANUS

ASSAO, A.\*; LAUTENSCHLÄGER, G.A.C.; NERY, L.R.; MOREIRA, C.R., CONSOLARO, A.; RUBIRA-BULLEN, I.R.F. FACULDADE DE ODONTOLOGIA DE BAURU FOB-USP

Lichen Planus is an inflammatory disease that may involve multiple skin sites, as well as mucous membranes, hair folicules and nails. It rarely occurs on the lips. This study reports a case of a 33-year-old, female and smoker patient, she came to the Semiological Department of Faculdade de Odontologia de Bauru, presenting the lower lip swelled, dried up, desquamative, with whitish and red patches, and some brown stains. When manipulated, it bled and was painful. There were also some erytroplasic areas, with verrucous and cracked surface, like plaques, in the oral mucosa. The patient reported that worked under the sun for years, without any protection. Histopathological examinations of biopsy specimen disclosed actinic chelitis, leukoplasia, eritroplasia, respectively. Microscopic features revealed oral mucosa composed of stratified pavimentous epithelia, hiperparakeratosis, hiperplasia with exocytose, liquefaction degeneration of basal cell layer, and presence of Civati's corpuscles. Mononuclear inflammatory infiltrate was also present and the epithelial-connective tissue junction, presented hyalinization. These findings suggested Lichen Planus for both biopsies, and they were treated with topical corticosteroids and antifungals. The patient is clinically better and in fortnight proservation.

## 435. ORAL HEMANGIOMA: REPORT OF TWO CASES AND MANAGEMENT DISCUSSION.

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Hemangioma, vascular malformation, and varix are benign lesions of blood vessels the majority of which develop in the head and neck regions. Usually represent an aesthetic problem with no greater clinical complication, however when accidental or surgical rupture occurs there is a risk to hemorrhage. Treatments proposed for the management of benign vascular lesions include surgical therapy, systemic corticosteroids, intralesional injection of sclerosant agents (sclerotherapy), interferon a, laser, embolization, cryotherapy, and radiation therapy. Two cases of hemangioma it will be discussed. The first case is about a middle aged lady, who presented a hemangioma on the tongue, measuring 2 cm. It was treated by sclerotherapy; intralesional injection of a 5% ethanolamine oleate agent was used diluted in 1:1 in articain 2%. Only one session was applied. The second case is about a lady, who presented a hemangioma on inferior lip, which measured 1 cm. One session of liquid nitrogen (2 cicles of 30 seconds each cicle) successfully treated the lesion. Sclerotherapy and cryosurgery are effective and conservative techniques for the treatment of benign vascular lesions, both are discussed showing the advantages and disadvantages of each of them.

#### 437. TRICHO-DENTO-OSSEOUS SYNDROME

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Tricho-dento-osseous (TDO) syndrome is a rare autossomal dominant disorder characterized by enamel hypoplasia, enlarged pulp chambers, taurodontism, increased bone density, and curly kinky hair at birth. The purpose of this study is present two brothers affected by TDO syndrome and emphasize its great phenotypic variability. A 9-year-old boy, clinically showed enamel hypoplastic, rough and yellowish-brown colour on the permanent teeth. Periapical and panoramic radiographic examination revealed an enamel radiodensity similar to the dentin, all permanent teeth had pulp chamber larger than normal and the permanent first molar exhibited taurodontism. In the hand-wrist and lateral cephalometric radiographs a normal trabecular and bone growth pattern could be observed. His brother with 11 years old showed yellowish-hypoplastic enamel on the permanent first molar, however without taurodontism and the handwrist and cephalometric radiographics examinations did not exhibit abnormalities. Cases reports are important to identify TDO syndrome and its variations.

### 434. KERATOCYSTIC ODONTOGENIC TUMOUR: A CASE REPORT IN JAW

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Keratocystic Odontogenic Tumour is a benign neoplasm deriving injury probably from remainders of dental plates, with peculiar characteristics from its histopathologic aspect and its rate of recurrence. The majority of the cases occur to patients in the 10 to 40 years old spectrum, with preference to males. The jaw is the region most affected with this trend of involvement of the posterior region and mandibular ramus. This paper refers to a case report of Keratocyst Odontogenic Tumour in the posterior region of the jaw, the subject being a white woman 69 years of age with circumscribed tumefaction in maxillary molar region and radiolucent area with absence of continuity of the bone. The histopathologic analysis after surgery evidenced a fine layer of stratified squamous epithelium with cubical cells. The fibrous capsule was formed by colagenous conjunctive fibrous tissue, with presence of fusiform fibroblasts, blood vessels, infiltrated inflammatory damage predominantly to the lymphocytes and some islets of odontogenic epithelium, compatible with odontogenic keratocyst. The followup of one year didn't show any clinical signs of recurrence. Conclusion: The histopatológic analysis makes necessary for a diagnostic confirmation and differentiation with injuries of other nature. The Keratocystic Odontogenic Tumour must have a long clinical accompaniment, due to its high rate of recurrence.

## 436. GIANT CELL CENTRAL LESION. CLINICAL REPORT OF A NON-RESPONSIVE CASE TO CORTICOID INTRA-LE-SION INFECTION TREATMENT.

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Giant cell central lesion is a benign process that happens almost exclusively in jaws, presenting typically as a radiolucent unique lesion. Such process is found predominately in children and young adults, generally till the third decade of life. Case report: JDM patient, 12 years old, female, presented with pain and increased volume complaints on left face, lightly erythematous, fibroelastic consistency, partially covering 37 tooth. Medical history: Rhabdomyosarcoma on the left thigh with 1 year and 10 months of age, treated, presenting relapse by the 5 years. Radiographically it was observed bad lined unilocular radiolucence related to teeth 36 and 37, with separation between them. Diagnose hypothesis was Rhabdomyosarcoma late metastasis. An incisional biopsy was done and on histopathologic exam it was perceived an alteration compatible with giant cell lesion. Corticoid intra-lesion injections were chosen as treatment, during 2 months without success and with lesion size increase. Hence, a lesion resection was done, confirming initial statement. The case is under proservation. Corticoid infection in aggressive characterized lesions still need more study in order to better comprehend the response to this kind of treatment.

#### 438. AIDS X DENTISTRY

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Today, there are all over the world, about forty million people infected with HIV viruses, from all social classes, even man or woman. As a health professional, the dentistry needs to know the ill and knows how to act treating infected patients. It's known that a large part of dentistry avoid to treat these patients because of prejudice, fear or just not knowing the illness. The diagnostics is simple, and it can be done by a clinical exam and, after by lab exam. That's why, the dentistry needs to care about the information from anamnesis and the mouth manifestation associated to the ill as oral candidiasis, oral hairy leukoplakia, varicella Zoster, gingivitis, periodontitis, salivary gland, Necrotizing ulcerative gingivitis (NUG), papilloma virus, herpes, recurrent aphthous ulcers, and even to the Kaposi's sarcoma, that is a signal of a possible ill. The dentistry must be prepared to attend this patient avoiding the HIV ill and the hepatitis B.Respecting these rules, the infection risk is too low. Is also important that the dentistry knows how to deal in cases like this, treating or at least conducting to other health professional. According to the Odontology Federal Organization, everybody has the right of a treatment and, every dentistry, legally able to exercise the profession could realize an Odontology Procedure.