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Abstracts

Surgical and Orthodontic Management of Anterior Impacted Teeth

Dimitrios Hatziemmanuil[1], **Labros Zouloumis**[2], **Nikolaos Topouzelis**[3]
Faculty of Dentistry, Aristotle University, Thessaloniki, Greece
[1]*Private Dentist*
[2]*Department of Oral and Maxillofacial Surgery*
[3]*Department of Orthodontics*

SUMMARY

In the present paper the management or anterior impacted teeth is reviewed. Techniques regarding the surgical as well as the orthodontic aspect of their management are described. Mainly the 3 surgical techniques for the exposure of anterior impacted teeth are presented, which should be chosen in regards on the site of impaction; namely, they are the gingivectomy, the apically positioned flap, and the closed eruption technique. The basic principles of the orthodontic treatment of anterior impacted teeth are also presented, by which teeth could be properly aligned in the dental arch. This orthodontic treatment comprises 2 phases, the pre-surgical and the post-surgical phase. The biological rules for the protection of the periodontium and for the safe alignment of anterior impacted teeth are finally described.

Keywords: Anterior Impacted Teeth; Surgery; Orthodontics

Measuring Patient Satisfaction in a Dental Faculty: A Pilot Study

Mehmet Ilgüy, Dilhan Ilgüy, Semanur Dinçer, Gündüz Bayirli
Yeditepe University, Faculty of Dentistry, Department of Oral Diagnosis and Radiology, Istanbul, Turkey

SUMMARY

Objectives: The aim of this pilot study was to measure satisfaction of dental patients by a 32 item satisfaction questionnaire with a 5 point rating scale.
Methods: The study group consisted of 129 dental patients (89 women and 40 men, mean age 39.01 years, standard deviation of 12.8), who were referred to the Department of Oral Diagnosis and Radiology. The individuals who participated in the study received the questionnaires at their first visit. For the statistical analysis, 8 of 32 items were scored in the opposite direction because of its negative content. A total score was acquired by summing the scores of 32 items. Linear transformation was applied to the total scores, and then evaluated in the range of 0=dissatisfaction – 100=satisfaction. Student's t-test was used to examine differences between satisfaction, gender, age, and status of employment. 1-way ANOVA was used to explore the relationship between satisfaction and levels of education.
Results: The internal consistency of the questionnaire was determined as 0.72 by using Cronbach's alpha. No statistically significant differences were found between satisfaction and gender, levels of education, status of employment ($p>0.05$). Dental satisfaction was higher among older patients ($p<0.01$).
Conclusion: The levels of patient satisfaction were high in all groups. Statistical analyses indicate that the questionnaire needs arrangement and we decide to exclude 6 items for the further study.

Keywords: Patient Satisfaction; Questionnaire

Colour of Permanent Teeth: A Prospective Clinical Study

Rade Paravina[1], **Kathy L. O'Keefe**[1], **Bozidar L. Kuljic**[2]
[1]*Department of Restorative Dentistry and Biomaterials*
University of Texas Dental Branch at Houston, Houston, Texas, USA
[2]*Department of Restorative and Esthetic Dentistry*
Tufts University School of Dental Medicine, Boston, Massachusetts, USA

SUMMARY

Objectives: To evaluate the colour range and distribution of human teeth *in vivo* among patients of different gender, bleaching history and no smoking/smoking with different dietary/oral habits.
Materials and Methods: Patients' tooth colour measurements were performed using a Vita- EasyShade Intraoral Spectrophotometer. A total of 1064 vital, non-restored and non-discoloured teeth (maxillary and mandibular right central incisors, canines, first premolars, and first molars) were evaluated in 133 patients of various ethnic groups, gender, bleaching history and dietary/oral habits.
Results: L*, a* and b* mean values for the group of 133 patients were 74.5, -0.4, and 20.9. Female teeth were slightly lighter, less red and less chromatic than male teeth counterparts ($\Delta E^* = 3.0$). Bleached teeth were considerably lighter, less red, and less chromatic than teeth of patients who have not bleached their teeth ($\Delta E^* = 4.6$). Habits that include smoking caused the most pronounced differences in tooth colour, with smokers' teeth becoming darker, redder and more chromatic ($\Delta E^* = 4.5$).
Conclusion: Within the limitations of this study, it was found that colour differences for male versus female teeth, bleached versus non-bleached teeth, and patients smoking were well above the 50:50% perceptibility threshold of $\Delta E^*=1.0$, and above the acceptability threshold of $\Delta E^*=2.7$.

Keywords: Tooth, colour; Aesthetic Dentistry; Shade Guide

Evaluation of Adhesive Systems Bond Strength on Amalgam Repair

Bilinç Bulucu[1], **Cemal Yeşilyurt**[1], **Mehmet Bayram**[2]
Faculty of Dentistry, Ondokuz Mayis University, Samsun, Turkey
[1]*Department of Conservative Dentistry*
[2]*Department of Orthodontics*

SUMMARY

This study evaluated the ability of 3 adhesive systems (Clearfil SE Bond - CSEB, Gluma Comfort Bond – GCB, and Panavia F - PF), to bond amalgam to amalgam (A+A), amalgam to composite (A+C) and dentin to amalgam (D+A), by measuring shear bond strengths. 30 auto-polymerizing acrylic cylinders with 2 round undercut cavities were prepared and filled with amalgam. Then, a cylinder Teflon tube with an inner diameter of 4mm and 3mm in height was positioned and amalgam and composite restorative materials were bonded to the amalgam restorations. 30 freshly extracted sound mandibular molars were embedded by their roots in auto-polymerizing acrylic resin blocks. Enamel tissue was removed and the dentin surface was wet ground on 600 grit silicon carbide paper. A plastic tube with an inner diameter of 4mm and 3mm in height was positioned and amalgam cylinders were prepared on the exposed dentin.

The shear bond strength of all of the specimens was evaluated using a Lloyd universal testing machine with pressure exerted on the interfaces until bond failure. The shear bond strength values (MPa) were: for CSEB (A+A - 14.3±4.3; A+C - 18.7±4.8; D+A - 20.1±8.2), for GCB (A+A - 18.6±7.5; A+C - 15.9±6.3; D+A - 3.7±2.8), and for PF (A+A - 11±6.3; A+C - 20.7 ±5.1; D+A - 10.1 ±5.4). Accordingly: for the amalgam to amalgam group GCB showed the highest bond strength ($p<0.05$); the amalgam to composite group showed no statistically significant differences among adhesive systems ($p>0.05$); and CSEB showed the highest bond strength ($p<0.05$) among other adhesive systems in the dentin to amalgam group.

Keywords: Bond Strength; Adhesive Systems; Amalgam Repair

Effect of Er,Cr:YSGG Laser on Ceramic Surface

P. Kursoglu[1], **H. Yurdaguven**[2], **E. Kazazoglu**[1], **S. Calikkocaoglu**[1], **T. Gursoy**[3]
[1]*Department of Prosthodontics, Yeditepe University, Faculty of Dentistry*
[2]*Department of Operative Dentistry, Yeditepe University, Faculty of Dentistry*
[3]*Private Clinic*
Istanbul, Turkey

SUMMARY

Objectives: Purpose of this study was to assess the surface topography of IPS Empress 2 ceramic after treatment with a laser-powered hydrokinetic system - Er,Cr:YSGG laser, and to compare it with the surface topographies treated with conventional procedures, such as hydrofluoric acid etching and airborne aluminium oxide particle abrasion, and also with the control group.
Material and Methods: 4mm in diameter, 2mm in thickness IPS Empress 2 discs were fabricated following the manufacturer's instructions. All specimens were sanded with 600 grit silicon carbide paper and were randomly divided into 6 groups depending on subsequent surface treatments: Group I - without additional surface treatments after sanding (control group); Group II - abraded with 50 μm aluminium oxide particles for 5 sec; Group III - treated with 5% hydrofluoric acid for 20 sec; Samples of the Group IV, V, and VI were separately irradiated by Er,Cr:YSGG laser system of energy parameters 1.5W, 2W, and 2.5W, respectively. Each specimen was irradiated for 1 minute. All specimens were examined using SEM.
Results*:* All of the surface treatments changed microstructure of IPS Empress 2 ceramic when compared with the control group. The resulting surface topographies were different among the groups which were treated by laser, airborne particle abrasion, and acid etching. Superficial shallow irregularities and scratch-like surfaces were observed on the specimens treated with airborne particle abrasion. When the surface treatment was etching with hydrofluoric acid, elongated crystals and shallow irregularities were observed on Empress 2. The SEM photographs showed that laser system created rough and irregular hollow-like surface topography.
Conclusion: Er,Cr:YSGG hydrokinetic laser system may be an alternative surface treatment method of ceramic restorations. Meanwhile, further investigation must be performed to evaluate the effect of this surface treatment method on bonding strengths of ceramic restoration.

Keywords: Laser; Dental Ceramic; IPS Empress 2; Er,Cr:YSGG laser

The Annual Effective Dose Delivered to Patients from Oral Dental Radiographies in Albania

Luan Qafmolla[1], **Ruzhdie Qafmolla**[2]
[1]*Institute of Nuclear Physics, Tirana, Albania*
[2]*Medicine Faculty, Stomatological Department, Tirana, Albania*

SUMMARY

Diagnostic medical and oral dental radiography comprises 82% of all man-made radiation exposure of the population in Albania. Although dental radiography does not make a major contribution to radiation dose, we performed a detailed assessment of radiation risk from oral dental radiography, evaluating the annual effective dose in dentistry clinics of Tirana during 2000-2005[1,2]. The measures of effective doses were carried out using TLD-100 cards for different parameters of X-ray tubes (60, 65, 70 kV; 7, 10 mA). The doses were evaluated for mandibular and maxillary incisors, canines, premolars and molars, given to 720 patients aged 5-60 years. The average dose was 4.1mGy and dose limits were from 0.7-144mGy. The reference level recommended by IAEA and ICRP[3] for dental radiography examinations is 7 mGy (surface dose), while the Albanian Commission of Radiation Protection has evaluated and recommended the value of 5mGy. The dose from 5mGy in oral dental radiography examinations is equivalent to effective dose of 5μSv. The measurements obtained in our study showed that the system of radiation protection in X-ray machines in operation phase in all dental practices, where we performed activities was in satisfactory levels, ensuring the protection of staff, patients and population.

Keywords: Dental Radiography; Dose, effective

Effects of Cetylpyridinium Chloride in Overall and Caryogenic Salivary Micro Flora Reduction

Aleksandar Dimkov[1], **Nikola Panovski**[2], **Marija Stevanovic**[1], **Elizabeta Gjorgievska**[1]
[1]*Department of Pediatric Dentistry, Faculty of Dental Medicine*
[2]*Institute of Microbiology and Parasitology, Medical Faculty*
Skopje, FYROM

SUMMARY

As an active ingredient of oral antiseptics, cetylpyridinium chloride (CPC) has a wide antimicrobial spectrum with a strong bactericidal effect on Gram positive microorganisms and a fungicidal effect on yeasts. It's efficiency against Gram negative pathogenic microorganisms and mycobacteriums is questionable. Concentration of 0.05% of CPC in mouth-rinses results with immediate reduction of bacterial counts. The aim of this study was to estimate the salivary levels of *Streptococcus mutans* (MS) and *Lactobacillus species* (LB) in the saliva before and after mouth rinsing with an antiseptic mouth-rinse containing CPC, and to compare the number of whole salivary flora by saliva analysis before and after mouth rinsing. In order to accomplish this aim we used Aqua fresh mouthwashes (Smith Kline Beecham, Great Britain). The group consisted of 12 healthy schoolchildren aged 9 - 13 of both sexes. The participants were with a good oral health and similar DMF indices. For better precision and accuracy, the same group was a control group, too. The saliva samples were taken before, and 20 minutes after tooth brushing, early in the morning, after at least 12 hours without oral hygiene. The counts of MS and LB were determined with commercial CRT bacteria strips produced by Ivoclar-Vivadent, Liechtenstein. The total count of the saliva microorganisms was determined by standard microbiological methods. A significant reduction in salivary MS and LB levels was observed in all samples as well as a decrease in the total count of aerobe and anaerobe bacteria and yeast.

Keywords: Cetylpyridinium Chloride; Antimicrobial Agents; *Streptococcus mutans*; *Lactobacillus species*; Dental Decay; Salivary Flora

Evaluation of *In Vitro* Antimicrobial Activity of Various Propolis Samples against *Enterococcus faecalis*

Ozant Oncag[1], **Dilsah Cogulu**[1], **Atac Uzel**[2], **Kadriye Sorkun**[3]
[1]*Ege University, Faculty of Dentistry, Department of Paedodontics, Bornova-Izmir, Turkey*
[2]*Ege University, Faculty of Sciences, Department of Biology, Basic and Industrial Microbiology Section, Bornova-Izmir, Turkey*
[3]*Hacettepe University, Faculty of Sciences, Department of Biology, 06532 Ankara, Turkey*

SUMMARY

The aim of the present study was to carry out a comparative analysis of antimicrobial activity of ethanol extracts obtained from various Anatolian propolis samples against *Enterococcus faecalis (E.faecalis)* and to compare the antimicrobial effectiveness of all these samples with a traditional Brazilian propolis sample. 4 different Anatolian (Trabzon: TG; Bartin: TAR1; Ankara: TAR3; Bursa: TB) and a south-eastern Brazilian propolis (BR) samples were used for this *in vitro* study. *E. faecalis* (ATCC 29212) was used for antimicrobial activity test. Determination of minimal inhibitory concentration (MIC) was performed by the agar dilution method. Statistical analysis was carried out using SPSS (SPSS Inc., Chicago, IL, USA) 10.0 software program.

All propolis samples evaluated in this study showed antimicrobial activity against *E.faecalis*. The antimicrobial effectiveness of TB was statistically higher than the other samples against *E.faecalis* ($p<0.05$). All 4 Anatolian propolis samples were found to be statistically more effective than Brazilian propolis ($p<0.05$). The results of the present study suggest that propolis can be used in endodontics since it demonstrated significant antimicrobial activity against *E.faecalis*. Further *in vitro* and *in vivo* studies using propolis may help to confirm this finding.

Keywords: Propolis; *Enterecoccus faecalis*; Antimicrobial Activity

Evaluation of the Prevalence of Odontogenic Sinus Tracts and Possible Relationships with Overlying Restorations in Patients Referred for Endodontic Treatment

J. Tanalp[1], **I. Dikbaş**[2], **S. Sert**[3], **F. Kaptan**[1], **D. Ilgüy**[4], **M. Karapınar Kazandağ**[1], **G. Bayırlı**[1]

[1]*Yeditepe University, Faculty of Dentistry, Department of Endodontics*
[2]*Yeditepe University, Faculty of Dentistry, Department of Prosthodontics*
[3]*GATA Haydarpaşa Military Medical Academy, Dental Service*
[4]*Yeditepe University, Faculty of Dentistry, Department of Oral Diagnosis and Radiology*

SUMMARY

The purpose of this study was to determine the prevalence of odontogenic sinus tracts in a group of patients with periapical radiolucencies and referred for endodontic treatment. 864 permanent non-vital teeth with periradicular radiolucencies were evaluated. The number of odontogenic sinus tracts and data about some parameters related with the examined teeth were recorded and statistically analyzed using the chi-square test.

The results indicated that 21.4% of the examined teeth possessed odontogenic sinus tracts. Sinus tracts were most frequently encountered in the maxilla. Maxillary central incisors and mandibular molars were most frequently associated with sinus tracts. Only 2 teeth exhibited extraoral cutaneous sinus tracts. No significant correlation was noted between the presence of previous endodontic treatment and the formation of sinus tracts ($p>0.05$). Among teeth with overlying restorations, sinus tracts were most frequently observed in those with fillings compared to those with crowns or bridges, and the difference was statistically significant ($p<0.05$). Within the limitations of this study, it can be concluded that the likelihood of encountering odontogenic sinus tract in clinical practice is 1 among 5 teeth with periradicular radiolucencies.

Keywords: Odontogenic Sinus Tract; Periradicular Radiolucency; Endodontic Treatment

An Extremely Large Mucocele of Blandin-Nuhn Salivary Glands: Report of a Case

M. Voulgaropoulou[1], **Ir. Karabouta**[2], **Th. Zarampoukas**[3], **A. Vladikas**[1]
[1]*Private Dental Practice, Thessaloniki, Greece*
[2]*Aristotle University, Dental School, Department of Oral and Maxillofacial Surgery, Thessaloniki, Greece*
[3]*Aristotle University, Medical School, Department of Histopathology, Thessaloniki, Greece*

SUMMARY

A case of an extremely large mucocele in a white young female patient, aged 16, originating from the inferior lingual salivary glands of Blandin and Nuhn, is presented. The importance is focused on the unusual size and the applied treatment as well. The lesion was located on the ventral surface of the tongue, on the right side between the tip and the root. It demonstrated a smooth, raised and bluish appearance and its size was 2.5cm in length and 1.5cm in width. It was excised by a surgical dissection including the entire peripheral salivary glands and the deep musculature tissue in the tongue was left behind. The cystic lesion was removed intact with its fluid inside. Nor was the unroofed technique using plain gauze performed, neither the opening window technique to the cystic wall with secondary epithelilazation that consist the usual treatment of such cases. The wound was closed primarily and the healing was uneventful. The histological examination confirmed a mucocele of extravasation type, whose walls were composed of granulation tissue. No recurrence was noticed. The case is an interesting because of the dimensions of the lesion and the duration of presence.

Keywords: Salivary Mucocele; Salivary Glands; Lingual Mucosa

Infra-occlusion of Primary Molars: A Review and Report of Cases

Nazan Kocatas Ersin, Umit Candan, Ali Riza Alpoz
Ege University, Dental Faculty, Department of Pediatric Dentistry, 35100 Bornova - Izmir, Turkey

SUMMARY

The aim of this study was to describe the distribution and degree of infra-occlusion and to evaluate the influence of age of diagnosis and treatment outcomes of primary molars during a period of 2 years. 21 patients aged between 6 to 11 years participated in the study. The children were subjected to clinical and radiographic examinations every 6 months during 2 years. Parameters assessed were age, gender, distribution and degree of infra-occlusion based on radiographs, ankylosis, altered position of adjacent and successor teeth and treatment outcome.

The most frequently affected teeth were primary second molars located in the lower arch as bilateral occurrence. The degree of infra-occlusion was considered as mild in 35, moderate in 15, and severe in 6 teeth. The successors were congenitally absent in 10 infra-occluded teeth. Tipping of neighbouring teeth and the delayed eruption of the permanent successors were found to be the most frequent complications. The treatment outcome was favourable in 78% of the cases. It could be concluded that early diagnosis, correct treatment approach and follow-ups were the main principals of a successful treatment of infra-occluded primary molars.

Keywords: Infra-occlusion; Primary Molars; Children; Ankylosis

Multiple Root Canal Systems in Adjacent Maxillary Premolars

George J. Vasilakis, Christos Kyriazis, Tetiana Ponikarovska
Pivate practices, Tirnavos and Agios Nikolaos, Halkidiki, Greece

SUMMARY

A case report is presented of a 47-year-old male who had unsuccessful endodontic therapy. The failure was due to the clinician's inability to diagnose and locate the multiple and complex root canals in the maxillary right first and second premolars. Increased awareness of this infrequent condition will assist other clinicians when treating such difficult cases.

Keywords: Root Canal; Premolars, maxillary