

STANDING COMMITTEE ON RESEARCH AND EDUCATION 9th LECTURE CONTEST



**INTERNATIONAL ASSOCIATION
OF DENTAL STUDENTS**
Istanbul, Turkey

ABSTRACT BOOK



SCORE – STANDING COMMITTEE ON RESEARCH AND EDUCATION OF THE IADS.

SCORE is one of the most developing committees of the Association, which works on the scientific projects. On the one hand, it aims to improve and stimulate research activities of dental students. On the other hand, it advocates the sufficient dental education and professional development.

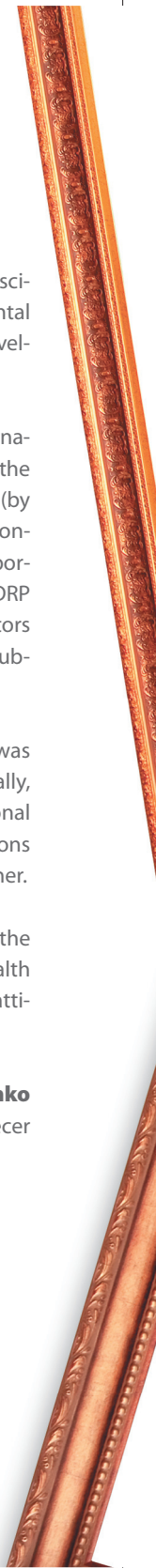
By SCORE projects we give a chance of presenting the results of the research on the international level (Lecture Contest), of publishing the articles in the indexed scientific journal of the IADS (Dental Students Research Journal), of participation in scientific lectures and workshops (by famous lecturers or companies), of taking a part in the Dental Olympics (students compete, demonstrating their theoretical and practical skills), and, finally, the Committee provides a unique opportunity for dental students to participate in the International Dental Research Program (IDRP). IDRP is an international dental research exchange. Our members enjoy the work with famous doctors and researchers all around the world, being a part of their scientific teams and, nevertheless, publishing the results of their works in international journals.

Lecture contest has become a good tradition of IADS Congresses and Mid-year meetings. It was established at the Congress of the 2008 in Egypt and since then takes place annually or biannually, gathering dental students from all over the world to present their research on the international level. The 9th Lecture Contest 2013 of the IADS for the first time will see both, oral presentations and poster sessions. It is a great occasion to share students' scientific experience with each other.

Therefore, SCORE paves the way for dental students' engagement with science. It stimulates the performance of research in order to cultivate a good understanding among all future oral health professionals of research mechanisms, and to enhance life-long learning behavior, skills and attitudes as well as widen their perspective.

Tatiana Vorovchenko

IADS International Scientific Officer



Dear Colleagues,

The 9th Lecture Contest is going to start on the following days, keeping up a tradition of many years. This event was founded long time ago in order to give the possibility to dental students from all the world share the outcome of their research work and for it to be appreciated. Such an event is of a big importance for the young dental student researchers as it doesn't only serve as a competition, but also as an educational tool through which they grow and acquire more experience.

I would like to congratulate the Turkish Local Organizing Committee and the IADS Standing Committee on Research and Education, as well as the partners who offered support into the organizing the event. I wish all the participants to enjoy the competition and good luck in all their future endeavours.

Sincerely yours,
Pavel Scarlat
IADS President



Dear dental
students from all around
the world,

The achievements of modern science in dentistry give clinicians the opportunity to develop their practice. Dentists can not be real clinicians without the skills of research, for any doctor is primarily a researcher. In everyday clinical work a dentist constantly analyzes and decides on the basis of the analysis.

Therefore, the Standing Committee on Research and Education of the IADS encourages you to join the world of science that will broaden your horizons in modern dentistry and welcomes all the participants of the 9th IADS Lecture Contest!

Year by year the Contest becomes more and more popular, so the selection was not so easy. We congratulate all the selected participants and wish you future development on this fascinating path.

Best regards,
Dr. Tatiana Vorovchenko
IADS International Scientific Officer



Dear friends,

Albert Einstein once said "The important thing is not to stop questioning. Curiosity has its own reason for existing." Today we are here to listen to people who didn't stop questioning. Each of you did researches which will contribute to the world's dental knowledge. Each research makes us ask new questions in the way of seeking the truth. You strengthen the light which will enlighten our ways in our future dental career. I congratulate you from the bottom of my heart, as you represent the youngest dental researchers today in Istanbul Congress Center, where the biggest dental gathering of the year –FDI takes place. Thank you all for your efforts and good luck in Lecture Contest! Hope you are enjoying your time in Istanbul.

Wish you all the best,

Görkem Şengün

Chairwoman of 60th IADS&YDW Annual World Dental Congress, Turkey



Agenda:

9.00 – 9.30 **Opening of the Lecture Contest**

9.30 – 10.30 **1st oral presentations session**

1. Magdalena Wilczak (Poland)
The Influence of the Concentration of Chlorohexidine on Gingival Fibroblasts Proliferation and Morphology.
2. Abdulmajeed Okshah (Saudi Arabia)
Human Teeth are The Black Box.
3. Faezeh Amiri (Iran)
Three-dimensional Finite Element Analysis of the Effect of Different Orthodontic Forces on Stress Distribution in Bone During Space Closure.
4. Karapinar Gokay (Turkey)
In vitro Evaluation of Dental Enamel Exposed to Medicines Used in Paediatric Cardiology.

10.30 – 10.50 **1st poster session + coffee break**

10.50 – 11.50 **2nd oral presentations session**

5. Andrey Baltaev (Russian Federation)
Designing a New Better Orthodontic TAD System.
6. Murad Alrashdi (Saudi Arabia)
Evaluation of Demands and Needs For Dental Care in a Sample of the Cameroon Population.
7. Camelia Dewi Hartanto (Indonesia)
Healing effects of Curcuma xanthorrhiza Roxb. In Wound and Bone in Diabetics Rats (In Vivo).
8. Nicolas Cohn (Chile)
Determination of Citotoxicity of Human Fibroblast to Exposure of BisGMA Concentrations.

11.50 – 12.10 **2nd poster session + coffee break**

12.10 – 13.10 **3rd oral presentations session**

9. Yana Sadykova (Kazakhstan)
Physical Factors at the Directed Tissue Regeneration in Periodontal Disease Treatment.
10. Leyli Sadri (Iran)
Do anti-Streptococcus mutans and Streptococcus subrinus Immunoglobulins of Egg Yolk Have Any Inhibitory Effect on the Growth and Adherence of These Bacteria?
11. Mona Norozy (Iran)
An in-vitro Comparison of Effect of Two Different Design of Non Metal Post, Single Taper and Double Taper on Fracture Resistance of Dental Root.

13.10 – 13.30 **Evaluation and Announcement of the Winners**

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Abstracts of the oral presentations:

The Influence of the Concentration of Chlorohexidine on Gingival Fibroblasts Proliferation and Morphology.

Magdalena Wilczak
(Poland)

Co-authors:

Agnieszka Nowak
Paulina Urbaniak
Malgorzata Kotwicka

Coordinator:

Marzena Wyganowska-Swiatkowska

Introduction:

Chlorohexidine, a commonly used antiseptic, with less toxicity, can inhibit the healing wound. PANsys3000 is a highly automated cell-culture system that is used for in vitro cell culture and analysis of diverse cell lines in conditions similar to in vivo ones. This system enables cell culture of various cells and the usage of diverse culture media at the same time, using the cell culture conditions of choice and constant microscopic observation.

Objectives of the investigation:

The aim of the study is to observe the influence of chlorohexidine in different concentrations on gingival fibroblasts in condition similar to in vivo.

Experimental methods used:

All experiments were conducted on human gingival fibroblast cell line – HGF (Innoport, Spain).

The cell suspension after trypsinization was combined with culture medium and placed in PanSys 3000.

After 24 hours the culture medium is removed and the DMEM (Dulbecco's Modified Eagle Media) without FBS (Fetal Bovine Serum) is added with the proper amount of Curasept product (0,2% Chlorohexidine) gaining concentrations of Curasept(1 %, 2%, 5%, 10%, 20%, 100%) in culture medium. The control was without the Curasept product. After 15 minutes of cell incubation in culture medium with the addition of Curasept, the culture medium was removed, the cells were rinsed with 2 ml of Hank's fluid and 1,5 ml of DMEM culture medium with 10 % of FBS and 1 % of antibiotic was added. The observations were held for 48 hours. The pictures were taken in constant 10 minute interval in the region of interest. The same region was photographed for 72 hours from the moment of the cell culture was made and than combined into video.

Essential results including data, and eventual statistics:

As a result of 72 hour observation, the changes in proliferation of the cells in culture media lines with the addition of Curasept product in concentration of 10% , 20% and 100% in relation to the control culture were noted. After 15 minutes of incubation of the cells with DMEM and Curasept in concentration of 1% , 2% and 5% no significant changes in the proliferation or morphology of the cell in relation to the control culture were noted. After 15 minutes of incubation of the cells with DMEM and Curasept in concentration of 10 % and 20 % the decreased dynamics and number of cell division was noted. There were no changes in the morphology of fibroblasts.

After 15 minutes of incubation of the cells with DMEM and Curasept in concentration of 100% the inhibition of growth and cell division was noted, however the morphology of the cells was intact. The cells managed to maintain their morphology intact for 48h after the addition of Curasept. The conclusions above were made based on the observations of the control culture with culture medium DMEM with 10 % of FBS and 1 % of antibiotic after 72 hours.

Conclusion:

Low concentration of the chlorohexidine does not interfere with the proliferation and morphology of the gingival fibroblasts. The growth of the concentration of the chlorohexidine inhibits the cell proliferation and insignificantly affect their morphology.

Keywords:

Gingival fibroblasts, chlorohexidine, PANsys 3000.

Human Teeth are The Black Box.

Abdulmajeed Okshah (Saudi Arabia)

Co-authors:

Ibrahim Shabel
Abdullah Alhasaniah
Mshari Aiban

Coordinator:

Prof. Dr. Hossam A. Eid, Asst.

Introduction:

Human Teeth can preserve a sufficient amount of human DNA for further investigations in mass disasters and in criminal scene investigations.

Objectives of the investigation:

The study aim was to use human teeth remains to detect genes babysit mounted on chromosome Y to identify gender.

Experimental methods used:

Forty teeth (20 males and 20 females), average age was 35.5y collected from the college of dentistry, KKU. All data required for the study were collected from the patient's files. Each tooth spitted into two halves then pulp tissue collected and subjected to DNA extraction and then analysis. Genes of RBM1, sY14, sY83, SY90, CDY were amplified using the multiplex PCR.

Essential results including data, and eventual statistics:

Male teeth only gave five bands with different molecular weights ranged from 72 to 800 bp. While no amplicones were observed with the women DNA.

Conclusion:

Human teeth provide sufficient amount of DNA, so its use in forensic investigation is promising.

Keywords:

Human teeth, DNA, PCR, Y chromosome, Mass disaster.

Three-dimensional Finite Element Analysis of the Effect of Different Orthodontic Forces on Stress Distribution in Bone During Space Closure.

**Faezeh Amiri
(Iran)**

Co-author: Allahyar Geramy

Introduction:

Space closing is one of the most common orthodontic challenges. To achieve an ideal orthodontic treatment, estimating the level of stress and strain within the periodontal ligament (PDL) and supporting bone following the application of orthodontic forces seems to be vital. The finite element method (FEM) would be a reliable technique for the simulation and calculation of the local state of stress distribution. The aim of the present study was to use the finite element method to describe the step by step stress distribution in alveolar bone thorough a diastema closure process via bodily or tipping movement between the central incisors of the mandible.

Objectives of the investigation:

The aim of the present study was to use the finite element method to describe the step by step stress distribution in alveolar bone thorough a diastema closure process via bodily or tipping movement between the central incisors of the mandible.

Experimental methods used:

Four 3D finite element models were designed of an anterior segment of mandible containing lower central incisors, their PDLs, spongy and cortical bone. The models were the same except for the distance of the teeth which were

4.5 mm to 2 mm. The models were designed in SolidWorks 2011 (Concord, 01742 USA) and then transferred to ANSYS Workbench Ver. 12.1 (Cononsburg, USA). A 0.5 N force was applied to produce bodily movement to close the distance between central incisors (simulating the fixed appliance). In the second stage the same force was applied to tip the teeth. Meshed models contained 40078 nodes and 19284 elements. The von Mises stress was evaluated in a defined path in midline between the teeth's cervical and apical area.

Essential results including data, and eventual statistics:

In the fixed appliance models, the cervical area stress was increased between the 4.5 mm distance (= 1.16×10^{-2}) model and the 2 mm distance (= 3.56×10^{-2}). This increase was also noticed in the apical area from 9.6×10^{-4} (in 4.5 mm distance model) to 2.6×10^{-3} (in 2 mm distance). This increase was shown when the removable type of force application was assessed. The cervical stress was 2.35×10^{-2} MPa in 4.5-mm-distance model and increased to 5.79×10^{-2} MPa in the 2-mm-distance model. The apical stress was 3.79×10^{-3} MPa in the 4.5-mm-distance model and increased to 5.37×10^{-3} MPa in the 2-mm-distance model.

Conclusion:

Keeping the same force level in different stages of space closure can increase the stress level in bone. A gradual decrease of the force level in different stages of space closure is strongly suggested.

Keywords:

Bone stress; finite element method; Periodontal ligament; space closure, stress distribution.

In vitro Evaluation of Dental Enamel Exposed to Medicines Used in Paediatric Cardiology.

**Karapinar Gokay
(Turkey)**

Co-authors:

Prof. Dr. Yegane Guven,
Prof. Dr. Ferda Dogan,
Dr. Sule Can Trosala

Introduction:

In vitro evaluation of dental enamel exposed to medicines used in paediatric cardiology

Objectives of the investigation:

Evaluation of dental enamel exposed to medicines (acetylsalicylic acid, furosemide, captopril, propranolol) used in paediatric cardiology in vitro.

Experimental methods used:

Tablets were crushed in a mortar and dissolved in 10 ml distilled water. pH of the medicines were measured with pH meter. Bovine teeth which were divided into 37 enamel blocks were used in the experiments. Enamel blocks were randomly distributed into 6 groups. In order to immerse in the medicine solutions, 7,065 mm² windows were opened on every enamel block. Two windows were opened on one of the blocks which enable to observe the difference between medicine exposed block and the one with clean surface in SEM (Scanning Electron Microscope).

Groups:

Group I: acetylsalicylic acid, Group II: furosemide, Group III: captopril, Group IV: propranolol, Group V: 10 mM citric acid (control), Group VI: distilled water.

Every tooth was put into the cell cultivation chambers which contain 500 µl medicine solution and than kept in the chambers for thirty minutes. Afterwards, dissolved phosphate was determined spectrophotometrically.

Essential results including data, and eventual statistics:

The pH values varied between 2.96 and 5.1. Acetylsalicylic acid (75 mg) tablet water solution showed the lowest pH. The highest dissolved phosphate obtained for Captopril (25 mg) tablet solution 0,3192µg and for acetylsalicylic acid (75 mg) tablet water solution 0,2977 µg, respectively. Scanning electron microscopy analysis showed prominent erosive patterns.

Conclusion:

Especially acetylsalicylic acid, captopril, propranolol and less in amount furosemide pointed out an erosive effect on dental enamel. Considering the long term and regular usage, this study demonstrated erosive potential of these medicines.

Keywords:

Dental erosion, acidic medicines, paediatric cardiology.



Designing a New Better Orthodontic TAD System.

**Andrey Baltaev
(Russian Federation)**

Co-authors:

Orest Z. Topolnitsky, Elena A. Gritsenko

Coordinator:

Dmitriy E.Suetenkov

Objectives of the investigation:

To develop a new orthodontic TAD system.

Experimental methods used:

The designed palatal device provides orthodontic traction and allows you to change its direction in the transversal (oral) and distal direction. The design is fixed on dismantlable titanium mini-implants with a square internal interface for a screwdriver. The middle part of the construction allows the use of 2 or 3 mini-implants. Cantilevers used for the application of ligatures or elastic ties can be bent in the plane of the hard palate. The CAD-system SolidWorks was used in the development of the device. This involved mathematical modeling of the conditions of the upper jaw with implants placed and a fixed platform. A study of the stress-strain state of the bone-implant fixation was performed to compare the various quantity of mini-implants. Orthodontic forces were applied at 45 and 90 degrees to the plane of the cantilever with a strength of 50–150 grams.

Essential results including data, and eventual statistics:

When fixing into two implants their heads deformed by 0.097 mm, which is several times greater than fixation with three bearing points. (0.035 mm)

Conclusion:

The device stability when fixed on three mini-implants is increased by up to 25-30% under external loads. Use of the designed structure provides a solution to fairly complicated clinical cases which require anchorage and the en masse.

Evaluation of Demands and Needs For Dental Care in a Sample of the Cameroon Population.

**Murad Alrashdi
(Saudi Arabia)**

Co-authors: Meshary Alsulim

Coordinator: Abdullah Aljber

Introduction:

For effective planning and evaluation of any health service both estimates of levels of need as well as demand for treatment should be taken in to account. However, oral health services appear to be designed to meet the needs of the provider rather than those of the public. The term 'need' is commonly used to describe the amount of treatment that dentists judge their patients ought to have, whilst 'demand' refers to the treatment requested by the patients themselves. An Internet research failed to find any studies or reports that give information about treatment needs and demands for dental care in Cameroon population.

Objectives of the investigation:

The present study sought to assess the normative needs and demands for dental care among patients visiting the Cameron Surgical Camp 2012 in Marwa City.

Experimental methods used:

The WHO's basic methods were used to determine the Dental status and the dental treatment needs, and the Dental Fluorosis, Prosthetic need, Prosthetic demand and Community Periodontal Index for Treatment Need (CPITN)¹ was used to record each patient's scores. The clinical examination of the patients was carried out using a dental mirror, an explorer and the periodontal probe recommended by WHO.

Essential results including data, and eventual statistics:

The sample surveyed consisted of 314 females and 158 males. Table 1 shows the Demands and needs for dental care 145 distribution of subjects who required treatment according to their age groups and gender. A higher percentage of females than males sought treatment. In regards to prosthetic status majority of the patients doesn't has any prosthesis despite their normative needs. A minority of patients was having some upper and lower bridges. Upper and/or lower full denture treatments were needed by members of the 45-64 and > 65 age groups. A higher percentage of subjects in the > 45 age group needed partial dentures compared to those in other age groups. Prevalence of fluorosis in this study turned out to be free with only to cases was having questionable to very mild fluorosis index.

Conclusion:

Patients' perception of need frequently gives rise to a demand for health care. Patients are often unaware of the treatment options available and depend on the health care provider to suggest the appropriate care for their conditions. This study, which is the first to evaluate the general situation regarding the demands for dental care of patients visiting dental clinic in Cameroon Surgical camp 2012.

Keywords:

Treatment, Need, Demand, Cameroon and oral health.

Healing effects of *Curcuma xanthorrhiza* Roxb. In Wound and Bone in Diabetics Rats (In Vivo).

Camelia Dewi Hartanto (Indonesia)

Co-authors: Citra Kartika Y, Denanda Adyandara S, Destiwaty Asima N
Coordinator: Evie Lamtiur P

Introduction:

Diabetes Mellitus (DM) is the twelfth leading cause of death in the world, also it delays wound and bone healing. In Indonesia, the prevalence of DM in 2008 was 5.7%, putting Indonesia in the top ten of countries with the highest number of DM patients in the world. By the year 2030, the estimated number of patients with DM in Indonesia will be over 20 million (approximately 10% of the population). Among Indonesian people, *Curcuma xanthorrhiza* Roxb. is known as Javanese turmeric (Temulawak) which has been used for food and medicinal purposes. In the former studies, the benefits of *Curcuma xanthorrhiza* Roxb. has been shown such as anti-inflammatory, anti-bacteria, anti-fungal and anti-oxidant. *Curcuma xanthorrhiza* Roxb. has been identified containing of several chemical constituents such as xanthorrhizol, curcuminoid and volatile substances. There was no study has been carried out so far to observe the healing effects of *Curcuma xanthorrhiza* Roxb. in wound and bone in diabetic rats.

Objectives of the investigation:

The purpose of this study was to evaluate whether *Curcuma xanthorrhiza* Roxb. could increase wound and bone healing in diabetic rats. The results of this study may encourage people, specially Indonesian people, for further soft and hard tissues repair consuming the herbal plants.

Experimental methods used:

30 male Sprague-Dawley rats (150–250 g) were induced Streptozotocin (STZ) (single dose of 50 mg/kg BW; intra-peritonially). Fasting blood glucose levels were measured 48-hours post administration of STZ which all rats were showing high blood glucose level (> 200mg/dl). A bone drill (d = 2 mm) defect was created in the mandibular of each animal then divided into 2 groups : the first group was the control group and the second group was administrated by *Curcuma xanthorrhiza* Roxb. (1000 mg/kg BW; oral route; once daily). Rats were sacrificed on day 5, 9, 15, 18 and 22. Data were presented as mean and the results were analyzed statistically using T-Test Independent. The differences was considered significant when $p < 0.05$.

Essential results including data, and eventual statistics:

Rats treated with *Curcuma xanthorrhiza* Roxb. showed significant ($p < 0.05$) increases and healed faster in wound healing (performed by fibroblasts and collagen), as well as in bone turnover (reflected by osteoblasts, osteocytes and osteoclasts) which significantly ($p < 0.05$) indicated that in this group, the bone repair process also occurred faster compared with the control group.

Conclusion:

This result showed that *Curcuma xanthorrhiza* Roxb. is potential to be candidates for diabetic

wound and bone healing herbal therapies and could be developed as a pharmacological agent in such clinical setting.

Keywords:

Curcuma xanthorrhiza Roxb., diabetic, rats, wound healing, bone healing.

Determination of Citotoxicity of Human Fibroblast to Exposure of BisGMA Concentrations.

Cohn-Inostroza Nicolás Andrés (Chile)

Coordinators:

PhD. Pamela Ehrenfeld

PhD. Ignacio Moreno-Villoslada.

Introduction:

Photopolymerized dental composite resins are periodically used in the field of dentistry, but the rate of polymerization ranges from 55 % to 75 %. Therefore BisGMA the unreacted monomers in the polymer network reduces clinical longevity of these resins. These substances can penetrate the dentin, may irritate soft tissue and promote allergic reactions. It has been found that the release of these substances have cytotoxic effect, genotoxic, mutagenic and estrogenic. Ratanasathien et cols, has made a ranking of cytotoxicity of unpolymerized monomers: BisGMA > UDMA > TEGDMA >>> HEMA. Furthermore it has been found that mono methyl ether of hydroquinone (MEHQ) and dimethyl aminoethyl methacrylate (DMAEMA) can inhibit the growth of oral epithelium hamster mouse and the DMAEMA can affect cellular lipid synthesis. Found that the

acrylates are more toxic than the methacrylates like structure and the presence of the hydroxyl group increases cytotoxicity.

Objectives of the investigation:

Determine the rate of cell death by exposing human fibroblasts (H-FB) at concentrations of $1E-6$ [M], $6E-5$ [M], $1E-5$ [M] and $4.8 E-4$ [M] of Bis-GMA, for 24, 48 and 96 hours.

Specific objective:

Determine the minimum concentration and exposure time of Bis-GMA to cause cell death in FB-H.

Experimental methods used:

Stimulus test methodology Bis-GMA. In four 24-well plates (Figure 1), of which 18 are planted with 360,000 FB-H incubated per well in 12-well stocked with FB-H Bis-GMA is added at the following concentrations: $1E-6$ [M], $6E-5$ [M], $1E-5$ [M] and $4.8 E-4$ [M]. Six wells were used as a control, separated in two rows of three wells each located at the ends of the plate, as well as six wells containing only DMEM basal control. Each well plate will be exposed to a certain period only, which are respectively 24, 48 and 96 hours.

Essential results including data, and eventual statistics:

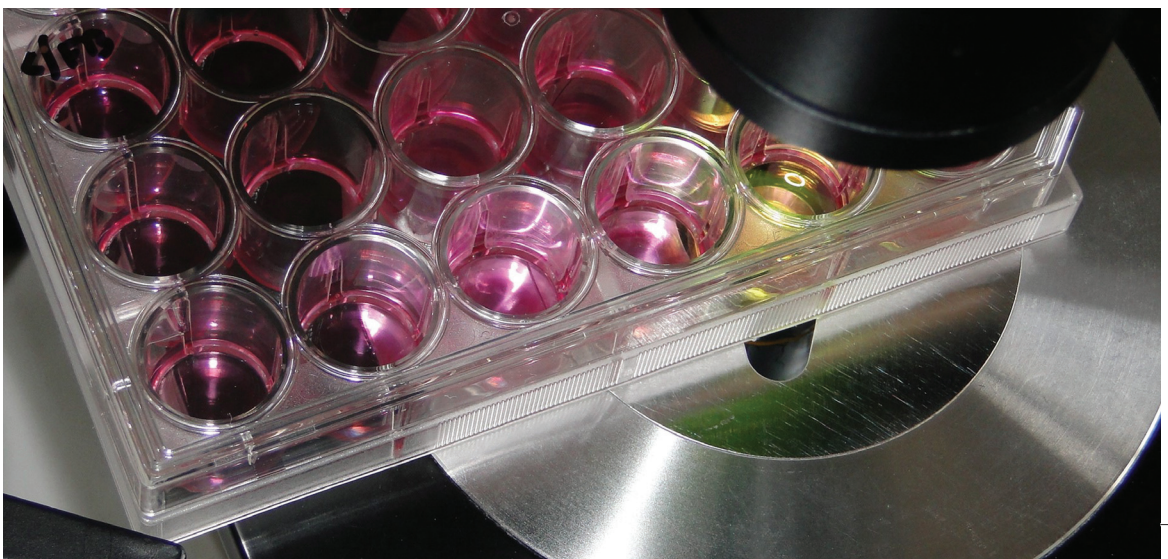
Through a study on liquid chromatography and molecular absorption spectrophotometry. The liberated molar [M] concentration of BisGMA was determined in polymerized dental resins in different degrees of Ethanol. In the pathology laboratory, crops do H-FB, and administered doses of BisGMA at concentrations of $1.15 E-07$ [M] and $1.46 E-06$ [M], but such concentrations do not cause cell death, in fact in both experiments is maintained and also generates a slight increase in the proliferation of FB-H, both 24-hour exposure and 96 hours.

Conclusion:

Concentrations lower than $1.46 E-06$ [M] of BisGMA, not produce cell death, but concentrations between $1.46 E-06$ [M] and $1.15 E-07$ [M] generated vacuolation within the cytoplasm of the fibroblast, which can be generated by the increase of oxygen free radicals by including nanospheres BisGMA.

Keywords:

BisGMA, HPLC, Human fibroblast, dental resins. ([MeSH] Terms).



Physical Factors at the Directed Tissue Regeneration in Periodontal Disease Treatment.

**Yana Sadykova
(Kazakhstan)**

Co-author: Prof.Dr. Serik Zholdybaev

Coordinator: Prof. Dr. Saule Esembayeva

Introduction:

The solution of such tasks as stabilization of destructive process in an alveolar bone and activation of osteogenesis processes, can't be carried out without an integrated approach to treatment of inflammatory and destructive processes. Inclusion of surgical methods of treatment allows to reach significant improvement of a structural and functional condition of parodontium fabrics. These literatures and results of own clinical researches show that, despite the considerable success connected with use of the latest transplant materials, modern barrier membranes and techniques of the directed tissue regeneration without the combined application of physical factors in complex therapy of parodontium diseases, resistant results of treatment isn't observed.

Objectives of the investigation:

Research objective was improvement of complex treatment of patients by a generalized periodontal disease on the basis of new conceptual approach with use of radiation of the high-energy laser, cavitation energy and a method of the directed tissue regeneration.

Tasks:

1. To develop a method of the combined treatment of a periodontal disease with scientific and technological revolution use with application of physical factors

2. To estimate efficiency of a method of the combined treatment of a periodontal disease with scientific and technological revolution use with application of physical factors

Experimental methods used:

The pilot studies the purpose of which studying possibility of energy use of laser radiation, ultrasound and a method of the directed tissue regeneration are carried out on rats. Experiments were made on adult rats weighing 160-200 gr with permission and approval of Ethical committee. Under anesthesia with observance of requirements of ethical standards periodontal disease was simulated on rats by imposing of wire ligatures with the subsequent surgical treatment in two groups. In the first group treatment was carried out by a method of the directed tissue regeneration without use of physical factors, in the second group treatment was carried out by a method of the directed tissue regeneration with use of physical factors. As the surgical tool energy of the erbium laser was used. For processing of a periodontal pocket the low-frequency ultrasound for the purpose of removal of necrotic tissues, products of disintegration and disinfecting of an operational field for the subsequent imposing of a transplant material and a barrier membrane was used.

Essential results including data, and eventual statistics:

Results of research showed process of healing and recovery of experimental animals at application of a method of the directed tissue regeneration averaged 21-26 days, thus the general condition of the animals, a full epithelization of gum tissue, lack of signs of rejection and periodontal disease clinic were considered as criteria of an assessment of treatment. In the second group where application of the

directed tissue regeneration was carried out with use of physical factors (the erbium laser and low-frequency ultrasound) allowed to reduce treatment terms considerably. So data of objective researches showed that terms of recovery were observed for 16–19 days. Periodontal disease signs disappeared, mobility of tooth considerably decreased, the tendency of increase in the sizes of an alveolar shoot was noted. Permanent remission was noted at 87% of animals whereas in control group I made 72%. Studying of morphological data testified that in group of animals where the combined method of treatment an intergration of bone tissue was used occurs much quicker without formation of boundary leukocyte aggression. With partial restoration of tissue of a periodontium without accurate differentiate.

Conclusion:

To improve the results of treatment of a periodontal disease the method of use of the directed tissue regeneration and physical factors are offered. This method showed that there is a considerable improvement of results of treatment, rehabilitation terms are reduced, treatment terms with increase by 1,4 times of favorable outcomes decrease.

Keywords:

Experiment, laboratory animals, the erbium laser, the low-frequency ultrasound, the directed tissue regeneration.



Do Anti-Streptococcus mutans and Streptococcus subrinus Immunoglobulins of Egg Yolk Have Any Inhibitory Effect on the Growth and Adherence of These Bacteria?

**Leyli Sadri
(Iran)**

Co-authors:

Rasool Salehi
Sara Kamali
Sorush Sadri

Introduction:

The egg yolk contains antibodies transported from the blood of the hen into the yolk in order to give immunity to the chick. It can be utilized in order to attain antibodies against Streptococcus mutans, which is the main etiologic agent of dental caries in humans. Streptococcus subrinus is another strain which can be found in dental plaques and initiate the formation of dental caries.

Objectives of the investigation:

The present study aimed to determine the effectiveness of antibodies (IgY) extracted from egg yolk in preventing the growth and adherence of S.mutans and S.subrinus in culture media.

Experimental methods used:

The antibodies were derived from egg yolks obtained from hens immunized with surface antigens of S. mutans and S. subrinus grown in TSA, TSB, BHIB, BHIA medium. Growth and adherence of S.mutans and S.subrinus in culture media were assessed by measuring the optical density (OD) and compared to the control

group which was not treated with antibodies. Data were analyzed using T-test and ANOVA by SPSS software.

Essential results including data, and eventual statistics:

IgY inhibited S. mutans and S. subrinus adherence comparing to the control group.

Mean OD value of S.subrinus in presence of Ab=0.261

Mean OD value of S.subrinus in absence of Ab=1.237

Mean OD value of S.mutans in presence of Ab=0.227

Mean OD value of S.mutans in absence of Ab=1.726

IgY also reduced the growth of S. mutans and S. subrinus. These differences in count and adherence of bacteria between two groups were both statistically significant ($p < 0.05$).

Conclusion:

Our results suggest that the effectiveness of IgY against S. mutans and S.subrinus is an efficient method to inhibit the colonization of these bacteria in the culture media. It means that it also may have potential inhibiting effects on these strains in the oral cavity of humans.

Keywords:

Immunoglobulin Y, Streptococcus mutans, Streptococcus subrinus

An in-vitro Comparison of Effect of Two Different Design of Non Metal Post, Single Taper and Double Taper on Fracture Resistance of Dental Root.

Mona Norozy
(Iran)

Co-author: Dr zafar mahdavi izadi

Introduction:

Very little is known about the resistance to fracture of endodontically treated teeth restored with different design of esthetic post systems.

Objectives of the investigation:

The aim of this in vitro study was to compare the fracture resistance and failure mode of endodontically treated teeth restored with two different types of quartz fiber post.

Experimental methods used:

Twenty extracted mandibular premolars with similar size were chosen and randomly divided into 2 groups (n=10). After cutting the crowns and endodontic therapy, the teeth restored with a quartz fiber single taper light-post or quartz fiber D.T light-post in group B and A, respectively. All posts were cemented with dual cure cement. Composite resin cores were built up using a performed polyester matrix. Specimens were embedded in an acrylic resin block with a layer of elastic

polyether Impergum around roots as PDL. Compressive load was applied at 135 angle to the long axis of the tooth at a crosshead speed of 1mm/min until fracture accrued. T-test was used to determine the significance of the failure load values between the two groups.

Essential results including data, and eventual statistics:

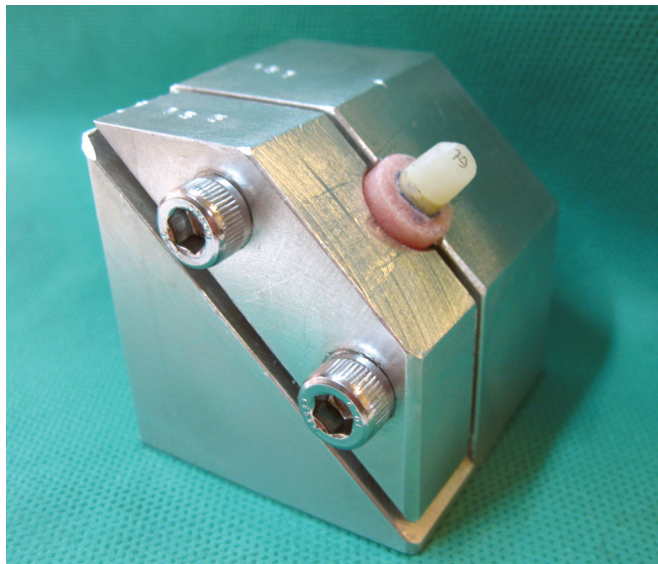
There was no significant statistical difference in fracture resistance among two groups. The mean fracture load in groups A and B were $366.7 \pm 102.75N$ and $382.4 \pm 67.33N$, respectively. ($P > 0/05$).

Conclusion:

According to the findings, two different designs of quartz fiber posts did not influence the fracture resistance of endodontically treated teeth.

Keywords:

Single taper quartz fiber post, D.T quartz fiber post, Fracture resistance.



Abstracts of the poster session:

Study of the Efficiency of Re-mineralizing Gel by Scanning Electron Microscopy

**Anton I. Aleksandrov
(Russia)**

Co-authors: Elena A. Gritsenko
Coordinator: Dmitry Ye. Suetenkov

Introduction:

Remineralization in orthodontics

Objectives of the investigation:

Evaluation of the efficiency of the remineralizing gel in dynamics, against the background of forthcoming phase of orthodontic treatment.

Experimental methods used:

We used a remineralizing agent that is customly used in homes, that consists of a combination of calcium glycerophosphate, xylitol and magnesium chloride. The study was performed on the patient's teeth with crowding of the teeth. 12 premolars with etched and intact sectors of the enamel were removed before using the gel, after a week of application, two and three weeks after the remineralizing therapy. The basic method is analyzing the morphology and elemental composition of the enamel SEM with energy dispersive microanalysis. We expanded the research areas to 50, 100 and 500 nm.

Essential results including data, and even-tual statistics:

After the second week, we observed a surface roughness decreasing, a shrinkage of microscopic spaces, an accumulation of the mineral

component and the restoration of the surface layer of enamel prisms.

Positive changes were detected in the mineral composition of hard tissues. According to the study, the value of the Ca / P ratio was 3.4 for etched sectors of enamel; 2.3 for intact sectors. After 4 weeks of remineralizing therapy the value of the ratio of molar concentrations of Ca and P (Ca/P) was 1.7, which is optimum for dental hard tissues composition.

Conclusion:

The effect of remineralizing gel observed for 4 weeks. The accumulation of macronutrients enamel can contribute to the reduction of the risk of caries in orthodontic patients with performing professional oral hygiene and local application of fluoride.

Keywords:

Remineralizing therapy, SEM

An in Vitro Assessment of the Erosive Effects of Turkish Wines on Human Teeth

**Dilara Şeyma Alpkılıç
(Turkey)**

Co-authors: Dr. Şule Can TROŞALA
Coordinator: Prof. Dr. Yegane GÜVEN

Introduction:

An irreversible loss of dental hard tissues due to some acids without the activity of microorganisms may be named as erosion. Alcoholic soft drinks have become increasingly popular and have high concentrations of acids and alcohol so might have the potential to cause dental erosion.

Objectives of the investigation:

This study aimed to investigate the erosive potential of some Turkish wines on human teeth in vitro.

Experimental methods used:

In this study two red (Öküzgözü, Boğazkere) and two white (Sultaniye, Narince) wines were used as to investigate their erosive effects. Initially, the pH and the titrable acidity of the wines were measured. Many unerupted 3rd molars were gathered, prepared and sectioned as slabs. Each slab was covered with a nail varnish, leaving an exposed window (R:3 mm). Then the slabs were arranged in 6 groups. Each group included 5 slabs and they were exposed to wine sample for 5 seconds, artificial saliva for 5 seconds. This procedure has been repeated for 10 times for each slab with each wine separately. Mineral loss was calculated and the results were analyzed statistically. One sample was examined in a SEM.

Essential results including data, and eventual statistics:

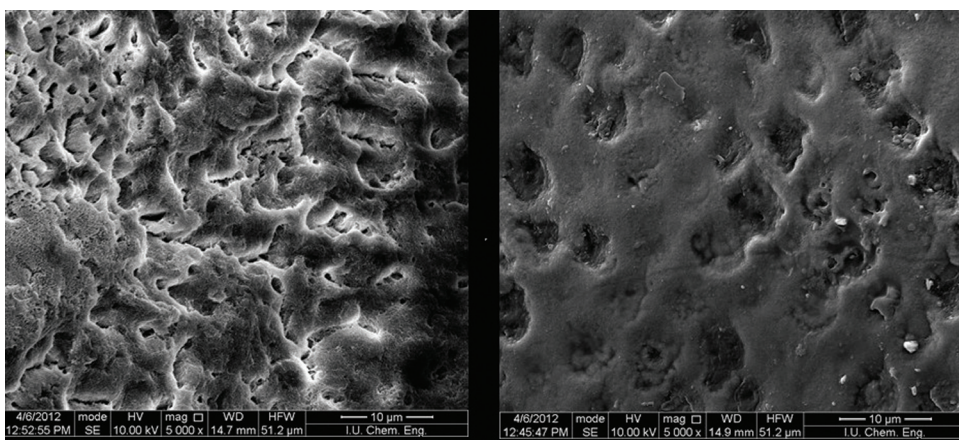
The pH of the wines ranged from 3.20 to 3,79 and the titrable acidity ranged from 0,57 to 0,84 mM. The amount of mineral loss following procedures ranged from $0,15 \pm 0,033$ to $0,07 \pm 0,004 \mu\text{g}$ In comparison, the citric acid control had a pH of 2,55 titrable acidity of 0,3 and removed $0,39 \pm 0,008 \mu\text{g}$ of enamel. Relationships between lesion depths and chemical properties were statistically significant ($P < 0.05$).

Conclusion:

All the acidic beverages including wines, are potential risk factors of dental erosion. Therefore, dentists should be alert because of the increasing consumption of wine among the public and should use every opportunity to educate patients about the risks of alcohol use.

Keywords:

Enamel wear, wine, alcohol, erosion.



Azithromycin 0.5% Gel as an Adjunct to Non-Surgical Treatment of Chronic Adult Periodontitis. A Clinical, Microbiological and Immunological Study.

Soulafa Mohamed Belal (Egypt)

Co-authors:

Dr. Omaila Mohamed Helmy Afify
Dr. Enas Arafa El-Zamarany
Dr. Shereen Abdel Moula Ali

Coordinator:

Dr. Omaila Mohamed Helmy Afify

Introduction:

Conventional non-surgical periodontal therapy has been proven to be an effective treatment for patients with chronic periodontitis. Local administration of antimicrobials provides a high concentration of the drug in the pocket and enhances the clinical results without any systemic side effects and bacterial resistance. Azithromycin (AZM) is a semisynthetic; acid-stable antibiotic, has unique characteristics that support its use as adjunct to conventional therapy in treatment of chronic periodontitis

Objectives of the investigation:

The aim of this study was to determine in vivo the effect of 0.5% AZM gel clinically, microbiologically and immunologically in the treatment of moderate to severe chronic periodontitis.

Experimental methods used:

Twenty one patients with moderate to severe chronic periodontitis were randomly selected and divided into three groups, seven patients in each group. Group I received SRP + placebo gel "methyl cellulose", group II received SRP + 0.5%

AZM gel, and group III received SRP + 0.5% AZM gel twice applications. Plaque index (PI), bleeding on probing (BOP), probing pocket depth (PPD), and clinical attachment level (CAL) were recorded. Subgingival plaque samples were collected and analyzed using BANA test for identifying red complex bacteria. GCF samples were collected and analyzed using ELISA test for quantitative measurements of monocytes chemotactic protein-1 (MCP-1) as a marker of severity of inflammation. Clinical parameters, bacteriologic evaluation and immunologic measure were evaluated at baseline, 1, 3 and 6 months evaluation periods.

Essential results including data, and eventual statistics:

The clinical results showed significant improvement in most evaluation periods. At one month, comparing group I to group II, group I to group III, and group II to group III, there were significant reductions in the mean values of PI, PPD and CAL ($P < 0.05$), but for BOP score there was a significant reduction when comparing group I to group II and group I to group III ($P < 0.05$), but a non significant reduction was found when comparing group II to group III at that evaluation period ($P > 0.05$). At three months evaluation period, comparing group I to group II and group I to group III results showed significant reduction in the mean values of BOP, PPD and CAL ($P < 0.05$), while a non significant reduction was observed when comparing group II to group III for the same parameters ($P > 0.05$). For PI at three months, there was a significant reduction of its mean values when comparing group I to group III and group II with group III ($P < 0.05$), while a non significant result was obtained when comparing group I to group II ($P > 0.05$). At six months evaluation period, for PPD and CAL results there were no changes when comparing group I to group II and group

II to group III (0 change), while comparing group I with group III give a significant reduction in those parameters mean values ($P < 0.05$). For BOP, there was a significant reduction comparing the three groups to each other at that period ($P < 0.05$), while the PI results showed a significant reduction comparing group I to group II and group II to group III, while become non significant when comparing group I to group II. The bacteriological results showed significant decrease in all the three treated groups ($P < 0.05$), with no significant reduction between group II and group III at 1 month and 3 months ($P > 0.05$), which become significant at 6 months ($P < 0.05$). However, there was a significant decrease between group II and group I and group III and group I at all the follow up periods (1, 3, and 6 months). MCP-1 concentration was reduced in all treated group, but the reduction was statistically significant at 3 and 6 months when comparing group I and group II ($P < 0.05$). Also significant reduction was detected

comparing group I with group III at 1, 3, and 6 months, but when comparing group II versus group III, the significant reduction was at 1 and 6 months follow up periods, while a non-significant reduction was detected at 3 months ($P > 0.05$).

Conclusion:

Adjunctive topical subgingival application of a biodegradable 0.5% AZM gel to conventional mechanical therapy produce improvement in clinical, bacteriological and immunological parameters over the traditional treatment alone. Also, serial application of AZM gel is recommended to ensure extended effect of the therapy.

Keywords:

Azithromycin (AZM), chronic periodontitis, scaling and root planing (SRP), monocyte chemotactic protein-1 (MCP-1).



The Effect of Water Wash and Immersion Disinfection Procedures on Microbial Load of Alginate and Silicone Dental Impressions

**Inês Correia
(Portugal)**

Co-authors:

Ana Assis, Diogo Ribeiro, Raquel Gonçalves,
Ana Portela, Mário Vasconcelos

Coordinator:

Benedita Sampaio-Maia

Introduction:

The control of cross-infection is an imperative issue when dealing with dental impression materials in Dentistry. Dental impressions that have been exposed to infected saliva and blood provide a significant source of cross-infection. Infectious microorganisms from the oral cavity can survive on the impression surface and be transferred to the stone casts. Handling of both impressions and stone casts can potentially transmit infectious diseases to dental staff and technicians. Although American and Australian Dental Associations' as well as CDC' guidelines for disinfection of dental impressions have undergone considerable changes over the years, no universally agreed disinfection protocol has yet been recognized. Moreover, published work from all over the world claim that the majority of professionals who work in dental offices and prosthetic laboratories do not follow the published recommendations. Also, almost half of laboratories inquired by Jagger et al in 1995 claim that had inadequate instructions regarding to disinfection techniques. So, the lack or inadequate procedures for the control of dental impressions' cross-infection is currently a real problem.

Objectives of the investigation:

The aims of the present study consisted in evaluating the effect of water washing and of 1% and 5.25% sodium hypochlorite, 2% glutaraldehyde and the commercial disinfectant MD520 containing 0,5% glutaraldehyde on the reduction of the microbial load of alginate and addition-reaction silicone (Virtual 380, Ivoclar Vivadent) after mouth contact.

Experimental methods used:

Fourteen students, 3 men and 11 women, from the 5th year of Bachelor plus Master degree of Faculty of Dental Medicine of Porto University voluntarily participated in the present study. Inclusion criteria were absence of systemic or salivary gland pathology, age between 22 and 25 years as well as participants with DMFT (decayed, missing and filled teeth) index ≤ 5 (after a clinical examination). The medical and dental histories were collected in order to characterize the population. For each patient, one alginate (Vival NF, Ivoclar Vivadent) impression and one addition-reaction silicone (Virtual 380, Ivoclar Vivadent) impression were performed in different days at the mandibular arch, under aseptic conditions and using sterilized materials. An impression was made simultaneously using artificial sterilized teeth (Frasaco) in order to evaluate the microbial load of alginate (Vival NF, Ivoclar Vivadent) and addition-reaction silicone (Virtual 380, Ivoclar Vivadent) previous to mouth contact. The first and second right and left molars were the selected impression area to study. These selected teeth were divided in 3 parts and each sample was constituted by a pull of one third of each semi-arch in order to minimize the difference of microbial colonization between sides. Each pull was submitted to one of the following treatments: sample was left untreated, without any disinfection methodology; sample was washed with tap water dur-

ing 30 s; sample was disinfected by immersion in 1% of sodium hypochlorite during 10 min; sample was disinfected by immersion in 5,25% of sodium hypochlorite during 10 min; sample was disinfected by immersion in 2% glutaraldehyde; sample was disinfected by immersion in MD520 (MD 520, Durr, Bietigheim Bissingen, Germany) during 5 min. Following the exposure to treatment regimes, the impressions were placed in 3ml of 0.9% NaCl and vortexed 5sec for 3 times for microorganisms release. The total aerobic microorganisms were determined by smearing in Brain Heart infusion (BHI) agar and incubated at 37°C for 3 days. The colonies were counted and the results expressed as colony-forming units per milliliter (CFU/ml).

Essential results including data, and eventual statistics:

The statistical analysis was performed using Microsoft Excel. As expected, alginate and silicone without mouth, water or disinfectant contact, presented very low microbial load, 1.50 ± 1.29 CFU/ml and 0.60 ± 0.89 CFU/ml, respectively. After mouth contact, alginate and silicone microbial load increased significantly to $1.5E+05$ and $5.47E+03$, respectively. Of notice, that after mouth contact, the microbial load of alginate was significantly higher than silicone ($p=0.005$). Afterwards, the tap water washing reduced the microbial load by 1,60% in alginate and by 14,7% in silicone. The immersion disinfection procedures decreased the microbial load of either alginate or silicone by more than

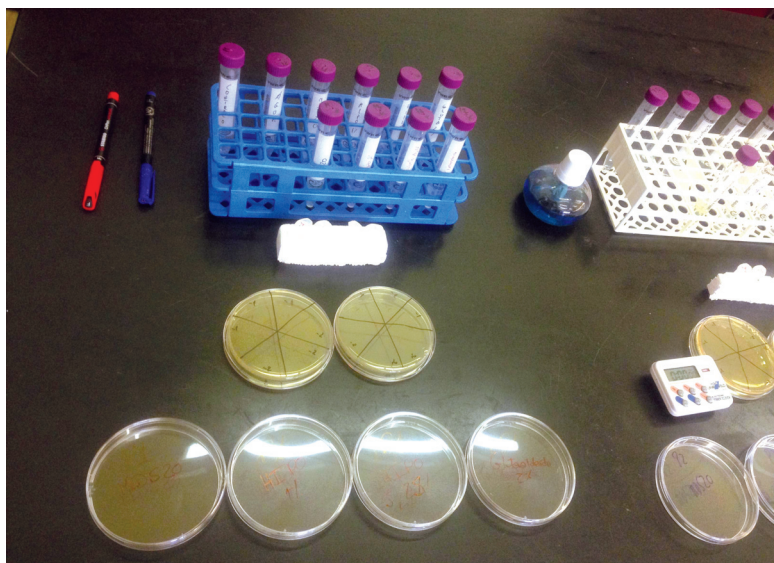
99,99% irrespective of the disinfectant used.

Conclusion:

Dental impression materials can act as a transmission vehicle for oral microorganisms. Alginate appears to absorb more microorganisms than silicone. Dental impression water wash alone is insufficient for reducing the risk of cross-infection. However, the immersion of dental impressions in sodium hypochlorite (1% or 5,25%), glutaraldehyde or MD520 is effective in reducing significantly the microbial load, so the immersion disinfection procedure should be mandatory.

Keywords:

Disinfection; alginate; silicone; sodium hypochlorite; glutaraldehyde; water.



Carbon Dioxide (CO₂) Laser Treatment of Ankyloglossia: A Case Report

**Sara Ehsani
(USA)**

Co-authors: Sara Ghadimi

Introduction:

Ankyloglossia or tongue-tie is caused by short, thick or tight lingual frenum and limits tongue's mobility. Previously, conventional frenectomy with scalpel and sutures was the only way to remove the abnormal frenum. Recently, laser surgery has been introduced as an alternative for conventional frenectomies and various studies showed the ability of carbon dioxide (CO₂) laser for conservative management of oral diseases. Using CO₂ laser offers some advantages over conventional methods, such as less post-operative pain, swelling and infection, decrease in risk of metastasis and edema, and less bleeding.

Objectives of the investigation:

The objective of this study was to use the conservative, bloodless, and more convenient removal method of CO₂ Laser surgery for treatment of Ankyloglossia.

Experimental methods used:

A 13 years old boy having lingual frenum with the complaint of limited mobility of tongue and speech problems was referred to the laser department of Tehran University of Medical Sciences Dental School. For his treatment, CO₂ laser was used with the following parameters: 10600 nm wavelength, 1.5W output power, 100Hz frequency and 400 μsec pulse duration in non-contact mode. Complete dissection was performed by separating the fibers. Neither su-

tures after excision, nor wound dressing were applied.

Essential results including data, and eventual statistics:

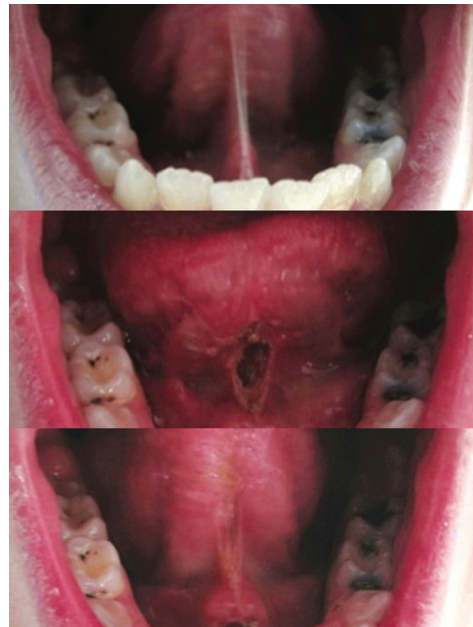
The outcome of using CO₂ laser was dry and bloodless field during operation, no post-operative swelling, no pain or discomfort, with normal healing process.

Conclusion:

We recommend the use of CO₂ laser for soft tissue surgery due to elimination of suture, convenient coagulation, less consumed time, patients' comfort and easy manipulation.

Keywords:

Ankyloglossia, CO₂ Laser, Laser Surgery.



Endodontic complications of crowned teeth, clinical and radiological investigation on 30 patients.

**Grati Manel
(Tunisia)**

Co-authors:

Hadyaoui Delenda, Guesmi Imene,
Khiari Amina, Saafi Jilani, Cherif Mounir

Coordinator: Cherif Mounir

Introduction:

The success of a fixed prosthesis is only achieved if the restoration is stable in the time without causing any complications.

Our work is about a retrospective study conducted on patients consulting in an emergency at the dental clinic of Monastir.

Objectives of the investigation:

The aim of this study is to diagnose symptomatic endodontic complication that need an emergency treatment, to determine their etiology and frequency, to correlate post prosthetic complication with the initial state and to determine anchorage type impact on its

longevity.

Experimental methods used:

In a practical way, we proceeded by performing:

- A clinical examination of a total population of 30 patients.
- A radiological exam of the crowned teeth.
- A survey form including general considerations, chief complaint, clinical and radiological aspects.

Essential results including data, and eventual statistics:

The descriptive study allowed the repartition of the sample according to chief complaint, prosthesis longevity, quality of endodontic treatment, bone loss and periodontal disease of the crowned teeth. 100% of the vital teeth presented badly-adapted prostheses. Regarding the teeth endodontically treated, we noted a failure rate of 81%. As for the analytic study, it allowed to identify the factors responsible for the prosthetic failure. The results obtained were compared to those found in the literature.

Conclusion:

Endodontic complications of crowned teeth mean a prosthetic failure and are a clinical evidence in our everyday practice. Thus a detailed study leading to a precise diagnosis helps to define etiological factors and thus concluding



several prevention rules to avoid biological failures of crowned teeth.

Keywords:

Endodontic complications – prostheses longevity – failure – crowned teeth.

Three Dimensional Study of Application of Biodentine and MTA+ on Dentin by X-ray Microtomography

**Ewelina Mielko
(Poland)**

Coordinator:

Prof. Renata Chalas MD, PhD

Introduction:

Looking into teeth using non-destructively method makes the research non-invasive and repeatable. X-ray microtomography is a technique to characterize material microstructure in three dimensions at a micron level spatial resolution without interference with the sample. The reaction between two materials Biodentine™ (Septodont) or MTA+ pro (Cerkamed) and human hard tissue - dentin is a very good match to check this method abilities and its suitability. Biomineralization caused by these materials is based on odontotropic features causing formation of tertiary dentin and dentin bridges. This is the reason why they are recommended to direct and indirect capping, perforation, apexification, resorption, pulp exposures and retrograde root filling.

Objectives of the investigation:

The aim of the present study was to show the

three dimensional effect in the investigation of two potential materials as Biodentine and MTA+ on the human dentin. The purpose was also to check penetration abilities of both materials.

Experimental methods used:

Standardized class 1 cavities according to Black were made in human extracted teeth and filled with MTA+ or Biodentine. The dentin microstructure and interface between bioactive materials Biodentine or MTA+ was processed and analyzed by X-ray microtomography VI Tomax M (General Electric-Measurement&Control Solutions). The obtained pictures were assessed and discussed.

Essential results including data, and eventual statistics:

On the basis of the performed experiment it was noticed that all empty spaces in cavities were filled by both materials. The used method provided the selective visualization of the material, dentin and enamel. Three dimension models of the filling allowed to check adherence of applied materials to the tissues. Additionally, with the great precision of the method it was detected all spots of deeper penetration of materials into the bottom of the cavity.

Conclusions:

Demonstrated abilities confirm that X-ray microtomography is a suitable and powerful tool to investigate dental tooth structure and mineral dynamic process after application of bioactive materials. Created three dimensional images can showed complexity of the dentine in a contact with used materials.

Keywords:

X-ray Microtomography, Biodentine, MTA+, Dentin

Effectiveness Evaluation of a Galenical Oral Paste in Treatment of Recurrent Aphthous Stomatitis

**Niloofar Moharrami
(Iran)**

Co-authors: Mohammad Moharrami
Coordinator: Maryam Yazdizade

Introduction:

Recurrent aphthous stomatitis, or RAS, is a common oral disorder of uncertain etiopathogenesis for which symptomatic therapy only is available.

Objectives of the investigation:

This study aimed to evaluate the efficacy of a galenical oral paste in the treatment of RAS.

Experimental methods used:

The study was a randomized, double-blind, controlled before-after clinical trial. Forty-six patients with RAS randomly participated in this study. The subjects were treated with Iralux (the galenical oral paste) and lidocaine gel in two groups. The paste was applied by subjects themselves three times a day-30 minutes after the meal. Three parameters (size change, pain scale, and healing time) were recorded before, and then 10 min, 8 hours, 2days and 4 days after the treatment.

Essential results including data, and eventual statistics:

There were no statistically significant differences in all the three parameters between the two groups ($p > 0.05$), and No side effects were reported.

Conclusion:

This study has shown that Iralux to be effective in the same way as lidocaine gel in treatment of RAS.

Keywords:

Recurrent aphthous stomatitis, Iralux.

Patient's Consciousness of Dental Treatment in Clinic of Restorative Dentistry

**Sevde Şirikci
(Turkey)**

Co-authors:

Zeynep Afra Akbiyık, Dt. Işıl Karaduman,
Prof. Dr. Ahmet Dirican

Coordinator: Prof. Dr. Can Dörter

Introduction:

In order to eliminate the problems regarding health the important thing is the communication between the doctor and the patient. Accordingly, it is important to inform patients about the treatment type, procedure, post treatment affects, and patients should be aware of their treatments.

Objectives of the investigation:

A survey has been prepared out which aims to investigate the awareness and information about the treatment procedure, which have been received and will be receiving by the patients in Istanbul University Dental Faculty Restorative Treatment Department.

Experimental methods used:

100 participants randomly selected from patients of Clinic of Restorative Dentistry. This study is a survey that includes 100 questions about pre and post treatment procedure. The questions are categorized under titles such as pre-, during-, post- treatment applications; general oral health self check-up, attitudes of hospital and communicational problems with dentist. Pre test and Post test data are statistically analyzed by Chi Square Test, using SPSS Software.

Essential results including data, and eventual statistics:

According to the analysis of the age, education level, frequency of brushing teeth and visiting dentist; the results are concluded that the awareness level of patient is statistically significant ($p < 0.05$).

Conclusion:

In the comparison of pre and post treatment term; 16% of the patients who did not aware of their treatment before procedure gained information during the treatment process ($p < 0.05$).

Keywords:

Patient Awareness, Patient Consciousness, Dentist-Patient Communication.



Remember
Together
is better