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WEDGE TECHNIQUE; A NEW METHOD FOR 3-DIMENTIONAL BONE AUGMENTATION

Fares Kablan

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Introduction:

Recently we notice an increase in patient's number with different degrees of atrophic jaws who contact oral surgeons seeking rehabilitation with dental implants, so the need for bone augmentation is increasing. Several bone grafting techniques and materials are used, but consistent results are difficult to achieve. In our report we present a new method "Wedge technique" for 3-dimentional ridge augmentation .

Methods:

22 patients (31 regions), 6 at maxilla, 25 at mandible were treated by this technique during the last year (sep 2008-feb 2010) Retromolar area is the gold standard as donor site. After preparation of the graft block and recipient site, through our technique; splitting of the block into wedges and making grooves at the recipient site and by inserting the wedges into the grooves we create multiple compartments witch filled with allogenuous bone, and cover with resorpable membrane The bone wedges enhance space maintenance and membrane tinting .After 3-4 month we insert implants.

Results:

the recovery time, morbidity, costs and complications were all favorable in all of our patients both at the donor and recipient sites. The success rate was 95%, in two patients the graft was partially exposed and treated with shaving and rounded the exposed wedges and oral hygiene maintenance, but the augmentations were saved. In one case we lost the majority of the graft volume .At 25 sites the patients had successfully underwent implants insertion with good lengths and diameters, at this stage the wedges were submerged into the allogenic bone, 5 sites still at the recall period, and have favorable healing. The bone gain average was 3-7 mm vertically and 3-10 mm horizontally.

Conclusions:

With wedge technique we can augment large areas of atrophic jaws with small autogenic graft. The bone volume that achieved was satisfied, especially that the majority of our augmented areas were at 3-dimentional posterior mandibular defects. The bone volume with lateral augmentations was more satisfying.

ANTIINFECTIVE DRUG ADVERSE REACTIONS IN ORAL CAVITY

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Objectives.

Adverse reactions of anti-infective drugs on oral cavity are an ample group of adverse effects sub estimate and unreported in medical practice. There are adverse reactions which may occur after the use of antibacterial chemotherapy, antifungal or antiretroviral therapy of some affections of the stomatognatic area and adverse reactions which may occur on oral cavity after the use of anti-infective chemotherapies for affections located in other regions of the human body. The most frequent reactions to antibacterial medication are the changes in teeth coloration after the administration of tetracycline, changes in taste (metallic taste) after metronidazole administration.

Methods.

We surveyed the incidence of adverse reactions in HIV infected patients aged between 1-18 years, both sexes, treated with antiretroviral chemotherapy. The patients received the next chemotherapeutical protocol: indinavir [idv]+

nevirapine[nvp]; indinavir [idv]+efavirenz [efv]; nevirapine [nvp]+ nelfinavir [nfv].

Results.

The most frequent adverse reactions on oral cavity were: oropharyngeal candidosis (67%), candidosis stomatitis (12%), vesiculous enantem with eritematous base (5%), lesions of necrosant stomatitis (3%), erosions of the gingiva and of the lower lip (2%), and ulcerations of the jugal mucosa and of the tip of the tongue (2%).

Conclusion.

The oral cavity tissues have the particularities that are concomitant in contact with blood, saliva, water and aliments. Adverse reactions can be influenced by drug's structure, the genetic structure of the patient and, also exists a great number of factors which can influence these adverse reactions. We consider that the examination of the patient's oral cavity and the correct report of the adverse reactions from this level are absolutely necessary.

DENTAL INFECTION AND DRUG ALLERGY

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OBJECTIVE:

Infection produces immune responses of humoral and cell type. If humoral response, the action of antibodies will result in the elimination of microbial antigens by activating the complement cascade, by activating fractions C3 and C4 and by immune complexes, equally removed by phagocytosis. If cellular mediation response, the immune system is expressed by inflammatory response and the cytotoxic response (CD4 LT and CD8 LT and LT-NK cells - natural killer). Dental infection favors drug allergies in two ways: by creating a layer of sensitization and by repeated drug treatments (antibiotics, NSAIDs and local anesthetics). Normal response to drugs is tolerogen-type, mediated by regulating-LT cells (suppressor). The breaking of tolerance and expansion of LT and LB effector cells will lead to clinical manifestations of the immediate and delayed sensitization. Sensitization conditions are hereditary and personal allergic

background, infection and repeated drug administration.

METHOD:

We studied a total of 96 persons who have presented to Allergology Cabinet for clinical manifestations of drug sensitization, following dental infection treatment. Age of people was between 21 and 66 years old, of both sexes.

RESULTS:

Sensitizing medicines were NSAIDs, antibiotics and local anesthetics. 80% of people had hereditary and personal allergic background. Various clinical manifestations were: skin, respiratory, cardiovascular. Repeated consumption of drugs has been detained.

CONCLUSIONS:

Dental infection, allergic background and repeated drug use are contributing factors in drug sensitization.

Keywords: dental infection, medications, allergies.

HOMODONT MORPHOLOGICAL CHARACTERISTICS OF TEETH WITH CLASS OSTEICHTHYES

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Piceus is a fish of the genus Mylopharyngodon, order Cypriniformes distributed by the Amur River in the north to southern China. Relatively fast growing species, reaching a length of 120 cm and weight about 30 kg. His body is moderately long, tightly covered with large scales. Riceus diet consists mainly of molluscs (mussels), which destroys the

shells of a massive swallowing teeth "pharyngeal" - located on the gill arch with a lack of well developed roots and chewing surfaces enkzemplari adults. The aim of the study was monitored at Phylogenetic development of dental apparatus. We present macroscopic and radiographic images of the "teeth" of Piceus.

RARE CASE OF MULTIPLE IMPACTED TEETH IN THE MANDIBLE- CASE REPORT

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Purpose:

While impaction of tooth is widespread, multiple impacted teeth by itself a rare condition. Usually multiple impacted teeth may be related to syndromes. The aim of this science report is to show a rare case of multiple impacted teeth at adult patient and our propose clinical approach.

Materials and methods:

The clinical case is showed from adult man /64-year old/ with multiple impacted teeth (6 impacted teeth in the anterior place on the mandible) were not suggestive of any syndrome or metabolic disorder. The extraction of the impacted teeth is made on two stage with piezosurgery unit under local anaesthesia. For prevention of postsurgical complications, as a swelling and prevention of postsurgical

atrophy were used coneshapes from pressure xeno collagen.

Result and conclusion:

The incidence of multiple retained teeth by literature research range from 10.9% to 40.4%, most frequently is the retention of the third molars. In the literature most rarely

have clinical reports about multiple retained teeth which differ from third molars at adult patients. The rare clinical case we showed is very demonstrative and the medicative approach which we used gave excellent result.

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HOLTER MONITORING IN PATIENTS WITH CARDIOVASCULAR DISEASES IN ORAL SURGERY

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INTRODUCTION:

Pain control and anxiety is an important part in the contemporary dental treatment. A variety of local anesthetics and techniques for local anesthesia are widely explored, whereas the issue for the choice of anesthetic with cardiovascular compromised patients is still disputable.

The choice of anesthetic and its dosage must be procised for good pain control as well as the possible side effects mainly revealing with compromised patients.

METHODS:

The aim of this study is to ascertain the effect of vasoconstrictors in the contemporary local anesthetics on patients with cardiovascular diseases.

As preparation for this study is used a cross-section of patients with commonly seen cardiovascular diseases, daily visiting the General dental practitioner:

Heart failure (after 6th month); Ischaemic heart disease, including Mild Angina pectoris.

Articaine is used as local anesthetic.

RESULTS:

As a prognostic mark for eventual myocardial ischemia ST-segment on the ECG is traced as well as the effect of local anesthesia.

CONCLUSION:

From this research is seen that pain control with cardiovascular compromised patients, in the field of oral surgery, must be performed after throughout analysis of the corresponding condition and current status of the patient. Further investigation i.e. hematological must be obtained to enable a sound treatment plan.

Key words: cardiovascular diseases, Holter, vasoconstrictors;

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FIBROUS DYSPLASIA IN THE MAXILLO-MANDIBULAR REGION

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INTRODUCTION:

Fibrous dysplasia is a non-neoplastic, progressive bone tissue disease of unknown etiology, uncertain pathogenesis and variable histopathology. Fibrous dysplasia is a congenital, metabolic, nonhereditary disorder, which involves one or more bones together associated with skin pigmentation or endocrine abnormalities. Fibrous dysplasia represents 2.5% of all bone tumors and more than 7% of all non-malignant tumors of bone. The cranial or facial bones are involved in approximately 1 / 3 of patients with fibrous dysplasia. The polyostotic form involves many bones of the skeleton, and is usually unilateral. The average age of patients with fibrous dysplasia is 25.8 years (from 5-67), 46.7 percent of which are men.

CASE REPORT:

The present article describes a rare case of 27-year-old man with bilateral fibrous dysplasia of upper and lower jaw. Six years ago the patient was examined due to pain in the mandible, which the patient could not locate. Bilateral vestibulooral symmetrical expansion in the maxillary tubers and the distal sections of the mandible was established upon examination. The patient is with idiopathic skin disease and debility. OPGT was done, and a diffuse radiolucency of the distal parts of both jaws was found. In the region of 36 over the mandibular canal induration about 1 cm in diameter was observed. The maxillary left sinus was overshadowed by osteoid growing tissue that covers 2 / 3 of it. A 3D scanner was performed to define bone density. 36 tooth was extracted

and a bone and soft tissue material was taken for pathohistological examination. It confirmed our preliminary diagnosis - fibrous dysplasia. Laboratory testing of serum alkaline phosphatase was made, which was elevated.

CONCLUSION:

This report presents the clinical diagnostic approach to patients with a rare disease and its follow-up.

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REVIEW AND A CASE REPORT OF ORAL LICHEN RUBER PLANUS

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OBJECTIVE

Diseases as Lichen Ruber planus may first occur in the oral cavity even to be the only manifestation of these conditions. In this relation many of these conditions may first be presented to the General dental practitioner. Adequate diagnosis and treatment is dependent on appropriate identification of oral lesions and a multitude approach is required. In this relation the enlightenment of the General dental practitioner is essential for the early treatment and prevention of complications.

CASE REPORT:

The aim of this report is to represent a case of Oral Lichen Ruber Planus and to give an account on the interdisciplinary approach of diagnosis, treatment and its further management. A 55-year-old female is presented with oral manifestations of LRP. Cutaneous findings on the flexor surfaces of the upper extremities are also presented. Medical history reveals poli-neuropathia 12 years ago with unestablished etiology. Intra oral examination revealed a chronic inflammatory disease with ovoid ulceration on the lateral margin of the tongue, white

hyperkeratotic plaques on buccal mucosa bilateral, and gingival lesions. Bimetallic examination as well as probe for Candida Albicans was made. Dermatologist confirmed the primary diagnosis.

Biopsy excision of the lesion and histological examination confirmed diagnosis. Topical corticosteroids were prescribed and the result of the local treatment is traced for over a year.

CONCLUSIONS

1. For the primary diagnosis of Oral Lichen Ruber Planus of highly importance is the interdisciplinary approach of diagnosis, treatment and further management.
2. Primary diagnosis, in cases of Lichen rubber planus with oral manifestations, is set usually by General dental practitioner .
3. Serious differential faults in the diagnosis of Lichen rubber planus can be result by the insufficient information.
4. Successful treatment and further management of this condition is highly dependent on collaboration between the dental and medical specialists.

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REHABILITATION OF SEVERELY ATROPHIC MAXILLA WITH INTRAOSSEAL DENTAL IMPLANTS- A CLINICAL CASE

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Objective:

The purpose of this presentation is to show the difficulty in prosthetization of a clinical case with a pronounced atrophy of the upper jaw and the various types and nature of restrictions imposed by the requirements of the patient.

Methods:

The clinical analysis, surgical protocol and prosthetic solution are presented in the treatment of 72 year-old woman with a pronounced atrophy of the upper jaw. OPG, standard CT of the upper jaw was used in the planning and a special surgical template was fabricated, helping us to find intraoperatively the exact locations of implants. The preliminary analysis of

the number, height and diameter of intraosseal implants helped us to find the exact prosthetic solution in this clinical case. The preparation of the implant bed was done by conical osteotomy in order to expand and condense the existing bone, which allowed us to use endosseal implants with a possible maximum size in a very limited maxillary volume and the reluctance of the patient to use other methods and surgical techniques. Conical threaded and self-tapping intraosseal implants were used, placed according to a classic two-stage methodology with a flap and a long-term functional loading after a period of four months.

Results and Conclusion:

The applied surgical and prosthetic solution allowed us to achieve a good functional and aesthetic rehabilitation in this case of severe atrophy of the upper jaw, following a number of restrictions imposed on us by the reluctance of the patient to use other surgical solutions. This shows that in the case

of severe atrophy of the upper jaw, a good clinical result can be achieved. For this reason, the use of CT, a well-planned surgical template, sufficient preparation, the maximum use of available bone volume and the choice of a good prosthetic solution is very important.

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NITRATES AND NITRITES IN ORAL CAVITY

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Summary:

Nitrates' or nitrites' presence in saliva may lead up to many positive physiological effects. Salivary nitrates possess anti-inflammatory properties on the oral cavity and the digestive tract. Patients with periodontitis have lower concentration of NO₂ in saliva than the healthy ones. In studies of the amount of salivary nitrates and nitrites, Streptococcus mutans and Lactobacillus spp., the number of caries in children is significantly reduced in patients with higher levels of salivary nitrates. Nitrites' concentration in vitro, equal to that in saliva,

provokes cytolytic and cytostatic effect on the six major pathogens in the mouth. Studies on Streptococcus mutans show that the amount of nitrite and / or the production of NO are important for the survival of S. mutans in the mouth. The growth of this microbe, a major pathogen of dental caries, is suppressed in the presence of physiological amount of nitrites in saliva.

We are looking for relation between the nitrates and different aspects of oral status.

Key words: nitrates, nitrites, saliva

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OSSEOUS AND DENTAL PROBLEMS IN PATIENTS WITH RENAL FAILURE A CASE REPORT

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Objectives:

This is a case of a 32-years old male K. P. He has an end stage renal failure and for a year and 8 months is on hemodialysis. He is a potential recipient of a kidney transplant from a living donor (his mother). He has also renal osteodystrophy, secondary hyperparathyroidism, multiple brown tumors

Methods:

The patient came to us for focal diagnostic because of the awaited transplantation. He was took full anamnesis, oral and hygienic status. Then several tests - local thermometric, pathogalvanism and vitality test - were made. We could not use the Gehlen test because of the darker complexion of the man. A new OPG was prescribed.

Results:

The patient's dental status is good - he has 2 extracted teeth, 3 fillings (1 amalgam and 2 composite fillings) and 1 caries.

The hygienic status is also satisfying - only mild gingivitis. On that account the amalgam filling is replaced due to its high corrosive value (-230 mV) and plaque control manipulation is accomplished.

Comparing two OPGs "the new one and one from August 2009" we notice that the brown tumors in the mandible continue to develop in spite of the treatment and the partial parathyroidectomy. The vitality test shows that teeth 37, 36, 35, 34, 31, 41, 44 and 45 are practically not vital, but local thermometric test does not define them as active foci.

Conclusions:

It is very hard to help patients like this. The perfect treatment plan and useful specialist's collaboration are probably not enough. And may be every effort or manipulation will bring more harm than help. And we can treat only the complications, but not prevent them already

ARE WE ALLERGIC TO OUR WORK

M. Balcheva*, Vl. Panov, A. Kisselova

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Objectives:

Dental materials and medicines possess high allergic potential. They provoke allergic reactions both in patients and dental staff. The staff is afflicted mainly with contact dermatitis (on the hands) and respiratory diseases.

The sensibilization of the dental staff begins still in the dental school. It is a well-known fact that the poly-allergy is the new cancer, so the atopic individuals and these with other allergies are expected to show higher sensitivity to our materials. Another risk group consists of students with many and different restorations - they are already influenced by the studied materials. It is also anticipated that the longer exposure will lead to higher sensibilization.

Methods:

Three groups of dental students (in their first, third and fifth year) are the target of our research. They are taken an allergic anamnesis and full dental status; the materials of their restorations are also recorded. The potential allergy to dental materials is tested with the DMS-1000 Series (Dental Materials Staff) of Chemotechnique Diagnostics. The series consists of 10 allergens "they are applied to the students" backs with IQ Ultra patch and removed 48 hours later. Reading of the test is performed when the initial irritation of the skin is faded. Results: The research still continues, so the results will be available for the congress.

VIDEONYSTAGMOGRAPHY - NEW TECHNOLOGY FOR THE FUNCTIONAL INVESTIGATION OF THE VESTIBULAR SYSTEM

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Abstract:

Videonystagmography is a new modern method for functional investigation of the vestibular system. It includes the film and record of the eye movements using camera in infrared and the results have been measured in real time by computer. The videonystagmography shows a number of advantages to the electronystagmography and none adverse events have been

noticed by the patients. This method is extremely useful to the clinician in diagnostic work and in establishing the difference of the peripheral and central lesions of the vestibular system.

Key words: videonystagmography, new technology, vestibular system

TITANIUM IMPLANTS IN DENTAL MEDICINE AND OTORINOLARINGOLOGY

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Abstract:

The titanium implants find broad application in stomatology and otorinolaringology during the last 20 years. The titanium prosthesis are characterized with high biocompatibility and biostability. The aim of the present communication was to evaluate the existing scientific evidence on the rising application of titanium and titanium alloys for the preparation of implants in dental surgery. The choice of suprastructure alloy combined with titanium for the oral cavity is still controversial and needs investigations of the electrochemical

interaction of the suprastructure/implant couples. Nowadays multifunctional coated titanium implants are widely used in this field. There exist numerous biomaterials currently used in restorative implant dentistry. Their properties can be assessed by a variety of methods such as histology, histomorphometry, scanning electron microscopy, mechanical testing, computer-quantified tissue morphology, radiography, three-dimensional finite element analysis, resonance frequency of Astra Tech TiO₂ blasted implants at second surgery, etc. Implant stability is considered as a factor influencing on the achievement of

osteointegration. The stability of titanium dioxide grit-blasted dental implants is improved with fluoride treatment during the first six months following implant placement. A special attention should be paid to antibacterial/bacteriostatic titanium, titanium nanocoating and nanopatterning as well as antimicrobial drug/titanium implant. Both early and immediately loaded implants present with a high clinical level of osteointegration as shown by the bone-titanium interface of immediately loaded and submerged titanium implants. A superior biocompatibility and osteogenic efficacy of micro-arc oxidation-treated titanium implants was experimentally proved. It was established that titanium implants with a modified SLA surface can predictably achieve successful tissue integration when loaded in full occlusion 21 days after

placement and the integration could be maintained without incident for at least 2 years of follow-up. The analysis of effects of titanium ions on the cell viability and differentiation as well as the gene expressions related to bone resorption including receptor activator of NF-kappaB ligand and osteoprotegerin in the tissues around dental implants, the osteoblast-, osteoclast-, and gingival epithelial-like cells demonstrated that these ions exerted the biological effects, both on the viabilities of osteoblast and osteoclast and on the differentiation of either the osteoblastic or osteoclastic cells, which may influence the prognosis of dental implants. Further studies would try to elucidate the benefits of titanium and its alloys in dental implant surgery.

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CLINICAL AND LABORATORY PORTRAIT OF PATIENTS WITH ORAL NEOPLASM

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Abstract:

The aim of this study was to present the clinical-laboratory picture of patients with oral carcinomas compared to healthy subjects.

The alterations of oral and dental status, the level of salivary proteins and the abuse of main oral carcinogens (alcohol and nicotine) were studied.

Key words: oral carcinoma, dental status, salivary protein

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A CASE OF ERYTHEMA EXUDATIVUM MULTIFORME - IDIOPATHIC FORM - TREATMENT PROBLEMS

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Summary:

An idiopathic form of erythema exudativum multiforme, characterized by atypical localization and lack of skin manifestation at the moment of the clinical exam, was found. It was diagnosed rather late, after two biopsies of the skin

and one of the oral lesion.

We would like to accentuate the problems of treatment of idiopathic forms and our search for new solutions.

Key words: erythema exudativum multiforme, idiopathic form, treatment problems

DIALYSIS, RENAL TRANSPLANTATION AND ORAL HEALTH - MANY-SIDED NATURE OF DENTAL FOCAL DOCTRINE

Maria Dencheva

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Abstract:

The purpose of our research is to estimate the motivation for oral health and whether the patients are well informed about fields of disturbance in maxillofacial area. 170 patients participate in the research: 59 (34,7%) in hemodialysis, 51 (30%) with renal transplant and 60% (35,3%) controls. Based upon the direct individual questionnaire, it became clear that there is a lack of bilateral motivation for support of oral health and insufficient knowledge of the patients regarding oral health prophylactics, as well as lack of understanding of

dental focal problematic. The attitude of medics and dentists towards the dental sanitation of this population of patients is not on the sufficiently high level either. In order to respond completely to the health needs of patients of the hemodialysis and renal transplant it is necessary that the dental studies in Bulgaria to be introduced within the sphere of transplantation medicine.

Keywords: hemodialysis, renal transplantation, oral health, motivation

COMPARATIVE IN VITRO STUDY OF APICALLY EXTRUDED DEBRIS AND IRRIGANT FOLLOWING USE CONVENTIONAL AND ROTARY INSTRUMENTATION TECHNIQUES

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Objectives:

Complete preparation of the root canal space is one of the most important stages in endodontic treatment. During biomechanical preparation of the root canal space, debris, irrigant, bacteria, necrotic tissue may be extruded into the periapical region leading to periapical inflammation and postoperative flare-ups. It is mandatory to look for a proper way to decrease extrusion of debris via the periapical area to reduce post-treatment problems.

Aim:

The aim of this study is to establish and compare in vitro the amount of debris and irrigant extruded apically, using conventional- "step back" technique with K-files and engine-driven technique with K3 instruments.

Methods: Twenty four extracted teeth with single canals were used. The teeth were divided into two experimental groups of 12 teeth.

Group 1 (12 teeth) - the root canals were instrumented using stainless steel K-files and "step back" technique.

Group 2 (12 teeth) - the root canal were instrumented using nickel-titanium K3 rotary instruments and "crown down" technique.

Distilled water was used as an irrigant.

Debris and irrigant extruded from the apical foramen during instrumentation were collected into vials (using the Myers and Montgomery technique) and the amounts were determined.

The data were input and processed using the statistical software package SPSS 17.0.1. The level of significance for rejecting the null hypothesis was fixed at $p < 0,05$.

Results:

The results show, that both techniques produced extruded debris and irrigant through apical foramen. The values were: step back technique -0.41 ± 0.62 mg debris and 5.4 ± 1.54 mg irrigant

Conclusions:

During biomechanical preparation of the root canal space by conventional and engine-driven techniques, all instruments tested produced measurable apical extrusion of debris and irrigant.

This study was performed under contract - 5/27. 07. 2009 by the Medical University-Sofia

A CLINICAL EVALUATION OF FOUR MATERIALS, USED FOR RESTORATION OF ROOT CARIES LESIONS: 2 YEAR RESULT

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OBJECTIVES:

This study evaluated the clinical performance of resin composite, resin-modified glass ionomer cement, ormocer based restorative system and a compomer for a period of 2 years.

METHODS:

One hundred class V cavities were prepared in 11 patients. 25 restorations from each material were placed. Each patient received restorations from each material. Retention, marginal integrity, marginal discoloration, anatomic shape and recurrent caries were examined immediately after insertion (baseline), after 6, 12, 18 and 24 months.

RESULTS:

All materials showed significant changes in retention,

marginal integrity and marginal discoloration. Three fillings from resin-modified glass ionomer cement were lost. Statistically significant changes in anatomic shape were observed only in the resin-modified glass ionomer cement group. No statistically significant differences were observed for the four materials after 24 months. However, restorations made from the ormocer based restorative system and the compomer showed better retention and marginal integrity and least marginal discoloration.

CONCLUSIONS:

It was concluded that these materials were clinically reliable when used for root caries restorations. However slightly better was the clinical outcome for the ormocer based restorative system and the compomer.

EFFECTIVENESS OF THE TARGET ANTIMICROBIAL THERAPY OF THE SEVERE CHRONIC PERIODONTITIS PART III: CLINICAL ATTACHMENT GAIN

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Background:

The microbial aetiology of inflammatory periodontal diseases provides the rationale for the use of antimicrobial medication in periodontal therapy. The evidence for bacterial specificity in periodontitis has accumulated and strengthened over the past three decades. The concept of bacterial specificity and data that antibiotic agent in vivo can exceed concentrations necessary to kill or inhibit the pathogen(s) advocate the contemporary approach of adjunctive antimicrobial periodontal treatment.

The variety in the composition of the subgingival pathogenic flora and the specific sensitivity of the periodontopathogens predetermines the necessity from microbiological identification prior the antimicrobial treatment. The composition of the residual subgingival flora could predetermine the prognosis of the periodontal disease and the modalities of the supportive periodontal treatment.

The main goal of the periodontal therapy is the regeneration of the affected periodontal structures and achievement of stable periodontal attachment. The contemporary statement regarding the effectiveness of the periodontal therapy is that healing results with more coronal level of the connective

tissue attachment are associated with better long term stability. Therefore the gain of clinical attachment level is accepted as the primary criterion in the evaluation of the effectiveness of the non-surgical periodontal therapy.

Aim:

Evaluation of the effectiveness of treatment of severe chronic periodontitis with additional target antibiotic administration in comparison with the therapy with adjunctive antimicrobial combination amoxicillin + metronidazole and conventional mechanical periodontal treatment regarding the mean clinical attachment gain, reduction of the attachment loss extent and the variations of the attachment level in sites with initial CAL from 1-2mm, from 3-4mm and above 5mm.

Results: In all study groups mean clinical attachment gain has been achieved after the non-surgical periodontal therapy. In the group with target antibiotic administration the highest reduction of periodontal sites with CAL above 5mm is reported. These results advocate the effectiveness of the target adjunctive antimicrobial treatment in order to achieve better prerequisite for the future maintenance of the periodontal health.

Conclusion:

The microbiological identification of the periodontal pathogens in deep periodontal pockets is recommended in periodontitis patients with moderate and severe periodontitis in order to target the periodontal treatment and to assure better control of the microbial factor resulting in better reduction of the pocket depth and higher attachment gain.

This approach could assist in achieving stable periodontal status, limitation of the requirements of surgical procedures thus leading to better maintenance of the periodontal health. Key words: periodontitis, adjunctive antibiotic therapy, target antibiotic administration, clinical attachment level gain, long-term maintenance.

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EFFECTIVENESS OF THE TARGET ANTIMICROBIAL THERAPY OF THE SEVERE CHRONIC PERIODONTITIS PART I: REDUCTION OF GINGIVAL INFLAMMATION AND ACTIVE PERIODONTAL DISEASE SITES

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Background:

The microbial aetiology of inflammatory periodontal diseases provides the rationale for the use of antimicrobial medication in periodontal therapy. The evidence for bacterial specificity in periodontitis has accumulated and strengthened over the past three decades. The concept of bacterial specificity and data that antibiotic agent in vivo can exceed concentrations necessary to kill or inhibit the pathogen(s) advocate the contemporary approach of adjunctive antimicrobial periodontal treatment.

The variety in the composition of the subgingival pathogenic flora and the specific sensitivity of the periodontopathogens predetermines the necessity from microbiological identification prior the antimicrobial treatment. The composition of the residual subgingival flora could predetermine the prognosis of the periodontal diseases and the modalities of the supportive periodontal treatment.

The correlation between recurrent bleeding on probing and the progression is suggested in many studies. One of the main goals of the periodontal treatment is the achievement of good control of the gingival inflammation and the reduction of the active periodontal sites. Although there is no established acceptable level of prevalence of BOP in the dentition above which a higher risk for disease recurrence has been observed, a BOP prevalence of 25% has been the cut-off point between patients with maintained periodontal stability for 4 years and patients with recurrent disease in the same time frame. Individuals with low mean BOP percentages (<10% of the sites) may be regarded as patients with a low risk for recurrent disease while patients with mean

BOP percentages >25% should be considered to be at high risk for reinfection.

Aim:

Evaluation of the effectiveness of treatment of severe chronic periodontitis with additional target antibiotic administration in comparison with the therapy with adjunctive antimicrobial combination amoxicillin + metronidazole and conventional mechanical periodontal treatment regarding the achieved control of the gingival inflammation and BoP.

Results:

Significant reduction of the gingival bleeding and the BoP is achieved in all groups. In the group with target antibiotic administration the final mean values of the GB (gingival bleeding) and BoP (bleeding on probing) are the lowest and could suggest a low risk for progression of the periodontal disease.

Conclusion:

The microbiological identification of the periodontal pathogens in deep periodontal pockets is recommended in periodontitis patients with moderate and severe periodontitis in order to target the periodontal treatment and to assure better control of the microbial factor resulting in better reduction of the pocket depth and higher attachment gain. This approach could assist in achieving stable periodontal status, limitation of the requirements of surgical procedures thus leading to better maintenance of the periodontal health.

Key words: gingival inflammation, periodontitis, periodontal disease progression, risk assessment.

BACTERIAL LEAKAGE IN ADHESIVE ROOT CANAL SEALER

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Objectives:

The purpose of this study is to determine the degree apical leakage in root canal filled with adhesive root canal sealer.

Methods:

40 extracted teeth are divided in four groups. Two experimental (15 canal each) and two control groups (5 positive and 5 negative). Teeth were decoronated, leaving approximately 16 mm of root. Each canal was instrumented with K3-files using crown-down technique. Two experimental groups are obturated with cold lateral condensation with gutta-percha AH26 and Resilon EpiPhany.

Positive control group are filled only 2 mm apical and the occlusal table. Negative control teeth were obturated with

gutta-percha AH26 using hot vertical compaction technique. All teeth received three layers of nail polish. The bacterial leakage model was adapted from Khayat. The root of each tooth was immersed into the Difco Purple Broth Base with color.

Results:

The analysis show no statistically significant difference in leakage between two experimental groups.

Conclusion:

Under the limits of the in vitro study, both groups show no difference in apical leakage between gutta-percha AH26 and Resilon EpiPhany.

GINGIVAL TISSUE IL-1 β AND PGE2 LEVELS IN PATIENTS WITH CHRONIC PERIODONTITIS AFTER ADDITIONAL THERAPY WITH NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

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Background:

The understanding of the pathogenesis of periodontitis registers progress in last decades. Today it is well known that high level production of pro-inflammatory mediators in gingival tissues in response to pathogenic bacteria from dental biofilm results in destruction of supporting periodontal tissues and clinical expression of periodontal disease. There is enough evidence that PGE2 and IL-1 β are important mediators involved in the development of severe periodontitis. Several studies suggest that detection of these cytokines in high levels in gingival tissues and crevicular fluid may be a valid indicator of current attachment loss. The reduction of IL-1 β and PGE2 levels after periodontal therapy is potential criterion of successful therapy. It is now accepted that increased levels of IL-1 β and PGE2 in the GCF and gingiva may indicate risk of progression of periodontitis. We can well believe that additional medication may inhibit the production of pro-inflammatory mediators and thus the periodontal therapy may result in more favorable healing.

Aim of study:

To evaluate the effectiveness of additional therapy with NSAID (AulinB®) in non-surgical therapy of chronic periodontitis by means of IL-1 β and PGE2 gene expression levels in gingival tissues of patients with chronic periodontitis.

Materials and methods:

Evaluation of prostaglandin E2 (PGE2) and interleukin - 1 β (IL-1 β) gene expression levels in gingival tissues of 30 chronic periodontitis patients before and after non-surgical periodontal therapy (scaling and root planing) was performed. Comparison of prostaglandin E2 (PGE2) and interleukin-1 β (IL-1 β) gene expression levels in gingival tissue of patients with chronic periodontitis receiving conventional mechanical therapy alone or scaling and root planing plus additional host modulation therapy with NSAID (AulinB®) - 100 mg per day was performed. The assessment of gene expression levels of IL-1 β and PGE2 in gingival tissues of periodontal patients was made with PCR analysis - TagMan RT-PCR.

Results:

Statistically significant differences were found in two investigated groups of patients as treatment result - with additional AulinB® treatment and scaling and root planning alone. Received correlative coefficient with Spearman analysis is respectively - 0.72 for IL-1 β and 0.81 for PGE2. The negative value of ddCt in test group reflects a lower level of inhibition of gene expression. The comparative analysis of collected data demonstrates less difference between both of groups. The alteration in gene expression levels of IL-1 β and PGE2 is higher in patients treated with AulinB®.

Conclusion:

Results of this study confirm the effectiveness of non-surgical therapy in moderate and severe periodontitis. Additional use of non-steroidal anti-inflammatory agent may result in higher inhibition of pro-inflammatory cytokines as IL-1 β and PGE $_2$.

This data may be the rationale for eventual modification of non-surgical therapy by including anti-inflammatory agents in the treatment of chronic periodontitis for better healing results.

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PHOTODYNAMIC INACTIVATION WITH PHTHALOCYANINES OF BACTERIA ISOLATES FROM PATIENTS WITH CARIES AND PERIODONTITIS

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Objectives:

Failure in endodontics is usually related to inadequate cleaning and disinfection of the root canal system. This is due to the establishment of microorganisms in areas where the instruments and chemical agents used during root canal preparation cannot eliminate them. PDT is a complementary therapeutic method that could be used to eliminate these remaining bacteria. PDT is a process in which radiation acts on a dye that is applied to the target organism, resulting in bacterial death. The aim of this study was to investigate the effects of photodynamic therapy (PDT) on endodontic pathogens by evaluating the decrease in microbial count of bacteria, sampled from root canals and caries.

Methods:

The study group includes 23 patients: 11 of them with periodontitis chronica granulomatosa (diffusa / localisata) and 12 of them with caries simplex (acuta/ chronica). 26 samples were taken and plated on culture media. Biochemical identification with commercial kits followed. Suspensions of isolated bacteria were irradiated with diode laser (630 nm) in

the presence of new Ga, Zn- phthalocyanines. There were two control groups: samples that were only treated with dye and samples that were exposed neither to the laser light nor to dye. From each sample, serial tenfold dilutions were prepared and aliquots of 0.1 ml of each dilution were plated in duplicate on Sabouraud dextrose agar. After incubation at 37°C for 24 h, the number of colony-forming units (CFU/ml) was obtained.

Results:

E. faecalis and alpha-haemolytic streptococci were isolated. Reduction in the viability of bacteria isolates was achieved with some of the photosensitizers and light associations.

Conclusion:

The worldwide rise in the rates of antibiotic resistance of bacteria underlines the need for alternative antibacterial agents.

Photodynamic therapy appears as an effective method of inactivation of bacteria involved in dental infections. The application of new phthalocyanines leads to complete microbial destruction. The proposed method could become a promising alternative treatment of infections in endodontic medicine.

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COMBINED SURGICAL PROCEDURES TO OBTAIN ROOT COVERAGE OF MILLER CLASS II RECESSION DEFECT ON MANDIBULAR MOLAR

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Background:

Gingival recession (GR) is a term that designates the oral exposure of the root surface due to a displacement of the gingival margin apical to the cemento-enamel junction. Currently, successful treatment of recession-type defects is based on the use of clinically predictable periodontal plastic surgery procedures. The subepithelial connective tissue graft (CTG) and free gingival graft (FGG) are commonly used periodontal plastic surgery procedures. CTG has been described as a procedure for obtaining root coverage and

increasing the width and thickness of keratinized gingiva. The FGG, which is introduced prior to the CTG, can be used for many of the same applications as the CTG, including root coverage and augmentation of keratinized gingiva. The CTG often is the graft procedure of choice for root coverage because of its greater predictability in obtaining root coverage and better esthetic outcomes.

Materials and methods:

A case of young male patient with Miller class II gingival recession on mandibular molar is presented. The recession is

localized mesially on the buccal surface of mandibular first left molar. GR is 5 mm in depth and 3 mm in width. There was insufficiency of attached gingival tissues. We used combined surgical procedures for obtaining augmentation of attached gingiva by FGG on the first stage and root coverage by CTG on the second stage. Interval between the two periodontal plastic surgery procedures was more than 2 months.

Results:

The results from the first periodontal surgery including FGG reveal augmentation of the attached gingival tissues and

limited root coverage. The second plastic surgery including CTG leads to complete root coverage of the exposed root and stable periodontal attachment and absence of gingival recession for a period of 6 months.

Conclusions:

FGG and CTG are commonly used surgical procedures with their predictabilities. In some cases there are indications for combination between both of them.

Key words: Miller class II gingival recession, free gingival graft, connective tissue graft, root coverage

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THE TREATMENT OF A MANDIBULAR FIRST MOLAR WITH PERIODONTITIS CHRONICA GRANULOMATOSA DIFFUSA AND FIVE ROOT CANALS - CASE REPORT

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Described a clinical case of treatment of Mandibular First Molar diagnosed with Periodontitis Chronica Granulomatosa Difusa. The tooth has five root canals and considerable periapical lesions / PAI - 3-4/. In the process of its complex

treatment includes ozonotherapy. The results are recorded after three and six months by radiographics . The treatment is successful.

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SEM CHARACTERISTIC OF RESIN-DENTIN INTERFACE TO PRIMARY TEETH: AN IN VITRO EVALUATION OF TWO SELF-ETCH AND TWO ETCH&RINSE ADHESIVE SYSTEMS

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Objective:

Evaluation of the resin-dentin interfacial morphology of several dentin bonding systems on dentin of primary teeth.

Method and materials:

the following adhesives were applied on flat dentin surfaces of extracted human primary molars (n=20): self-etching two step adhesive AdheSe; all-in-one self-etching adhesive iBond; etch-and-rinse three-step adhesive Syntac and etch-and-rinse two-step adhesive Exite. Composite build ups were prepared using nanohybrid composite Tetric EvoCeram. After thermo- and mechanical loading the specimens were then processed for observation by SEM and magnification 1500. The photos were made on resin-dentin interface and they were used for

observation and accessing of morphology of adhesive and hybrid layer. Morphological features used for comparison were: thickness of adhesive layer, thickness and integrity of hybrid layer, establishment of resin tags and their lateral branches.

Results:

Adhesive and hybrid layer and resin tags were observed by all specimens. These characteristics have different parameters by specimens treated with adhesive systems, belonging to both strategies of adhesion. The differences between the above stated features were established not only inside the groups, treated with self - etching, but also inside the treated with etch and rinse adhesive systems.

PHYSIOTHERAPY APPARATUS GOMEOTON IN THE TREATMENT OF CHRONIC GENERALIZED PERIODONTITIS - A PRELIMINARY STUDY

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Chronic generalized periodontitis is a serious and socially significant disease that includes patients of different ages, by lowering the lower age limit. Treatment is difficult and complex because the etiology is multifactorial. The aim of this study is to evaluate the impact of Gomeoton apparatus in complex treatment of periodontal patients. Have seen four cases of chronic generalized periodontitis. Before treatment were collected periodontal index and from selected pockets

were taken microbiological investigation. After 45 day response to the apparatus and professional oral hygiene were repeated periodontal indices and microbiological examinations. The results showed improvement of the condition of the patient parodont. It can definitely be argued that this is only a result of physiotherapy apparatus, but more detailed studies are needed to assess the impact that this physiotherapy in complex treatment of periodontitis.

THE ORAL TOLERANCE TO CONTACT ALLERGENS IN PROSTHODONTIC BIOMATERIALS

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Two cases of oral allergy to dental prosthesis are presented, highlighting the interest of dosage of allergen and the clinical manifestation of contact allergy to prosthodontic dental materials. Symptoms appeared after placement of new prosthesis of same material as the precedent one. These

patients were able to tolerate the allergen in minor quantity and increasing of the quantity interrupt the tolerance. These cases indicate a possible relationship between the oral contact allergy and the dosage of the allergen.

PARTIAL PULPOTOMY IN PRIMARY TEETH - CLINICAL EXPERIENCE AND ADVANTAGES

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Aspects of the modern pediatric endodontics are preservation of vital pulp, pain management by analgesia and application of biological pulp-capping agents. The endodontics of the 21st century is opposed to devitalization of the pulp by arsenic medicaments, pulp treatment without analgesia and application of known as toxic formaldehyde-releasing medicaments. Besides "stepwise" technique known as the best method of pulp preservation there are also great expectations for recently widely discussed method of partial pulpotomy. This method is not well-known in our clinical practice.

The aim of this study is to apply and make popular the method of partial pulpotomy, as well as to share our clinical results. To achieve this aim we set three particular tasks: 1. Fifteen primary teeth diagnosed as partial chronic pulpitis (Pulpitis chronica partialis) to be treated by partial pulpotomy using

Ca(OH)₂ as a pulp-capping agent; 2. Fifteen primary teeth diagnosed as partial chronic pulpitis (Pulpitis chronica partialis) to be treated by partial pulpotomy using MTA as a pulp-capping agent; 3. To be compared (clinically and radiographically) partial pulpotomies with Ca(OH)₂ and ? 6 months and 1 year after the treatment.

Methods:

Partial pulpotomy was performed after infiltration analgesia. The pulp-capping agent (Ca(OH)₂ or ?) and the definitive restoration were put in one appointment.

Conclusion:

The results of the performed study show that partial pulpotomy is successful and simple vital method of primary teeth pulp treatment. MTA is the new preferred pulp-capping agent.

SOME PROBLEMS AND DECISIONS IN ENDODONTIC PRACTICE

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The goal of endodontic therapy is the prevention and elimination of pathosis of endodontic origin. Consensus report of the European Society of Endodontology on quality guidelines, generally accepted that correct diagnosis, proper debridement and preparation of the pulp cavity, and subsequent complete obturation of the prepared cavity are the triad essential for successful root canal therapy. Systemic and local health factors also can affect endodontic treatment outcomes.

The reporting of success in endodontic literature can be confusing because of the definition of "success/failure". One useful measure of success is the survival of a tooth after root canal treatment. Present day endodontics can achieve a 95-98% success rate in the primary session of a root canal treatment (RCT) and 74-95% success rate in retreatment cases. Within the scope of endodontic treatment it is important to understand that first and foremost, is bacterial infection. Endodontic diagnosis is one of the fundamental concepts in endodontology. An accurate diagnosis is the basis of treatment. Implants have changed the rules in clinical

endodontics by demanding a more precise endodontic therapy with a higher success rate. Apical periodontitis is primarily a sequel to microbial infection of the root-canal space in teeth.

The clinical management of apical periodontitis involves infection control by root canal treatment, which is the only viable alternative to tooth loss. Epidemiological studies have shown that the prevalence of apical periodontitis in root-filled teeth ranged from 40% to 51%. However, the magnitude of this problem has not been fully appreciated.

The process of case selection and treatment planning begins after a clinician has diagnosed an endodontic problem. The clinician must determine if the patient's oral health needs are best met by providing endodontic treatment and maintaining the tooth or by advising extraction. This question is more complex than ever before because of the wide array of treatment modalities.

An ideal treatment plan should address the chief complaints of the patient; provide the longest-lasting, most cost-effective treatment; and meet or exceed patients' expectations whenever possible.

DURATION OF DENTAL ALLOY RESTORATIONS WEARING AND NUMBER OF METAL CROWNS FOR CLINICAL MANIFESTATIONS OF ORAL CONTACT ALLERGY TO PROSTHODONTIC RESTORATIVE MATERIALS

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Allergies to metals are quite common but there is an existing discrepancy between the rarity of oral allergy to dental alloys and the frequency of metal sensitization and metal-induced contact dermatitis.

Objective:

To assess the role some factors affecting duration of dental alloys restorations wearing and number of metal crowns for clinical manifestation of oral contact allergy to metals in dental alloys.

Material and methods:

304 patients with dental alloy restorations and suspicion for allergy to their restorations were clinically examined and patch tested.

Results:

13.8% of them were with positive patch test to different metals. A positive correlation between metal sensitivity and duration of wearing dental alloy restorations was found. A significant difference in number of metal crowns between the group of patients with clinical manifestation of dental alloy allergy and the group of patients without clinical manifestation although the positive patch test to metals in their dental alloy restorations was found ($p < 0.05$).

Conclusion:

Long contact with dental alloy restorations is a prerequisite for sensibilizing the individuals and the clinical manifestation of oral contact allergy to dental alloys is dose-dependent.

REATMENT OF PATIENTS WITH FOCAL ORAL INFECTION CORRELATES WITH HIGH PERIPHERAL BLOOD LEVELS OF IL-10, IL-4, IL-2 AND CD25^{hi}CD127^{low} T REGULATORY CELLS

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TBackground:

Multiple data suggest a relationship between oral infection and systemic disorders, basically through the “spill-over” of proinflammatory cytokines that reach high local concentrations in periodontitis and enter the systemic circulation. However, data is scarce about the Th1/Th2 peripheral blood (PB) levels in patients with focal oral infection and the mechanisms of their regulation.

Aim:

We studied the levels of IL-2, IL-4, IL-5, IL-10, TNF- α and IFN- γ in parallel with regulatory CD25^{hi}CD127^{low} CD4 T cells in peripheral blood of patients with focal oral infection (n=13), before and after stomatological treatment, in comparison to healthy controls (HC, n=15).

Methods:

Patients PB samples were collected before and after extraction of retained molars and local periodontitis treatment. Treg (CD4+CD25^{hi}CD127^{low}) levels were defined in whole blood by flow cytometry. IL-2, IL-4, IL-5, IL-10, TNF- α and IFN- γ were quantified in supernatants of 24h PHA-activated DMEM-diluted (1:1 ratio) whole blood using human Th1/Th2 Cytokine Kit II (BD Biosciences). Flow-cytometry analysis was performed with FACSCanto™ Flow Cytometer and DIVA

software (BD Biosciences).

Results:

At baseline, a significantly decreased level of TNF- α was established in patients' PB (average 5629 vs. 6867 pg/ml for HC, p<0.05). Treatment increased significantly the stimulated production of TNF- α 7725 vs. 5629 pg/ml, p<0.05) though within the reference range (p>0.05 as compared to HC). In addition, treated patients exhibited significantly increased stimulated levels of IL-10 (1017 vs 1517 pg/ml), IL-4 (201 vs 370 pg/ml) and IL-2 (657 vs 1481 pg/ml), p<0.05 for all comparisons. Importantly, a significantly increased percentage of circulating Treg was established after treatment (5.6% vs 3.6%), which correlated with IL-2 concentration (R=0.4, p<0.05).

Conclusion:

The successful overcome of focal oral infection is related to a stimulation of a Th1 response, combined with the expansion of T reg cells. The latter contribute to increased IL-10 production, inhibition of extreme inflammation and IL-4 increase, thus restoring immune balance.

Key words: focal oral infection, flow-cytometry, Treg (CD4+CD25^{hi}CD127^{low}), IL-2, IL-4, IL-5, IL-10, TNF- α IFN- γ

LEGAL ASPECTS OF REGULATION ON BIOMEDICAL SCIENTIFIC RESEARCHES

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The existence of numerous new relationships created upon the improvement of modern medico biological researches emphasized, during the last decades, the need of improvement of several normative regulators which are to assure the following of certain ethical and legal principles. Different scientific societies have been issuing ethical codes and regulations, in order to regulate their activities. The appliance of these codes is assured by certain committees and commissions, which come up with expert opinions according to the level up to which certain research complies with the ethical and legal principles prescribed in specific legal

regulation on European and national level.

In Bulgaria, there are created committees in ethics of scientific research in the field of medicine, among which are: National Council of Bioethics to the Ministry of Education and Science, National Ethic Committee and ethic committee of transplantations to the Ministry of Health, Bioethics Committee to the Institute of Neurobiology to the Bulgarian Academy of Sciences, Committee of ethics in scientific research activity to the Medical University in Pleven and Committee of ethic in scientific researches to the Medical University in Sofia. The activity of these committees,

commissions and councils is regulated by acts such as the Universal Declaration of Human Rights, WMA Declaration of Helsinki regarding ethical principles for medical research involving human subjects, the European convention on bioethics as well as all legally binding European legal instruments related to ethics in scientific researches, as well as article 203 of the Bulgarian Healthcare Act, Regulation No 14 issued by the Ministry of Health on the terms and orders for conduct of clinical trials of drugs on humans and the regulations in other international and national documents in the field of ethics in scientific research and scientific

publications.

Subject of expert evaluation are clinical and non-clinical biomedical scientific researches on human beings, scientific researches using personal biomedical data, human tissue, animals particular- genetically modified animals and microorganisms. The range of interest also include all ethical problems regarding protection of public interests and the researched objects from dishonest activities of researchers in production, announcement, offering and publication of results of scientific researches.

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THE ROLE OF INFLAMMATORY MEDIATORS IN THE PATHOGENESIS OF DENTAL INFLAMMATORY PROCESSES-A REVIEW OF THE LITERATURE

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There has been a renewed interest in the influence that foci of infection within the oral tissues may have adverse effect on general health. Dental inflammatory processes influence general health, apart from their local damaging effects. Recent studies have proved that immunologic reactions are an intermediary mechanism in pulp diseases, periapical tissues inflammation, and parodontitis. These reactions are not limited

only to inflamed tissues since antigens present in root canals and periapical tissues, and inflammatory mediators such as cytokines- main IL-1b, IL-6, IL-8, TNF-a, produced by stimulated lymphocytes, monocytes, macrophages induce significant changes in remote tissues and body organs, taking part in systematic reactions.

Key words: Focal infection, systematic reaction

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EVALUATION OF LOCAL ETIOLOGICAL FACTORS (CANDIDA INFECTION, HYPOSALIVATION, ALLERGY TO DENTAL MATERIALS, ELECTRICAL CURRENTS) IN DEVELOPING BURNING MOUTH SYNDROME (BM)

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ABSTRACT

Burning mouth syndrome is characterized by a burning mucosal pain without visible signs of mucosal pathology. Many causative factors: local, systemic or psychogenic have been proposed

Objectives:

The aim of this study is to assess the local factors that influence burning mouth sensations.

Methods:

A total of 30 patients (22 females and 8 males) were sent to the Department of Oral Diagnostic of the Faculty of Dental medicine for consultation regarding oral discomfort (dry mouth sensation, burning mouth and taste disorders). A diagnostic protocol for patients with burning mouth syndrome

is described.

Results:

Our results from the microbiological examination show that 4 of the patients have Candida infection and 1 patient has Klebsiella pneumoniae. The results from the saliva test are that the symptom of dry mouth is subjective. Most of the patients (n=20) show allergy to dental materials. Only 3 of the patients have increased values of electrical currents.

Conclusions:

The study demonstrates that "the burning mouth" may have any one or a combination of diverse causes. Careful and thorough clinical and laboratory investigations are necessary.

Key words: dry mouth, burning mouth, local factors

THE USEFULNESS OF HAMILTON ANXIETY AND DEPRESSION SCALE (HAM) IN ASSESSING ANXIETY AND DEPRESSION IN PATIENTS WITH BURNING MOUTH SYNDROME (BMS)

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Burning mouth syndrome is a multifactorial disorder. Psychological factors in BMS have been reported by several authors. Some of them consider that anxiety, depression and cancerphobia are the most important etiologic factors.

The Hamilton Anxiety and Depression Scale (HAM) is a rating scale developed to quantify the severity of anxiety and depression symptomatology, often used in psychotropic drug evaluation.

Objectives:

The aim of the study is to assess anxiety and depression symptoms in BMS patients by using HAM scale

Methods:

30 patients, affected by BMS and 15 matched control subjects were sent to the Department of oral diagnostic of the Faculty of dental medicine were examined and answered

the questions in order to fill the HAM scale.

Results:

The evaluation scale show that when present anxiety and depression greatly influence the psychiatric condition of these patients. Most of the studied patients have normal or mild scores of the Hamilton scale.

Conclusions

Future studies, evaluating a larger BMS subject group, are necessary in order to validate the hypothesis of the psychogenic etiology of BMS. The scale may be useful for dental practitioners when interpreting individual's expression of dental anxiety.

Key words: Hamilton scale, burning mouth syndrome, anxiety, depression

SIGNIFICANCE OF THE SIZE OF CLINICAL CROWNS OF MOLLARS IN CARIOLOGY AND ENDODONTICS.

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All academic teachers in the preclinical and clinical teaching are facing the problem with non accurate cavity preparations. The mistakes are related not only to dental amalgam restorations but to aesthetic restorations and endodontic cavities too. The aim of the present study is to measure the proper sizes of the clinical crown of molars and their variability in favour of more accurate cavity preparation in cariology and endodontics. 313 molar teeth are included in the study and following lengths are measured: mesiodistal, buccolingual, and buccal crown hight.

The differences with commonly used in Bulgaria local

literature sources are significant. It can be useful for the practice some of the regular terminology in lectures and operative dentistry manuals to be reconsidered. Cavities with buccolingual size up to 1/3, convergension of cavity walls in cariology, and even the possibility of convergension in endodontic cavities is essential to be carefully revised. Respecting the lowering sizes of the crown of human molars, during evolution, due to modern food industry, will lead to better clinical decisions in favour of the most important treatment task: rare restoration replacement, lower ware rates, and lower rates of secondary caries.

FREQUENCY OF ROOT CANAL CURVATURES IN MOLLARS- AN IN VITRO STUDY.

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Often root canal curvatures are the main reason for a poor root canal treatment. The clinical x-ray images often do not give a precise view of the degree of curvature from the axial axis. The aim of the present study was to measure the severe curvatures > 25° separately for upper and lower jaw in representative number of extracted human molars. The lengths of each root were measured from the respective cusps for 771 roots. All deviations were measured in the apical half of the roots, and registered when higher than 25 – 30 °. The data

shows that 47 from 461 upper teeth (10%) and 49 from 312 lower teeth (15.7%) were with severe curvatures. The highest numbers were found in lower third molars – 19.2%. In Bulgaria root lengths are lower, than in the commonly used tables. This two findings are proving the higher risk from iatrogenic mistakes during root canal treatment. Diagnostic x-rays and a working hypothesis for curvatures of each root after the first half we found as essential.

ORAL PRESENTATION

LOW INTENSITY DENTAL LASERS IN THE SURGICAL PROTOCOL OF THE DENTAL IMPLANTOLOGY

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While the correct biomaterial osseointegration of the implants is a condition for their stability, the implant survival rate depends on the epithelial and connective tissue attachment to the titanium surface of the implants, which protects the bone from the oral bacterial flora.

The aim of the study is to be proposed a method for using a low intensity dental lasers for stimulation a healthy periimplant mucosa to be formed. The obtained results are good.

A COMPLEX APPROACH IN THE REHABILITATION OF EDENTULOUS LOWER JAW

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The aim of the study is a complex approach in the rehabilitation of edentulous lower jaw with advanced atrophy of the alveolar ridge to be suggest. A vestibular soft tissue

plastic with caudal displacement, insertion of implants in the frontal area, making of traverse and a total overdenture is proposed. The advantage of the soft tissue plastic is to be created a condition for making of normal lower jaw denture.

IN VITRO STUDY OF THE BACTERICIDAL EFFECT OF ANTIMICROBIAL AGENTS USED IN ENDODONTICS WITH MODIFIED AGAR DIFFUSION METHOD

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The purpose of this study is to carry out the comparative in vitro examination of bactericidal effect of antimicrobial drugs used in endodontics (for iontophoresis and application) against some basic microbial agents of periodontitis.

Materials and methods:

Using the modified agar-diffusion method the antimicrobial effect of five antimicrobial agents used in endodontics is evaluated: I2/KI, Cupral, Ca(OH)₂ (high dispersion), Cresophene, Rockle. For the needs of the study nutritious media is used: MH- agar. Tested microorganisms are: E.faecalis, S.aureus. For the aims of study are prepared 66 teeth(single root). Root canals are prepared with a step-back technic, Master file No 40. Covers of petri plates are perforated and through them the teeth are pushed in. Apexes of the teeth are immersed in the agar media. Antimicrobial agents are placed into the root canals and are led by a direct

current or an application. Bactericidal effect is assessed by measuring of the inhibition haloes around the apexes.

Results:

Using the modified agar diffusion method, when the drugs are led in the root canals by an application and the test microorganism is E.faecalis no zones of suppressed bacterial growth around the root apexes were detected. When the test bacterium is S.aureus, the suppressed zones have a diameter from 2mm to 4 mm. Using the modified agar diffusion method, when the drugs are led in the root canals by direct current, the zones of inhibition of bacterial growth formed in this case are very large. They are from 30 to 33.5 mm, when test bacterium is E.faecalis, and the zones are from 20.5 to 25 mm when test bacterium is S.aureus.

Acknowledgments: This study was sponsored by Grant No. 21-D/2008 from Medicine University- Sofia.

EFFECTIVENESS OF THE TARGET ANTIMICROBIAL THERAPY OF THE SEVERE CHRONIC PERIODONTITIS PART II: PREVALENCE OF RESIDUAL POCKETS

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Background:

The microbial aetiology of inflammatory periodontal diseases provides the rationale for the use of antimicrobial medication in periodontal therapy. The evidence for bacterial specificity in periodontitis has accumulated and strengthened over the past three decades. The concept of bacterial specificity and data that antibiotic agent in vivo can exceed concentrations necessary to kill or inhibit the pathogen(s) advocate the contemporary approach of adjunctive antimicrobial periodontal treatment.

The variety in the composition of the subgingival pathogenic flora and the specific sensitivity of the periodontopathogens predetermines the necessity from microbiological identification prior the antimicrobial treatment. The composition of the residual subgingival flora could predetermine the prognosis of the periodontal diseases and the modalities of the supportive periodontal treatment.

The reduction of the probing depth of the periodontal pockets is one of the main criteria for the success of the

periodontal treatment. The percentage of the residual pockets with probing depth greater than 4 mm determines the risk of disease progression. The reduction of the periodontal sites with PD above 7mm could limit the necessity of periodontal surgery.

Aim:

Evaluation of the effectiveness of treatment of severe chronic periodontitis with additional target antibiotic administration in comparison with the therapy with adjunctive antimicrobial combination amoxicillin + metronidazole and conventional mechanical periodontal treatment regarding the prevalence and the achieved mean reduction of PD of periodontal pockets with initial PPD below 3mm, from 3 to 5mm, from 5-7mm and above 7mm.

Results:

In all study groups a reduction of the mean PD has been achieved. The prevalence of periodontal sites with PD above 7mm after therapy is the lowest in the group with target antibiotic administration. These results advocate the

effectiveness of the target adjunctive antimicrobial treatment in order to limit the extent of the surgical procedures in the therapy of the periodontal disease.

Conclusion:

The microbiological identification of the periodontal pathogens in deep periodontal pockets is recommended in periodontitis patients with moderate and severe periodontitis in order to target the periodontal treatment and to assure

better control of the microbial factor resulting in better reduction of the pocket depth and higher attachment gain. This approach could assist in achieving stable periodontal status, limitation of the requirements of surgical procedures thus leading to better maintenance of the periodontal health. Key words: periodontitis, adjunctive antibiotic therapy, target antibiotic administration, PPD reduction, long-term maintenance.

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EVALUATION OF PERIODONTAL BONE DEFECTS AND FURCATION INVOLVEMENT WITH CONE BEAM COMPUTED TOMOGRAPHY

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Background:

The limitations of conventional 2-dimensional (2-D) radiographs have been emphasized in many studies. Because the image is a 2-D map of the 3-dimensional (3-D) tooth and periodontal tissue, these structures may be superimposed on each other. Recently, 3-D image analysis by cone beam computed tomography (CBCT) was introduced to dentistry, but it has been used only rarely in the periodontal field. Usage of 3-D analysis of bone structures has the advantage for evaluation vestibular and lingual defects, exact morphology of furcation lesions which is of great interest for planning regenerative and reconstructive procedures.

Aim: The purpose of this presentation was to introduce the clinical application of the CBCT for evaluating the morphology of periodontal bone defects and furcation involvement in periodontitis patients.

Methods:

Patients with chronic periodontitis were compared on bite-wing radiographs and cone-beam computed tomography. Periodontal bone defects and furcation involvement were detected and compared on both types of radiographs prior regenerative periodontal surgery. The data from CBCT was also compared to intra-operative measurements of bone lesions.

Results: CBCT is an imaging method for visualization of bone defects which are hard-to-reach for other imaging methods like maxillary molar's furcation lesions, angular defects in the furcation areas etc.

Conclusions:

We consider that CBCT is a useful aid in periodontal examination and diagnosis, and in the prediction and evaluation of periodontal treatment outcomes.

Key words: bite-wing, cone-beam computed tomography, bone defect measurements, regenerative therapy

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EARLY DIAGNOSIS OF FISSURE CARIES IN FIRST PERMANENT MOLARS DURING AND AFTER ERUPTION PERIOD

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Summary

First permanent molars erupted with very retentive deep fissure. Children between 5-7 years old have usually bad oral hygiene and oral hygiene condition of recently erupted teeth is even worse. This leads to quickly development of fissure caries. Early detection and accurate differential diagnosis between initial fissure caries and deep fissure is challenging for every pediatric dentist and would contribute greatly for planning non-operative micro-invasive treatment.

The aim of this research is to apply visual examination, based

on a classification by K. Ekstrand (Ekstrand and al.1998) for early detection of fissure caries in children two years after the eruption of first permanent molars. For that purpose children aged 6,7 and 8 were examined. The condition of occlusal surface of molars was evaluated visually with dental mirror by means of Ekstrand classification. The same was controlled using DIAGNOdent pen. The children were divided into groups according to the condition of the fissure and prophylaxis programme and treatment planning were made for each group.

CORTISOL IN SALIVA – A MARKER FOR INCREASED ANXIETY IN CHILDREN

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Objectives:

Cortisol, called also "stress hormone" participates in organism's response to stress situations and enters into complex interactions with the hormonal and immune system of man. The purpose of the study is to follow the cortisol level in saliva as dependent on anxiety rate in children.

Methods:

A screening investigation of 200 children was carried out to evaluate anxiety rate with the help of the revised children's manifest anxiety scale. 60 children (30 with high and 30 with low anxiety rate) were selected to measure the cortisol in the saliva by ELISA method with Saliva Cortisol Enzyme Immunoassay Kit, product of Salimetrics, USA.

Results:

The results show a dependence between the subjective psychological test for anxiety evaluation in infant age and the cortisol in saliva. Saliva is used as a non-invasive diagnostic indicator for the changes in cortisol levels.

Conclusion:

Cortisol is an objective oral biomarker that can be used for evaluation of risky oral environment and its connection to the general psychological status of children.

Key World: Cortisol, stress hormone, anxiety rate, saliva, ELISA, psychological test

The study is a part of project No. 17/2009 financed by the Medical University in Sofia.

SEM EVALUATION OF HARD TISSUES OF PERMANENT AND DECIDUOUS TEETH TREATED WITH ER-YAG LASER LITE TOUCH

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Summary

Er-YAG laser Lite Touch is from the last generation lasers which are appropriate for caries treatment with minimal intervention/MI/-a tendency in the modern dental medicine, especially effective for children.

We present a SEM evaluation of enamel and dentin of extracted permanent and deciduous teeth treated with Er-YAG laser Lite Touch and conventional rotating instruments.

The results show that surfaces irradiated with Er-YAG laser have properties for the adhesion of the new restorative materials as better as those treated with rotating instruments. Regarding the dentin surface, there was a great evidence of a difference in ablation rate between peritubular and intertubular dentin which have different mineral content and resulting tissue interaction.

ORAL CAVITY AND HEPATITIS B

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Hepatitis B is one of the most common infectious diseases in the world and it is a serious global health problem, with 2 billion people infected worldwide, and 350 million suffering from chronic HBV infection.

The predominant routes of transmission vary according to the endemicity of the HBV infection. In areas of high endemicity, perinatal transmission is the main route of

transmission, whereas in areas of low endemicity, sexual contact amongst high-risk adults is the predominant route. Markers of hepatitis B have been detected in whole saliva and other biological secretions.

We examined oral health (dental status, OHI, PBI) in 25 patients with chronic hepatitis B and evaluated serum and salivary levels of HBV DNA during antiviral therapy with Peg IFN.

TEMPORARY RESTORATIONS IN LARGE IMPLANT CASES - REMOVABLE OR FIXED?

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Abstract:

There are clinical cases with greatly reduced dentitions that demand long conservative, surgical, periodontal and implantological treatment. Providing with suitable temporary restorations allows adequate function and sufficient aesthetics throughout the treatment period.

The choice of the temporary restoration's kind (removable or fixed) may ruin or bring to a successful end the long implantological treatment.

The choice of supports for the temporary fixed restoration is an important detail, because after a strict assessment endodontically or periodontally compromised teeth could be used for a while before their extraction.

It is also possible to use mini-implants as supports for temporary restoration or to load the implants immediately.

Every clinical case, of course, needs an individual approach in order to be avoided unacceptable complications in the osseointegration period or even single implant's loss.

IMPLANT PLACEMENT AFTER RIDGE PRESERVATION TECHNIQUE

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Abstract:

Ridge preservation technique is already a routine approach in contemporary implantology. It allows limitation or even lack of bone loss after extraction and the use of full bone volume in placement of optimum size implants.

According to the used graft material, the surgical protocol/ record could vary in certain bounds.

Implants' opening and loading could also be delayed for a while. Immediate loading is not recommended.

NANO-TECHNOLOGIES IN METAL-CERAMIC RESTORATIONS

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Abstract:

When the topic of discussion is highly aesthetic prosthetic restorations, dentists and dental technicians are still faced with the dilemma whether to recommend all ceramic or metal-ceramic restoration with a cap, made of precious alloy. The

contest between the different tendencies today, in the era of high technologies, is stronger than ever.

The use of Captec nano-technology enables a combination of the highly aesthetic qualities of non-metallic restorations and the mechanical strength of the metal-ceramic ones.

MODERN DIAGNOSTIC AND TREATMENT ASPECTS IN TMJ PATHOLOGY

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In the last two decades the approaches to the TMJ pathology remarkably improved due to the achievements of MRI visual diagnostics, and the implementation of arthrocentesis and arthroscopy techniques. Following the contemporary Wilkes Classification for Internal Derangements of the

Temporomandibular Joint we try to summarize the aetiological and pathological basis of these wide spread disorders and the modern guidelines for reliable treatment.

Keywords: Temporomandibular Joint (TMJ), Internal Derangements, Arthrocentesis, Arthroscopy

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