

Abstracts of the articles

**P. 4 The study of pathogenesis components and identification of prognostic criteria for sialolithiasis**

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**Summary**

The article presents the results of the study of sialoliths, oral liquid and blood serum of patients with the sialolithiasis diagnosis.

It is shown that the main factor determining the level of Ca in sialolith is the level of Ca concentration in the saliva. The main elements of sialoliths were estimated. Revealed that sialoliths are mononuclear and polynuclear concentric-zoned cellular substances with rhythmic alternation of organic and mineral elements.

It is concluded that there is the primary factor that triggers the formation of sialoliths and also that there are some endogenic and exogenic factors which affect on them.

Additional stages of sialolithiasis pathogenesis were revealed. This allows the development of methods of prognosing such a disease like sialolithiasis.

**Keywords:** sialolith, saliva, blood plasma, sialolithiasis.

**For citation:** Yaremenko A.I., Razumova A.Y., Kutukova S.I. The research of pathogenesis links and revealing of prognostic criteria for sialolithiasis. Stomatology for All / Int. Dental Review. 2019; 2 (87); 4—7.

**P.8 A rationale for devitalization of teeth prior to their orthopedic treatment with porcelain-fused-to-metal restorations.**

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**Summary**

The analysis of the literature data and the conducted X-ray and sociological studies have made it possible to work out the recommendations for limiting the indications for depulping the teeth under metal-ceramic crowns. It was established that besides clinical data on diseases of dental hard tissues, crown height and tooth position in the dentition, on depulpation it's necessary to consider the X-ray width of the side wall of the tooth cavity (less than 2 mm) and pulp electro-excitability (over 25 mcA). These data and features of the orthopedic construction should be the foundation for the choice of endodontic dental treatment for orthopedic indications, while acute pulpitis should be considered as a consequence of iatrogenic cause.

**Keywords:** depulpation, indication, foundation.

**For citation:** Redinova T.L., Subbotina A.V., Redinov I.S., Korlyakov D.V., Vetoshkina N.V. The basis of the depulpation of teeth which are subject to orthopedic treatment with metal-ceramic structures. Stomatology for All / Int. Dental Review. 2019; 2 (87); 8—11.

### **P.12 Application of electromyography in diagnostic of patients with chronical periodontitis in case of different type of partial secondary adentia**

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#### **Summary**

The authors of this article conducted an investigation of functional condition of masseter muscles using electromyography in patients with chronical periodontitis in case of different type of partial secondary adentia. Analyzing the results of electromyography statistically significant differences were found between the studied indexes in patients with mild and moderate chronical periodontitis in case of different type of partial secondary adentia in comparison with the control group that included patients with absence dentition defects. Electromyographical investigation in patients with mild and moderate chronical periodontitis in case of different type of partial secondary adentia 6 and 12 months after the complex treatment suggested persistent positive changes in functional activity of masticatory muscles.

**Keywords:** chronical periodontitis, partial secondary adentia, superficial electromyography.

**For citation:** Maximovskaya L.N., Kulikov G.V. Application of electromyography in diagnostic of patients with chronical periodontitis in case of different type of partial secondary adentia. Stomatology for All / Int. Dental Review. 2019; 2 (87); 12—15.

### **P.16 Stabilometry as a method for assessing the effect of the orthodontic treatment on body posture in patients with distal occlusion**

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#### **Summary**

A body posture assessment based on the method of stabilometry was carried out in 27 patients aged 18—35 years ( $23.5 \pm 3.5$  years) with distal occlusion at the stages of orthodontic treatment using Damen Mx bracket systems and the Twin Force bite corrector. Changes in stabilometric characteristics indicate that there is a correlation between the program of postural regulation and bite alterations. They also imply the possibility of using stabilometry to assess the results of orthodontic treatment and the body's ability to adapt to it.

**Keywords:** postural status, distal occlusion, stabilometry, orthodontic treatment.

**For citation:** Markov N.M., Ivanov V.V., Krechina E.K., Pogabalo I.V. Stabilometry as a method for assessing the impact of orthodontic treatment on postural status in patients with distal occlusion. Stomatology for All / International Dental Review. 2019; no. 2 (87): 16—21 (in Russ.).

### **P. 22 Organizational and legal aspects of adverse outcomes in the provision of dental care**

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### **Summary**

The article provides an analysis of resolutions for dental malpractice claims and forensic medical examinations of adverse outcomes resulting from dental treatment. Recommendations are given on how to reduce adverse outcome risks and the number of patient complaints.

**Keywords:** defects in medical care, dentistry, medical error, forensic medical examination.

**For citation:** Butenko O.G., Topolnitsky O.Z., Romodanovsky P.O. Organizational and legal aspects of adverse outcomes in the provision of dental care. *Stomatology for All / International Dental Review*. 2019; no. 2 (87): 22—24 (in Russ.).

### **P. 26 The sensitivity of *Enterococcus faecalis* to medications used for root canal therapy in chronic apical periodontitis.**

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### **Summary**

The article presents the results obtained by the disco-diffusion agar method for determining the sensitivity of *Enterococcus faecalis* ATCC 29212 to endodontic materials. It was concluded that preparations based on 2% and 1.5% chlorhexidine have a pronounced antibacterial effect against *Enterococcus faecalis*, unlike calcium hydroxide.

**Keywords:** chronic apical periodontitis, temporary obturation, endodontic treatment, *Enterococcus faecalis*.

**For citation:** Dezhurko-Korol V.A., Makeeva I.M., Semenov A.M., Byakova S.F., Novozhilova N.E. The antibacterial activity of endodontic materials of the treatment of chronic apical periodontitis against *Enterococcus faecalis* on agar diffusion. *Stomatology for All / Int. Dental Review*. 2019; 2 (87); 26—29.

### **P. 30 Improvement of the diagnostics efficiency of occlusal disorders in patients with chronic periodontitis in case of different type of partial secondary adentia using method of computer occlusiography**

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### **Summary**

The article presents the results of the study of occlusal disorders in patients with chronic periodontitis in case of different type of partial secondary adentia using method of computer occlusiography. Occlusiographic analysis showed that as progression of chronic periodontitis takes place, the teeth are

missing and lack of occlusal contacts increasing occlusion on the frontal teeth group occurs. When the excess of adaptive-compensatory possibilities takes place it leads to traumatic injury of periodontal tissues that can result in resorption of alveolar bone, the emergence or increasing mobility of teeth and their loss. The results of study showed that elimination of occlusion imbalance in patients with mild and moderate chronic periodontitis and partial secondary adentia takes place already 6 months after complex treatment.

**Keywords:** computer occlusiography, malocclusion, chronic periodontitis, partial secondary adentia.

**For citation:** Kulikov G.V. Improvement the diagnostics efficiency of occlusal disorders in patients with chronic periodontitis in case of different type of partial secondary adentia using method of computer occlusiography. *Stomatology for All / Int. Dental Review*. 2019; 2 (87); 30—33.

### **P.34 A rationale for the application of photodynamic therapy in experimental in vitro investigation with strains of periodontal pathogenic bacteria and candida**

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#### **Summary**

The article presents the results of a study of the effectiveness of photodynamic therapy in in vitro experiments against the microaerophilic group of periodontitis pathogens and *Candida* fungi using light activation at different wavelengths.

To determine the sensitivity of photodynamic effects, the following priority strains of microorganisms were selected: *Aggregatibacter actinomycetemcomitans*, *Streptococcus constellatus*, *Candida glabrata*. The basis of the experimental studies was the automated cultivation of isolated strains of microorganisms with control of the growth curves of microbial populations using different exposure modes and photosensitizers.

The possibility of a more effective implementation of necessary corrective actions by dentists when using photodynamic therapy in the complex treatment of patients with periodontal diseases is substantiated.

**Keywords:** periodontopathogenic microorganisms, photodynamic therapy, photosensitizers.

**For citation:** Samusenkov V.O., Tsarev V.N., Ippolitov E.V., Podporin M.S., Ilyasova S.T. Substantiation of use of photodynamic therapy in experimental investigation in vitro with strains of parodontopathogenic bacteria and fungi candida. *Stomatology for All / International Dental Review*. 2019; no. 2 (87): 34—41 (in Russ.).

### **P.42 Structural and functional changes in the nasal and upper lip zone of adult patients with cleft lip and palate and their quality of life after the treatment in an early age.**

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#### **Summary**

The authors suggest a system of criteria for assessing residual and secondary deformities of the nose, upper lip and oral cavity of adult patients with a cleft lip and palate after surgical treatment in childhood.

The results of a survey in a group of such patients using the proposed system, as well as the results of studying the level of their quality of life using the SF-36 questionnaire, the "Subjective control level" questionnaire and interviewing are presented.

Recommendations for further treatment tactics are given.

**Keywords:** residual and secondary deformations, cleft lip and palate, assessment system, medical rehabilitation, follow up, quality of life.

**For citation:** Kovalenko K.Yu., Semyonov M.G. Structural and functional changes in the nasal and upper lip zone of adult patients with cleft lip and palate and their quality of life after the treatment in an early age. *Stomatology for All / Int. Dental Review*. 2019; 2 (87): 42—46.

#### **P. 48 Multilevel composition of the enamel apatite of human teeth (in the context of biomineralogy)**

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#### **Summary**

In this review paper, features of the hierarchical organization of enamel elements of human teeth at macro, micro and submicron levels are shown. At the macrostructural level, the spherulite-zonal structure of the enamel apatite is due to the radial arrangement of prisms and semi-concentric bands (Retzius surfaces). For the first time, complex types of subordinate structures of the structural order of subelements in enamel prisms have been established. The basic microstructural element of the enamel — prism can be represented in the form of a biocomposite composed of co-ordinated systems in the following sequence: globular nanoparticles → nanofibrils → subindividuals → chain aggregates of subindividuals → blocks → filamentary crystal (enamel prism). Unified structure-forming tendencies of the apatite enamel and of abiogenic natural mineral structures have been noted.

**Keywords:** enamel prism, apatite, structural elements, crystal, subindividuals.

**For citation:** Katkova V.I., Golubev E.A. Multilevel composition of the enamel apatite of human teeth (in the context of biomineralogy). *Stomatology for All / International Dental Review*. 2019; 2 (87): 48—53 (in Russ.).

#### **P.54 The application of the dental implant placement technique with simulated collagen subtotal demineralized cube in single-step dental implantation of placing**

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#### **Summary**

The clinical application of the new domestic material Boost in the form of subtotally demineralized collagen cube was performed in 3 patients with immediate dental implantation into the socket of the removed tooth in situations complicated by the unplanned absence of satisfactory primary stabilization. A new technique for the placement of a dental implant in a simulated osteoplastic material with simultaneous implantation is proposed. The effectiveness of the material was evaluated with computed tomography, orthopantomography and photographs 3, 6 months and 1 year after prosthetics.

**Keywords:** immediate implantation, xenogenic material, osteoplasty of the socket.

**For citation:** Stomatov D.V., Efimov Yu.V., Stomatov A.V., Nesterov A.V., Popoudin A.A., Bodachevsky D.V., Kurjaev I.I. The use of technology the introduction of dental implants in simulated collagen subtotal demineralized cube in immediate dental implants. *Stomatology for All / International Dental Review*. 2019; no. 2 (87): 54—57 (in Russ.).