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6th Edition of International Conference on

DENTISTRY AND ORAL HEALTH

11-12

VIRTUAL EVENT

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BOOK OF

ABSTRACTS

6TH EDITION OF INTERNATIONAL CONFERENCE ON

DENTISTRY AND ORAL HEALTH

11-12 AUGUST

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ABOUT MAGNUS GROUP

Magnus Group (MG) is initiated to meet a need and to pursue collective goals of the scientific community specifically focusing in the field of Sciences, Engineering and technology to endorse exchanging of the ideas & knowledge which facilitate the collaboration between the scientists, academicians and researchers of same field or interdisciplinary research. Magnus group is proficient in organizing conferences, meetings, seminars and workshops with the ingenious and peerless speakers throughout the world providing you and your organization with broad range of networking opportunities to globalize your research and create your own identity. Our conference and workshops can be well titled as 'ocean of knowledge' where you can sail your boat and pick the pearls, leading the way for innovative research and strategies empowering the strength by overwhelming the complications associated with in the respective fields.

Participation from 90 different countries and 1090 different Universities have contributed to the success of our conferences. Our first International Conference was organized on Oncology and Radiology (ICOR) in Dubai, UAE. Our conferences usually run for 2-3 days completely covering Keynote & Oral sessions along with workshops and poster presentations. Our organization runs promptly with dedicated and proficient employees' managing different conferences throughout the world, without compromising service and quality.

ABOUT ICDO 2022

Through our initiatives in dental education and research, Conferences organized by Magnus Group on Dental and Oral Health is one of the major professional gatherings dedicated to improving dental and oral health by supporting advanced science-based evidences. Since its inception, ICDO has been dedicated to its tagline of connecting dental and oral experts around the world through knowledge sharing and mutual cooperation for incubation.

We are thrilled to state the fact that after 5 highly successful annual conferences on dentistry and oral care, we are now pleased to welcome you all to the “6th Edition of International Conference on Dentistry and Oral Health (ICDO 2022)” during August 11-13, 2022 (Online Event).

The congress main theme is to present unique ethical and responsive techniques to all researchers in regard to dental cases and future medical care in dentistry, as well as to deal with the most up-to-date research and it strives to provide a meaningful theme of “Investigating the Latest Trends in Dentistry for Vibrant Smiles and a Healthy Lifestyle.”

Dentistry is the study, analysis, prevention, and treatment of illnesses, disorders, and conditions of the oral cavity, including the dentition but also the oral mucosa, as well as end-to-end and related structures and tissues, notably in the maxillofacial (jaw and facial) area. Although most people associate dentistry with teeth, the field of dentistry, often known as dental medicine, encompasses other components of the craniofacial complex. The congress is a platform dedicated to the development and dissemination of dental and oral health knowledge. We cordially invite all distinguished researchers, students, and delegates to join us in seeing the valuable scientific conversations and contributing to the longer-term developments in the field of dentistry and oral care and the summit is designed to give dentists, researchers, scientists, academicians, healthcare experts, oral care professionals and industrialists with clinically relevant, evidence-based knowledge on topics that may impact their practise.

Recommended Dental Conferences: Dental Conferences 2022 | Dental Conference | Oral Health Conferences | Dental Meetings | Oral Health Conferences 2022

KEYNOTE FORUM

DAY 01

6TH EDITION OF INTERNATIONAL CONFERENCE ON

DENTISTRY AND ORAL HEALTH

11-12 AUGUST

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Influence of Er: YAG laser on root surface during periodontal therapy

During the complex pathogenesis activities caused by periodontal disease, the tooth root surface undergoes a numerous change in physical and chemical structure, but also becomes cytotoxic due to the release of bacterial toxins that are embedded in the cementum of the tooth root. The main goal of periodontal therapy is to eliminate the infection and achieve healthy periodontal environment by removing bacterial deposits of dental plaque, dental calculus and the presence of subgingival concrements and endotoxins from the root surface. The ultimate goal of all periodontal procedures is to make the treated root surface biologically compatible with the host's periodontal tissues and to enable proper healing of the periodontium. During the initial periodontal treatment, mechanical debridement is performed on the periodontally compromised root surface to eliminate all calcified deposits (supra- and subgingival concrements), as well as bacteria and their endotoxins to restore the biological compatibility of the root to the disease. There are two basic therapeutic modalities in periodontology - conventional and laser-assisted therapy. Er: YAG is most common used laser that works in the field of infrared wavelength (2,940 nm). Due to its high absorption in water and hydroxyapatite, several studies have shown the effectiveness of this laser in the ablation of hard and soft tissues and its bactericidal effects with little or no pain in clinical application confirm the numerous advantages of this laser. Er: YAG laser is one of the most spectacular types of lasers that can be used in periodontal therapy. Its effectiveness in removing the softened and pathologically altered parts from cement and in smoothing the root surface has been proven in vitro studies. The latest scientific evidence suggests that the use of Er: a YAG laser wavelength in the treatment of chronic periodontal disease is equivalent to ultrasound and manual instrumentation of periodontal pockets. Taking into consideration the complex pathological changes, as well as the complexity of reparative and regenerative processes conditioned by the surface interface of the hard wall of the periodontal pocket, the aim of this presentation was to evaluate the morphological and chemical characteristics of tooth cement after application of different periodontal therapeutic modalities. The results of the conducted SEM analysis indicate that after conventional treatment there is advanced, while in laser treated areas there is moderate surface alteration. Based on the results, it can be concluded that after the laser-assisted therapy, the surface roughness as a component of the topographic texture of the cement is very similar to that of healthy teeth. Also, there is a significantly greater reduction in the thickness of the cement after the conventional treatment compared to the laser assisted periodontal therapy. It can be concluded that the root surfaces after the laser-assisted therapy show a greater morphological and chemical similarity with healthy root surfaces than the root surfaces treated with conventional therapy.

Audience Take Away

- The author wants to present the effects of conventional and laser-assisted periodontal therapy on the micro- and nanodimensional characteristics, as well as the chemical changes of the cementum of the root surfaces of teeth affected by chronic periodontitis. The values for the given parameters are compared with those of untreated healthy root surfaces which are assumed to offer the best properties and the most favorable micro-mechanical environment for the normal periodontal healing process.
- All findings in the presentation indicate that there is essential importance of the nanostructure and chemical characteristics of the root surface and it can be noted that the application of laser-assisted root surface treatment can contribute to the design of an appropriate biomimetic root surface as a prerequisite for the expected reparation/ regeneration after treatment of periodontally affected teeth. We believe that the obtained results will make a scientific contribution in the field of modern therapy of periodontal disease and will confirm the scientific findings, which

indicate that the use of laser light gives greater benefit in the healing of the periodontium after the therapy. The conclusions of this presentation are important both for the clinical dentists and for supplementing the scientific knowledge for the effect of different therapeutic modalities in the periodontology on the topographic-orphological nanodimensional and chemical characteristics of the root surface. By determining the thickness of the remaining cement of the treated teeth, it was determined that the degree of invasiveness in the conventional one is higher in relation to the laser-assisted periodontal therapy. Finally, it is noticeable that laser-assisted periodontal treatment has advantages over conventional therapy. This gives a significant scientific contribution that will have significance in everyday dental practice. The presented conclusions will contribute to solving the complex dilemmas that dentists have about the superiority and opportunities that lasers provide in everyday dental practice. Finally, technological advances and enhancements have increased the possibilities of available laser systems for their use in everyday dental practice. Among them, the laser devices that produce Er: YAG laser beams seem to have a promising use and are considered to become an indispensable tool in modern dentistry.

Biography

Mihajlo Petrovski, DDM in December 2013, Dr. Mihajlo Petrovski become Master of Dental Sciences ("Oral health in institutionalized elderly"). In November 2021, become specialist in periodontology. He enrolls PhD studies in the academic year 2017/2018 in the field of Basic and Clinical Research in Dental Medicine ("Analysis of micro-tographic and chemical characteristics of the root surface of the tooth after conventional and laser assisted periodontal therapy") and in 2021he becomes PhD in Dental Sciences. In May 2017, Dr. Mihajlo Petrovski becomes teaching assistant at the Faculty of Medical Sciences at University "Goce Delchev" in Stip.