

**Introduction.** The mandibular cranial dysfunctions are pathological entities in which at least one of the components of the dento-maxillary apparatus is not structurally or functionally adapted to its own activity. These disorders include manifestations in the temporomandibular joint or neuromuscular system and occlusal disharmony manifested in the dento-periodontal component of the dento-maxillary apparatus. Unfavorable occlusal relations causes changes to the fundamental positions of the mandible, resulting in non-physiological forces exerting a negative impact on the periodontium manifested clinically and radiologically through: dental mobility, gingival retraction, periodontal bags, widening of the desmodontal space.

**Aim of the study.** The purpose of this study was to identify periodontal signs produced by occlusal trauma and to remove potentially harmful paradontm factors by obtaining a mandibular-maxillary relationship that maintains the health of the dento-maxillary apparatus.

**Materials and methods.** A study based on the clinical, paraclinical and dental treatment of the patients included in the study group was performed. A lot of 20 people with at least one of the following signs considered to be inherited from mandibulo-cranial disorder: dental mobility, pathogenic dental wear, root resorption, widening of the desmodontal space, Stielmann cracks, occlusal parapuncture (bruxism), hypercementosis, false or true periodontal pockets. The age range most commonly experienced by periodontal suffering from occlusal trauma is between 15 and 45 years with an average of 32.9 years. The study was conducted between 01-02-2016 and 01-02-2018, the ratio of women and men being 16 to 4 in favor of women.

**Results.** During the study, we were able to highlight that primary or secondary occlusal trauma is a cofactor in the production of periodontal disease. In the absence of microbial plaque, occlusal trauma, does not produce gingivitis or periodontitis, and minor periodontal lesions are reversible. The treatment of dysfunctions of the cranio mandibular system is aimed at: occlusal stability, satisfactory mastication, satisfactory phonation and the absence of signs of marginal periodontal suffering.

**Conclusions.** Occlusive trauma occurs when one or more teeth are harmful to excess strain, by intensity, duration, frequency, direction. Occlusal trauma is a cofactor in the production of periodontal disease; therefore, treatment should begin early by correctly identifying the causes of occlusal disharmony and removing them. The purpose of the treatment is to establish the morpho-functional integrity of the dento-maxillary apparatus with minimal biological sacrifice.

**Key words:** cranial mandibular disorders, periodontium, occlusal trauma, occlusal disharmony

### 336. CEMENTED-RETAINED VERSUS SCREW-RETAINED FIXED IMPLANT-SUPPORTED PROSTHESES

Auhors: **Olga Cheptanaru, Svetlana Melnic, Cristina Postaru**

Scientific advisers: Chele Nicolae, MD, PhD, Associate professor, Department of Oral and Maxillo-facial Surgery and Oral Implantology *Arsenie Gutan*; Diana Uncuta, MD, PhD, Associate professor, Department of Dental Propaedeutics *Pavel Godoroja*

*Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

**Introduction.** Prosthetic rehabilitation of partial edentulous patients is today a challenge for clinicians and dental practitioners. A satisfying aesthetic result may not only depend on a visually pleasing prosthesis but also to natural surrounding peri implant soft tissue architecture and emergence profile. The application of dental implants in order to recover areas of missing teeth is going to be a predictable technique, however some important points about the implant angulation, the stress distribution over the bone tissue and prosthetic components should be well investigated for having final long term clinical results. There are two different methods of retaining a fixed implant-supported restoration: screw retention and cementation. All of the two restoration techniques give to the clinicians several advantages and some disadvantages.

**Aim of the study.** To evaluate the survival and success of screw versus cement-retained implant crowns and to compare the long-term outcome and complications of cemented versus screw – retained implant crown prostheses.

**Materials and methods.** The study included 20 people with single missing tooth, who received implant prosthetic treatment. Patients were divided into two groups: the study group with 10 screw retained restorations and the control group with 10 cemented-retained restorations. The following parameters consisted of PES, WES, ceramic fracture, abutment screw loosening, metal frame fracture and radiographic bone level were evaluated.

**Results.** Twenty patients were treated with implant supported crowns, 10 in the cemented group and 10 patients in the screw-retained group. Significant differences between groups were not found. There were no metal frame fractures, ceramic fracture or abutment screw loosening in either type of restoration.

**Conclusions.** Single tooth implants seem to be an achievable treatment option for functional rehabilitation of tooth loss. There is no significant difference between cement- and screw-retained restorations for major and minor outcomes with regard to

**Key words:** implant, cement- retained, screw- retained

### 337. TREATMENT OF DEEP CARIES USING MODERN TECHNIQUES

Author: **Irina Onoi**

Scientific advisers: Chetrus Viorica, MD, PhD, Associate professor; Roman Ion, MD, University assistant, Department of odontology, periodontology and pathology

*Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

**Introduction.** Deep caries is treated using Stepwise technique with subsequent application of calcium hydroxide filling (Base.it, Spident). Mineral trioxide aggregate (ProRoot MTA, Dentsply) is used in the treatment of deep caries, inducing pulp cell proliferation and high-strength tissue formation.

**Aim of the study.** To evaluate the success rate of modern techniques in the treatment of deep caries.

**Materials and methods.** The study was based on the treatment of 18 patients diagnosed with deep caries. Half of the patients were treated with Stepwise technique using calcium hydroxide, while mineral trioxide aggregate was used to treat other patients. The operative protocol was performed at a single visit: X-ray, professional teeth cleaning, vitality tests, isolation of the operative field, cavity preparation, applying the medicated and insulating filling, applying the final filling and control X-ray.

**Results.** To carry out a correct and successful treatment of deep caries it is important to establish the right diagnosis. Compliance with all stages of clinical and paraclinical examination will allow to minimize diagnosis errors. Treatment entailing compliance with all stages increases the chance of preserving dental vitality. Each method of treatment needs to be staged and assessed over time. Periodic control increases the rate of success and prevents the occurrence of complications.

**Conclusions.** The study results demonstrate that the treatment of deep caries by using mineral trioxide aggregate has a higher success rate as it induces pulp cell proliferation, cytokine release, formation of very high-strength tissue, and synthesis of dentin interface that resembles hydroxyapatite. The treatment of deep caries with Stepwise technique using calcium hydroxide shows a lower success rate due to the fact that calcium hydroxide does not offer a sealed adaptation to dentin, it is cytotoxic in cell cultures and reparative dentin is characterized by "tunnel defect".

**Key words:** deep caries, Stepwise technique, calcium hydroxide, mineral trioxide aggregate