

dimension. The measures applied must ensure the prophylaxis and interception of periodontal lesions.

Aim of the study. The aim of this study is to evaluate the practical effectiveness of the use of weak and well controlled orthodontic forces.

Materials and methods. For this study were selected 10 patients with many dentomaxillary abnormalities, associated with periodontal aspects. The mean age of the patients was 18 ± 60 years. Patients were selected and are included in the study according to the orthodontic address. Patients underwent orthodontic treatment with modern fixed appliances - polygregated systems pre-fitted with brackets, slot 0.22x0.28. The point of application of the orthodontic force was applied more apically. Some thermo-titanium nickel-titanium springs from the 7th generation, with smaller diameter and cross section, support slot 0.022 were used. Longer use of superelastic springs was also achieved at each stage of treatment.

Results. In 7 patients there was an increase in the periodontal healing level, and in 3 patients there was an increase in the periodontal condition. Post-orthodontic persistence of periodontal inflammation is attributed to non-compliance with oral hygiene, maintaining the cause - bacterial plaque.

Conclusions. Evaluation of the periodontal condition in orthodontic treatment determined clinical variations, depending on the treatment stage, periodontal medication, applied forces, oral hygiene status. In conclusion, a precise calculation of the biomechanics of the orthodontic forces, their points of application, the resistance and the duration of application lead to a favorable result.

Key words: Periodontics, dento-maxillary anomalies, orthodontic forces, complex orthodontic treatment.

399. ANGLE CLASS I MALOCCLUSION. PRINCIPLES OF DIAGNOSIS AND TREATMENT

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Introduction. Nowadays the importance of the smile is being extraordinarily important. The smile influences our mood, self confidence, thoughts and social relationships. Therefore, owners of an aesthetic smile are more prone to smile than those with dento-alveolar disharmonies. Following this aspect, one of the main reasons for the orthodontic treatment is the aesthetical one. Angle class I malocclusions are characterized by dental alignment disharmonies, when skeletal involvement is minor, presenting a normal antero-posterior intermaxillary relationship.

Aim of the study. Etiopathogenic study, correct diagnosis and treatment of Angle class I malocclusion.

Materials and methods.. A study was performed on 12 patients who had different degrees of severity of dento-maxillary crowding. For diagnostical purpose the following investigations were done: panoramic radiography (OPG), cephalometric and model analysis. An individual treatment plan was done for each patient. Two methods of treatment were selected: removable and fixed orthodontic appliances.

Results. The treatment method was chosen according to severity degree and patient's age. Thus, 8 patients of 12 were treated through fixed appliances, while the other 4 persons were using removable orthodontic appliances. Cooperative patients during the growth period and that have no severe teeth crowding, have wore removable appliances for 9 to 12 months, while the others were treated through fixed adhesive system within about 1,5 years.

Conclusions. Patients that wore removable appliances, followed by fixed appliances, achieved their aesthetic objectives, maximum intercuspation and a functional occlusion.

Key words: disharmony, Angle class I malocclusion, diagnosis, treatment, aesthetic, study, crowding, removable appliances, fixed appliances, dental alignment.

400. APPLICATIONS OF PALATAL MICROIMPLANTS FOR ORTHODONTIC TRACTION OF IMPACTED CANINES

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Introduction. Maxillary impacted canines can be considered a complex problem that often occurs in clinical practice. Canine is the second most frequently impacted tooth in the dental arch after the third molar. Maxillary impacted canines represent a common and challenging clinical situation. Fixed orthodontic treatment has been largely utilized but with the drawbacks of a prolonged treatment time and the possibility of intrusion of the adjacent teeth based on the law of action and reaction. Both of this inconvenience can be overcome through means of a Skeletal anchorage, using microimplants, known as TAD (Temporary Anchorage Devices).

Aim of the study. The aim of this study is to evaluate the practical effectiveness of micro implants in the "T- zone", for the management of maxillary impacted canines.

Materials and methods.. For this study were selected 15 patients with maxillary impacted canines, CBCT was done for all of them. Thirteen patients had one upper canine impacted palatally, and two patients had both upper canines impacted palatally. None of them had previous orthodontic treatment or active periodontal disease in the beginning of treatment. The 6-8 mm micro-screws with bracket-like head with the slot dimension of 0.22 mm were inserted using the screw driver, with a torque wrench to check that the tightening torque does not exceed 50 Newton. In the same surgical procedure the impacted canines were exposed with its application of an orthodontic eyelet.

Results. In 13 patients the mini screws had a long-term success, 2 patients had lost 1 of two microimplants. The mean traction duration was been 5 months with a range from 3 to 7 months, depending on the depth of the impaction, root position and angulation. After canines traction was done, the microimplants were used for anchoring the segmented elements in order to align the canines in the arch.

Conclusions. Midpalatal TADs can be used as absolute anchorage for difficult tooth movement such as traction of the impacted canines. Thus, the microimplants showed itself capable of supporting the orthodontic load alone, throughout the decompression phase of the impacted canines, thus avoiding the transmission of permanent invasive vertical forces, thereby preserving it from undesirable effects.

Key words: Palatal microimplants, maxillary impacted canines, skeletal anchorage, T-zone.