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МЕДИЦИНСКИЕ НАУКИ

ORTHODONTIC TREATMENT FEATURES IN EARLY MIXED DENTITION STAGE

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Nowadays, the question of the necessity of early orthodontic treatment remains quite relevant, because most patients seek orthodontic help at the age of 11-13 years, which is exactly during late mixed dentition stage or at the permanent dentition stage. Therefore, it is important to annually conduct routine preventive examinations of children in organized kindergartens and schools to identify problems at the early mixed dentition stage. Many Ukrainian and foreign experts believe that the first orthodontic examination should be performed at the age of seven, when both maxillary and mandibular first permanent molars, permanent central and lateral incisors should be erupted. We believe that the first orthodontic examination should be performed no later than 6 years, when it is possible to see the first signs of future problems with occlusion or violations of teeth eruption, dental crowding, vestibular and oral position.

Orthodontic treatment of children in the mixed dentition stage usually begins at the age of 7-9 years, when there are most deciduous teeth and a few permanent (incisors and first molars). The aim of early treatment is to correct severe cases, including malocclusions of the gnathic form, severe dental crowding, due to the use of functional devices such as Twin-block, Myobrace, LM-Activator, Andresen-Haupl

during the period of growth spurt before puberty. Due to the modern tendency towards early change and eruption of teeth in children, the question of the use of fixed mechanical orthodontic appliances in the early mixed dentition period is relevant. Maxillary arch expansion is achieved through the use of fixed orthodontic appliances with expansion screws and supportive elements such as bands, occlusal plates, artificial crowns which are used during the mixed dentition stage for the treatment of dental crowding, crossbite and for spontaneous correction of the class II malocclusion. Many foreign scientists note that the effectiveness of those appliances is quite high in most patients with narrowing of the maxilla, as it expands not only the dental arch, but also its apical base. Moreover, certain expanders are fixed on the temporary second molars instead of the first permanent ones, such as Marco-Rosa appliance, which allows not only to avoid side effects of the expansion, such as buccal tipping of the first permanent molars due to dentoalveolar compensation mechanisms, but also to achieve stable and long-lasting orthodontic treatment results.

We believe that early orthodontic treatment of children during mixed dentition stage with a use of functional and fixed mechanical orthodontic appliances is a very important issue nowadays, as the choice of appropriate appliance during treatment planning ensures harmonious growth and development of dental arches, jaws, upper pharyngeal airways, bad habits, improvement of the patient's face profile and reduction of orthodontic treatment duration, which is a guarantee of stability of the result and is usually not as difficult and complex as in the period of permanent occlusion[1- 10].

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