



Medical Psychological Approach In The Development Of Early Diagnosis And Treatment Of Children'S Crossbite

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ABSTRACT

Anomalies of occlusion of dentition belong to the group of major dental diseases and are characterized by high prevalence. Their frequency and prevalence in temporary bite has increased significantly in recent decades, ranging from 17 to 100% [1, 14, 21, 22, 25]. Despite the implementation of preventive programs and the introduction of advanced medical technologies, the prevalence of dental anomalies in children over the past ten years has not tended to decrease and remains high both in Uzbekistan and abroad. Anomalies of occlusion of dentition have a high prevalence in young children [19,20,22, 25]. In particular, F. Y. Khoroshilkina (1999) indicates that according to the results of studies, dental anomalies on average occurred during the period of milk bite – in 24%, during the shift period – in 49%, during the permanent period, at the age of 17 - in 35%. The number of anomalies in the period from the beginning of the formation of a temporary bite to the beginning of a replacement increased by 25%.

Keywords:

Crossbite, early diagnosis, treatment, medical and psychological approach.

Violations of orofacial functions aggravate the severity of dental anomalies. In such children, problems with the pronunciation of individual sounds are found in 27.9%, 47.1% - the usual oral or mixed type of breathing, 23.8% - infantile type of swallowing, 29% - impaired posture, 44.4% - frequently ill children (impaired respiratory function), whereas in children without malocclusion speech defects are observed only in 6.8%, impaired posture - in 10.5%. In children with anomalies of occlusion of the dentition, abnormalities in the immune system, a decrease in the main parameters of external respiration and a decrease in the concentration of oxygen in the blood at low saturation, a high level of carious activity were also detected [2,4,6,7,8,10,12,14,15]. Violations of the functions of chewing, speech, breathing, mouth

closure and swallowing occur in 40% - 69% of children with dental anomalies [3,5,9,11].

One of the most difficult pathologies in orthodontic practice is undoubtedly crossbite. Crossbite refers to transversal anomalies. It is caused by the discrepancy between the transversal dimensions and the shape of the dentition. Various terms describing crossbite are used: oblique, lateral, buccal, vestibulo-, buccolinguo-occlusion, lateral forced bite, articular crossbite, laterognathia, laterogenia, laterodeviation, laterodisgnathia, lateroposition, exo- and endo-occlusion. Untimely diagnosis of crossbite increases the duration of pathology treatment, as well as the social adaptation of the child [16,17,18,23,24].

The frequency of crossbite, according to the authors, varies at different ages: in children and adolescents - from 0.39 to 1.9%, in adults - about 3% [13].

Cross occlusion can be one- and two-sided. Both one dentition (upper or lower) and both dentitions, as well as the jawbones, may be responsible for the occurrence of cross occlusion. Clinically, this form is manifested by the following facial features: facial asymmetry, which depends on the shape and severity of the anomaly, one- or two-sided disorder, the degree and extent of the violation of the closure of the dentition, the dental alveolar or skeletal form of the anomaly; a violation of the configuration of the face, the displacement of the chin towards the lips and the obliquity of the chin. In palatococclusion, the palatine tubercles of the upper lateral teeth are projected when closed orally from the longitudinal fissures of the lower teeth of the same name as a result of a decrease in the transverse dimensions of the upper dentition. At the same time, the palatine tubercles of the lateral teeth of the upper jaw, when closed, do not contact the longitudinal fissures of the lower lateral teeth, but with their lingual tubercles, and with the severity of the anomaly, they may remain without contact [26,28,30,32,34,35]. Violations of orofacial functions aggravate the severity of dental anomalies. In such children, problems with the pronunciation of individual sounds are found in 27.9%, 47.1% - the usual oral or mixed type of breathing, 23.8% - infantile type of swallowing, 29% - impaired posture, 44.4% - frequently ill children (impaired respiratory function), whereas in children without malocclusion speech defects are observed only in 6.8%, impaired posture - in 10.5%. In children with anomalies of occlusion of the dentition, abnormalities in the immune system, a decrease in the main parameters of external respiration and a decrease in the concentration of oxygen in the blood at low saturation, a high level of carious activity were also detected [27,29,31,33]. Violations of the functions of chewing, speech, breathing, mouth closure and swallowing occur in 40% - 69% of children with dental anomalies [9,11,13].

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With whole forms of crossbite, the function of chewing is significantly impaired, which is due to a decrease in the area of occlusal contacts, biting of the mucous membrane of the cheeks. With lingual crossbite, the probability of lateral movements of the lower jaw is limited. There is also a speech disorder, which is connected with a change in the position of the tongue when pronouncing sounds[11,13].

Cross occlusion is accompanied by pronounced violations of the function of chewing, blocking of movements of the lower jaw and violation of the coordination activity of the masticatory muscles [23].

Anomalies formed in childhood in the transversal plane cause a restructuring of the maxillary system not only at the level of the dentition and alveolar process, but also at the level of the jaw body [17, 28].

Of great importance for differential diagnosis is the X-ray examination of the temporomandibular joints. With a cross bite without displacement of the lower jaw, both articular heads are located symmetrically and most often in the depth of the articular pits. If the lower jaw is displaced, they can be placed asymmetrically. The normal function of the temporomandibular joints is often impaired, which in the future may cause their disease in the form of deforming arthrosis [13,14].

Uncorrected displacement of the mandible can cause undesirable modification of the growth of both the upper and lower jaws, dental alveolar compensation, leading further to facial asymmetry and dysfunction [11, 24, 30, 31].

Early orthodontic treatment leads to the restoration of full-fledged chewing function, which ensures the harmonious development of the dental system and creates full-fledged conditions for the functioning of the entire gastrointestinal tract of the child. At an early age, it is quite reasonable to carry out a set of measures - non-hardware and hardware methods in order to eliminate the identified violations [11].

Occlusion anomalies are accompanied by deformation of the occlusal plane, changes in the movements of the lower jaw, violation (disharmony) of the masticatory muscles and temporomandibular joints [23, 16, 27].

About a hundred years ago, isolated studies on the prevalence of dental anomalies began to appear. These data became necessary for the development of organizational principles for the prevention of HPV and specialized medical care and dispensary work [6].

The progressive increase in the prevalence of dental occlusion pathologies from temporary to removable and permanent occlusion confirms the need for early orthodontic intervention already in the period of formed temporary occlusion, that is, at the age of 3-6 years [2, 3, 5, 9, 15, 26].

While getting acquainted with the above literature, we got acquainted with orthodontic treatments for malocclusion, but did not find detailed information about cross-bite in childhood and their psychological state. Therefore, depending on the age of children in the orthodontic treatment of crossbite, we set a goal to increase the effectiveness of treatment, taking into account their psychological state.

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