

New Methods of Application of Orthodontic Treatment of Mesial Occlusion in Children of Different Ages

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Relevance of the study. Mesial occlusion is a common pathology of dental occlusion in children, which differs from other anomalies by significant protrusion of the lower teeth. Here, the overdeveloped lower jaw is a real mesial occlusion as well as a constant forward movement of the underdeveloped upper or lower jaws - there are false mesial occlusions. Regardless of the nature and external features of the manifestation of mesial occlusions, it requires treatment. Mesial occlusions complain that the patient has severe deformities of the oval face, problems with posture, digestion and frequent headaches. Treatment of mesial occlusion in childhood when the tooth-jaw is forming gives an effective result.

From the first days of life in children with facial-jaw defects, conducting early orthodontic treatment for children is a preparatory joint in the pre-operative period, which is aimed at creating favorable conditions for further surgical intervention. Early orthodontic treatment procedures are desirable to separate the oral cavity and nasal cavity, prevent the development of secondary deformities, and normalize the feeding process [1.3.5.7.9.11].

Among patients seeking orthodontic care, patients with distal dental occlusion make up 65%. Analysis of publications on the epidemiology of distal occlusion of teeth made it possible to determine that this anomaly is one of the common anomalies of the tooth - jaw system, and on average 12.5-30.5% of all types of distal occlusions. In the presence of common somatic diseases, this rate increases by 74.6%.

The study of the frequency of developmental pathology of TJA in children is the first step towards optimizing dynamic monitoring and improving the organization of orthodontic care in children. Over the past 30-40 years, there has been a trend of increased TJAD frequency in children, which is associated with the influence of stable pathological mechanisms in their formation.

A number of authors say that the increase in morbidity is associated with a change in the environmental situation: air pollution, changes in the content of microelements in drinking water. Their conclusion is based on an integral connection between macro - and microorganisms. One of the important factors in the development of TJA and deformities in children is the damage of the tooth-jaw, which has occurred for many millennia and is currently ongoing, as a result of exogenous and endogenous influences during embryonic development.

In children, the growth and steepness of the cranial part of the skull led to a decrease in the facial part of the skull, a decrease in the jaws, a change in their size, shape and morphology. Tooth-jaw development has occurred at different rates in different parts of the globe and differently in people of different nationalities and races [2.4.6.8.10.12].

In recent years, interest in the problem of stable growth of TJA and deformations has increased significantly. Despite the introduction of modern diagnostic methods, the prevalence rate is increasing every year. It is known that the appearance and formation of the body is largely associated with the health of the mother, the genetic characteristics of the parents, the conditions of the gestation period, which in turn are influenced by a number of factors-external factors, medical – social, sanitary-hygienic, environmental, etc.

Extensive epidemiological studies of the prevalence of children with TJA and deformities have shown an increasing number of babies born with this pathology, and in the next decade the frequency of such

cases was 2 times higher than 100 years ago. Each year, the number of newborns with these defects per 100,000 of the population increased by 1.38. According to the WHO, the birth frequency of children with these defects in the world is 0.6-1.6 cases per 1000 newborns.

It is found that the etiological causative agent of mesial occlusion includes: hereditary predisposition; exposure to negative factors during intrauterine development; trauma during childbirth; early removal of milk teeth; late withdrawal of milk teeth; inflammatory processes of the upper respiratory tract in children; harmful habits (finger, lunge, lip absorption); rickets kasalik and its complications.

It should be noted that today there are two types of mesial occlusion: physiological – characterized by anatomically morphological and functional norms of the tooth-jaw joint; requires pathological - orthodontic intervention, since morphological and functional changes occur [12.14.16.18.20.22.23].

Classification of mesial occlusion in dental practice in 2004, Persin proposed a system of 9 classes based on his experience:

- lower jawmacrognathia(growth of the lower jaw);
- upper jawmacrognathia(protrusion into the upper jaw);
- upper jawmicrognathia (underdevelopment of the upper jaw);
- upper retrognathia (deep displacement of the jaw to the skull);
- upper jawmicrognathia and lower jawmacrognathia;
- upper jawretrognathia and lower jawprognathia;
- upper jawmicrognathia and lower jawprognathia;
- upper jawretrognathia and lower jawmacrognathia;
- the usual expansion of the lower jaw forward.

Today, by the degree of curvature of the mesial occlusion, it is classified as follows:

the first level is anomalies that are not visually noticeable, and the size of the gap between the teeth is up to 2 mm, the lower teeth differ in that they protrude slightly;

the second level-the "strong-willed chin" appears, the gap increases to 10 mm, the teeth of the lower jaw constantly touch the mucous membrane of the upper lip;

the third level - it is clearly felt that the lower jaw is larger than the top, the space between the teeth exceeds 10 mm, the teeth do not touch. There will also be other anomalies, one of which - the dense arrangement of teeth is observed. The third degree of curvature is dangerous, since this mesial shift of the teeth almost always turns into an open prikus.

Orthodontic advice is important to determine the mesial occlusion, to correctly assess its type and level. Examination of patients begins with a face and face profile examination, measurement of anthropometric parameters, visual assessment of occlusion in the oral cavity, a functional test that allows the separation of true and false mesial occlusion. The degree of mesial occlusion is assessed by the results of the determination of the bite with a roller bite, the study of diagnostic models, orthopantomography, lateral teleradiography, X-ray and tomography of the lower jaw of the chakka. In some cases, electromyography of the chewing muscles is carried out, and consultation with a speech therapist and an otolaryngologist is also required [13.15.17.19.21.23].

Conclusion. Methods to prevent mesial occlusion. Timely preventive measures play a very important role in preventing the appearance of pathology. Among them, breastfeeding a newborn baby - promotes the harmonious development of the jaw and its proper functioning. Periodic examination of teeth by orthodontists and other specialists can help identify diseases that cause mesial occlusion at an early stage. This will help eliminate defects as quickly as possible and prevent many complications.

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