



## ASSESSMENT OF THE EFFECTIVENESS OF CHEWING IN CHILDREN WITH ABNORMALITIES OF THE FACIAL JAW SYSTEM AND INDICATORS OF CAVITY

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### Abstract

#### Relevance of the research topic

The dentoalveolar system of a child is the part of a growing organism that changes dynamically under the influence of a complex of interconnected and interconnected factors. According to many observations and literary publications around the world, there is an increase in the number of children with anomalies and deformities of the tooth-jaw system (53-75%). In childhood, a high frequency of anomalies and deformities in the development of the dentoalveolar system leads to a violation of the health and social adaptation of the child in the children's community. In children with dentoalveolar anomalies and deformities, there is a high frequency of the caries process and a high prevalence of inflammatory diseases of the oral mucosa. Dental congestion (biting) disorders in childhood were reported in 46% of observations. This category of childhood patients has severe deformities that a highly qualified orthodontist requires. The combined pathology of dental occlusion in children is a complex category of patients with severe deformities of the dentoalveolar system, including a bite disorder in three mutually perpendicular planes. In 50% of cases, dentoalveolar anomalies are represented by combined dental congestion anomalies. In addition to the obvious aesthetic changes in the face-to-face area in children with dental congestion anomalies, serious functional disorders of chewing, breathing, swallowing and speech formation have also been noted. As a result of quality orthodontic treatment in childhood, aesthetic and functional acceptability is achieved, which makes it possible to increase the quality of life and social adaptation of the child. A prerequisite for successful orthodontic treatment is the fulfillment of the wishes of the patient and his parents in childhood before starting orthodontic treatment and satisfaction with the therapeutic result obtained. Modern literary sources cover the issues of the mechanism of regulation of bone metabolism of the facial region. To stabilize the therapeutic result achieved in an orthodontic patient, at present, the authors suggest using calcium and vitamin preparations during the retention period. After successful orthodontic rehabilitation in childhood, it is necessary to achieve a long-term stability of the results of treatment. Relapse rates are currently reported in 20-25% of childhood patients who received qualified orthodontic care but were unable





to maintain it during retention. After the therapeutic stage, the unwillingness of a young patient to continue using orthodontic devices during the period of orthognathic biting and even holding with teeth leads to a decrease in the stability of the position of the displaced teeth, a partial and complete cessation of the results of treatment. In orthodontics, relapse is an urgent topic for all orthodontists, leading to the appearance of initial disorders, partial or complete return of teeth in a short time . Recent increases in the quality of orthodontic treatment, as well as a decrease in the duration of treatment due to the high efficiency of modern orthodontic equipment, require 6 high levels of attention to maintain the results of orthodontic treatment, determine its optimal time parameters and design characteristics of orthodontic holders. Many authors have made recommendations on the need for experimental and clinical justification of an integrated approach to planning a holding period. Currently, there are no data on retention periods in childhood orthodontic patients, depending on age, severity of dentoalveolar deformity, time of treatment stage, and devices used. The level of development of the research topic. Children with joint pathology of dental occlusion are one of the most difficult categories of patients in Pediatric Dentistry. The retention period after orthodontic treatment is necessary to prevent recurrence of the final occlusion result, which can occur due to the efforts of the periodontist, who seeks to return the teeth to their original position, as well as due to deviation from the ideal occlusion if the final occlusion contacts are not perfect. Various designs of holding devices are used to ensure reliable fixation of the result of the resulting treatment. In particular, the combination of a removable holder and a non-removable holding mouth guard is a modern and effective holding method. Currently, due to an increase in the quality and effectiveness of orthodontic care, as well as a reduction in the course of treatment in children's patients with occlusion anomalies, it is necessary to analyze the stage of retention and the duration of the applied retention systems.

#### Chewing efficiency and metabolism

The effectiveness of chewing is the main factor for adequate chewing of food and, therefore, for optimal digestion and absorption of nutrients. Insufficient chewing efficiency can lead to:

- \* Chewing disorders: problems with grinding food, difficulty swallowing.
- \* Low digestion: reducing the absorption efficiency of nutrients.

**Metabolic problems:** lack of nutrients can lead to metabolic disorders, including:

- \* Lack of weight.
- \* Lack of vitamins and minerals.
- \* Growth and developmental disorders.





The effect of abnormalities in the face-to-face area on chewing efficiency and metabolism

### **Anomalies in the face-to-face area, such as:**

- \* Malocclusion: discrepancy between the upper and lower teeth.
- \* Accumulation of teeth: there is not enough space for the teeth to settle normally.
- \* Lack of teeth: lack of one or more teeth.
- \* Buccal cracks: tear on the upper lip or/and palate.
- \* Jaw abnormalities: malformations of the upper or lower jaw.

All of these abnormalities can have a significant impact on chewing efficiency and metabolism.

### **Evaluation of chewing effectiveness**

Various methods are used to assess the effectiveness of chewing in children with Chls abnormalities, including:

- \* Examination of the oral cavity: visual determination of the condition of the teeth, the presence of dental cavities, the size of the jaw.
- \* Chewing tests: measure the strength of chewing, the speed of chewing, the degree of grinding food.
- \* Food consumption analysis: determination of the amount and composition of food consumed, as well as the time spent on food.
- \* Questionnaires: assessment of the child's subjective feelings associated with chewing, nutritional problems.

### **Evaluation of metabolism**

Evaluation of metabolism in children with abnormalities in the face-to-face area includes:

- \* Blood test: determination of protein, albumin, hemoglobin, vitamins and minerals levels.
- \* Urine analysis: determination of the presence of protein, creatinine and other metabolic indicators.
- \* Anthropometric measurements: height, weight, waist circumference measurement.

Treatment:

Treatment of abnormalities in the face-to-face area in children is aimed at:

- \* Increase chewing efficiency: orthodontic treatment, surgical interventions, prostheses.



\* Improving metabolism: correction of Nutrition, use of vitamin and mineral complexes.

**Conclusion:**

Anomalies in the face-to-face area have a significant effect on the effectiveness and metabolism of chewing in children. Early diagnosis and treatment are the main factors in preventing long-term consequences associated with these anomalies.

### **Further research:**

Despite the available data, further research is required:

- \* Development of more accurate methods for assessing the effectiveness of chewing and metabolism in children with abnormalities in the face-to-face area.
- \* Determination of the long-term effects of facial abnormalities on children's health.
- \* Development of more effective treatments for anomalies in the face-to-face area.

### **Conclusion**

It should be noted that this review is informative in nature and not medical advice. If abnormalities in the face area are suspected, a qualified doctor should be consulted.

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