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ASSESSMENT OF CHEWING EFFICIENCY AND INDICATORS OF ORAL DRY METABOLISM IN CHILDREN WITH ANOMALIES OF THE FACIAL-MAGULATORY SYSTEM

KubaevAziz Saidolimovich
DSc, Associate Professor

Anvarova Muxtasar Anvarovna
Assistant of the Orthopaedic Dentistry Department
Samarkand State Medical University, Samarkand

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ABSTRACT
The dentoalveolar system of a child is a part of a growing organism, dynamically changing under the influence of a complex of interrelated and interrelated factors. According to many observations and literary publications, there is an increase in the number of children with anomalies and deformities of the dentoalveolar system (53-75%) around the world. The high frequency of anomalies and deformities in the development of the dentoalveolar system in childhood leads to impaired health and social adaptation of the child in children's society.

Keywords: Congenital cleft lip and palate; children; anomalies of the maxillofacial region.

Introduction:

The lack of doctor's control over changes in the masticatory function and indicators of oral cavity metabolism at various stages of prosthetic correction in patients are urgent problems of modern dentistry. The impossibility of measuring these parameters for most practitioners is associated with the high cost of a comprehensive examination, insufficient technical support, underestimation of their necessity and other problems. Indicators of masticatory function and oral metabolism actively affect the course and result of treatment, therefore it is not possible to clearly predict changes in these parameters for most orthopedists. Indicators of masticatory function and oral metabolism actively affect the course and result of treatment,

therefore the lack of the ability to clearly predict changes in these parameters is a "stumbling block" for most orthodontists.

Materials and methods of research. The material for the study was the peripheral blood of 100 children with congenital cleft lip and palate, who were at different stages of surgical treatment in the department of SamSMU of the Department of Chelyabinsk Region, Samarkand. The children were divided into 4 clinical groups, differing in age ranges and stage of surgical rehabilitation:
Group 1 – 20 children aged 0 to 1 year
(before surgical treatment);
Group 2 – 30 children aged 1 to 3 years
(after cheiloplasty, before veloplasty and/or
uranoplasty);
Group 3 – 30 children aged 4 to 6 years
(after cheiloplasty, veloplasty and uranoplasty);
Group 4 – 20 children aged 6 to 12 years
(after cheiloplasty, veloplasty, uranoplasty, autoosteoplasty, upper lip correction).
The control groups consisted of conditionally healthy children of the corresponding age range (20–30 people, respectively). The concentration of peripheral blood cytokines was determined by enzyme-linked immunosorbent assay (ELISA) on the ASCENT analyzer (Finland) using appropriate test systems (VEKTOR-BEST CJSC, Rostov-on-Don, Russia). The methodological basis of the dissertation research was the consistent use of methods of scientific cognition. The work was carried out in the design of an open comparative prospective study. To implement the tasks, the following methods were used: clinical (collection of data from anamnesis and objective examination, results of laboratory tests and instrumental research methods), methods of statistical data analysis, development of prognostic models.

Outcomes
When assessing the content of serum cytokines in children of different ages with VRHN at different stages of surgical rehabilitation, a significant increase in serum cytokines was found in children with primary lip/palate defect up to the stage of cheiloplasty (0–1 year) (Table). At the same time, the highest (2 times relative to the age norm) increase in IFNγ was noted, and the level of IL6 increased the least. Common to all the studied pro-inflammatory cytokines was a decrease in their content in the peripheral blood by the age of 2–3 years after cheiloplasty and before the subsequent stage of surgical rehabilitation with the entry of the concentration of IL6

and IL1β into the median control zone. In children of the 3rd and 4th clinical groups with RHHN against the background of a sharp decrease in the content of IL6, there was an excess of the age norm for the content of IL1β and IFNγ (Table), suggesting that in children with RHHN at the age of 4–6 years, the violation of osteogenesis, accompanied by a sharp decrease in IL6, is partially compensated by an increase in the content of IL1β as the leading factor of osteoclastic activity. As for the anti-inflammatory cytokine IL4, the change in its level in children of different age groups at the stages of surgical rehabilitation was rather ambiguous. Thus, the highest level of its content was found in the 1st clinical group of children in the first year of life (4 times higher than the age norm), as well as in children 7–12 years old (2.3 times higher than the norm), while in the 2nd and 3rd clinical groups there was a twofold decrease in the content of this anti-inflammatory cytokine (Table). Meanwhile, when analyzing the dynamics of IL4 in the peripheral blood of children of younger age groups with VRGN (groups 1 and 2), it is possible to distinguish subgroups that differ in the nature of changes in this cytokine. In particular, among children with ILH in the first year of life, patients with IL4 levels 3.6 times higher than the age norm dominated (70%), and 30% exceeded it 26 times, while 80% of children of the 2nd clinical group had IL4 levels 4 times lower than the control level, and 20% exceeded the age norm by 3.4 times. As the results of the study showed, in children with AHH at the age of 1 to 6 years, there was an increase in the content of IL17, which is also a stimulator of osteoclastogenesis, and the most pronounced (2 times relative to the age norm) in children in the first year of life. In the 2nd clinical group, an increase in the content of IL17 by 70% was revealed, in the children of the 3rd clinical group – only by 25%, and in children 7–12 years of age with VRGN, its decrease by more than 2 times was observed. Thus, the studies of the cytokine profile in children of different ages with VRGN allow us to conclude that the manifestations of secondary immune deficiency in this congenital disease are very specific and are largely determined not only by age characteristics, but also by the type of surgical rehabilitation carried out at different stages.

Findings

Due to the presence of somatic diseases and abnormalities in blood counts at the preoperative stage, more pronounced postoperative complications are noted in the group of children with congenital cleft lip and/or palate from regions with the petrochemical industry, which indicates a violation of their reparative regeneration after uranoplasty. This is the rationale for the development and application of a method for the prevention of postoperative complications, which will be included in

the rehabilitation algorithm to improve the physiological and speech functions of children after uranoplasty in a region with a petrochemical industry.

REFERENCES

1. Anvarova Mukhtasar Anvarovna, & Akhmedov Alisher Astanovich. (2024). A COMPARATIVE ASSESSMENT OF THE EFFECTIVENESS OF ORTHODONTIC TREATMENT OF PARTIAL DENTITION DEFECTS USING DIGITAL TECHNOLOGIES. European International Journal of Multidisciplinary Research and Management Studies, 4(05), 33–40.
2. Anvarova Muxtasar. (2024). MODERN PROTOCOL FOR CLINICAL AND FUNCTIONAL RESEARCH AND PREVENTION OF TEMPOROMANDIBULAR JOINT DISORDERS. European International Journal of Multidisciplinary Research and Management Studies, 4(02), 232–238.
3. Anvarova, M.A. and Akhmedov, A.A. 2024. COMPARATIVE ASSESSMENT OF THE EFFECTIVENESS OF ORTHOPEDIC TREATMENT OF PARTIAL DEFECTS OF DENTITION USING DIGITAL TECHNOLOGIES. Journal of Humanities and Natural Sciences. 2, 11 [2] (Jul. 2024), 17–21.
4. Anvarova Mukhtasar. (2024). MODERN PROTOCOL OF CLINICAL AND FUNCTIONAL RESEARCH AND PREVENTION OF TEMPOROMANDIBULAR JOINT DISEASE. European International Journal of Multidisciplinary Research and Management Studies, 4(02), 239–245.
5. Anvarova Mukhtasar. (2024). OPTIMIZATION OF EARLY DIAGNOSIS OF INTERNAL DISORDERS OF THE TEMPOROMANDIBULAR JOINT. European International Journal of Multidisciplinary Research and Management Studies, 4(03), 157–166
6. Anvarova Muxtasar. (2024). A COMPARATIVE EVALUATION OF ORTHOPEDIC TREATMENT FOR PARTIAL DEFECTS OF DENTAL ROWS USING DIGITAL TECHNOLOGIES . European International Journal of Multidisciplinary Research and Management Studies, 4(03), 254–257. h
7. Anvarova Muxtasar. (2024). MODERN PROTOCOL FOR CLINICAL AND FUNCTIONAL RESEARCH AND PREVENTION OF TEMPOROMANDIBULAR JOINT DISORDERS. European International Journal of Multidisciplinary Research and Management Studies, 4(02), 232–238.
8. Abdullaeva N. I., Akhmedov A. A. Disturbances in the system of lipid peroxidation in periodontal disease //european journal of modern medicine and practice. – 2023. – Т. 3. – №. 9. – С. 57-61.
9. Abdullaeva N. I., Akhmedov A. A. Immunological Aspects of the Pathogenesis of

Gingivitis and Periodontitis //Central Asian Journal of Medical and Natural Science. – 2023. – T. 4. – №. 5. – C. 17--21

10. Abdullaeva N. I., Akhmedov A. A. The role of the microbial factor in the etiopathogenesis of inflammatory periodontal diseases //Best Journal of Innovation in Science, Research and Development. – 2023. – T. 2. – №. 9. – C. 27-33.