

Improvement of Early Diagnosis and Orthodontic Treatment in Children with Dental Anomalies and Deformities

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ABSTRACT

The prevalence of dental anomalies according to WHO is on average at least 50% (WHO, Geneva, 2007). According to the data. The National Institute of Dentistry of the USA 40% of the total population have anomalies of tooth development and various disorders of jaw formation. Moreover, 15% of these individuals require surgical intervention to eliminate them. The issues of timely elimination and elimination of factors that negatively affect the normal formation of the dental complex are very relevant[1.3.5].

KEYWORDS: *Diagnosis, Orthodontic, Deformities, Anomalies.*

A wide range of scientific research is carried out in the world to predict and identify early latent forms of occlusion anomaly in growing children, as well as to optimize the effectiveness of diagnostic and therapeutic measures, existing diagnostic methods are already insufficient, and there is an urgent need for additional research methods. From these positions, it seems promising to study diagnostic and therapeutic measures aimed at improving the quality of orthodontic care for children. The development of the closest approach to the diagnosis and treatment of occlusion anomalies to achieve an acceptable result, combined with excessive growth of the upper or lower jaw and the anterior position of the dental alveolar complex of the upper jaw will help to obtain a stable aesthetic outcome in the treatment of orthodontic patients, and avoid relapses. The elimination of morph functional and aesthetic disorders caused by this type of pathology is an urgent problem of orthodontics [2.4.6.8.10].

Dental deformities belong to the main dental diseases and are characterized by high prevalence. The study of the prevalence of dental deformities and their individual ontological forms in different periods of bite formation is important in solving various issues: calculating the required number of orthodontists, organizing a network of orthodontic departments and offices, planning therapeutic and preventive measures, etc.

The frequency of dental deformities in children of the Republic of Uzbekistan, according to different authors, can be explained by regional peculiarities of the spread of pathology, the difference in the incidence of dental caries, the authors' individual approach to research methods and to the assessment of deviations from the norm, the lack of a unified classification of dental anomalies, as well as the fact that not all authors differentiate dental anomalies by individual ages, analyzing only individual risk factors that contributed to the occurrence of dental anomalies[7.9.11.13.15].

Obtaining scientifically comparable indicators of the prevalence of dental anomalies can be achieved with strict adherence to the principles of age grouping of the examined contingents, the same methodological approach to assessing the condition of teeth, dentition and bite on the basis of a single classification, taking into account the ethnic features of the structure of the face and its individual parts.

The deformity of the maxillofacial region in children has increased dramatically in the last 10-15 years and averaged from 15-18% to 40%. At the same time, the author noted that 4% of completely healthy children in the Bukhara region, 7% of dentists were healthy, 30% had emerging anomalies of the position of teeth, dentition and bite, 45% had formed dental anomalies, 56% had signs of violations. At the same time, it was noted that their prevalence tends to increase with age and ranges from 9.9 to 42.8% per 100 surveyed. In 30.1% of cases, the examined preschoolers needed prosthetics. The maximum value of the prevalence index of HFAD was noted at the final stage of the period of replacement bite[12.14.16].

Summarizing the research conducted by the domestic author, it can be concluded that there are significant fluctuations in the prevalence of dental deformities in various regions of the region. At the same time, it should be noted that the analysis of the literature data indicates that there is no tendency to decrease the frequency of dental deformities over the past decades.

Thus, the need to conduct scientific research in various regions of the Bukhara region in order to identify and analyze the impact of risk factors on the prevalence of dental deformities in children is of great importance for the development of a comprehensive program for the prevention of dental anomalies, taking into account the regional component. The above made it necessary to continue the scientific search in this subject area in terms of developing new, more effective approaches to the comprehensive prevention of dental deformities requiring orthodontic treatment, with their subsequent introduction into the activities of the territorial specialized health care unit[17.18].

The purpose of this study was to improve early diagnosis and orthodontic treatment in children with dental anomalies and deformities and to develop, implement and evaluate the effectiveness of a comprehensive multi-level prevention program.

In accordance with the goal, the following tasks were set:

1. To conduct and evaluate a comparative diagnosis of the size of the jaws, the position of the jaws relative to the base of the skull, the ratio of dental arches and defects in the location of teeth in young children.
2. To identify and evaluate diagnostic features of facial and jaw defects of functional genesis in young children.
3. Description of anomalies and deformities of milk and permanent teeth, study of the anterior and lateral sides of the face by anthropometry.
4. A new approach to the study and diagnosis of transverse narrowing of the jaws in young children, depending on the size of the interdental spaces.
5. Improving the early diagnosis of dental anomalies and deformities by determining the size of the jaws in the milk bite.
6. Improvement of treatment with removable and non-removable plate orthodontic devices in children with dental anomalies and deformities.
7. Evaluation of the effectiveness of early diagnosis and orthodontic treatment in children with facial abnormalities and deformities in terms of their quality of life.
8. Comparative study and evaluation of long-term results of early diagnosis and orthodontic treatment of this contingent.

For the first time, on the basis of in-depth clinical and epidemiological studies, the need for the development and implementation of active measures for the prevention of dental deformities in children will be objectified. New data on the prevalence and spectrum of harmful habits, interpreted

in the age-sex aspect, will be obtained, allowing to substantiate, formulate and introduce into the practical activities of a medical organization the concepts of "risk groups for the development of dental deformities" and "long-term personalized medical examination in orthodontics", determining the nature and scope of preventive measures of an orthodontist. The effectiveness of early diagnosis and orthodontic treatment in children with facial anomalies and deformities from the point of view of their quality of life and comparative study and evaluation of long-term results of early diagnosis and orthodontic treatment of this contingent will be studied [19.20.21.22.23.24].

The parameters of the coverage of children with orthodontic care and the objective need for it will be determined, the availability of hygienic knowledge among parents on the prevention of dental diseases and dental deformities, which is an important condition for planning preventive measures at the individual level.

The main criteria for improving orthodontic care for children will be scientifically substantiated and updated, as well as the parameters for choosing a medical organization of public and private ownership.

The materials obtained, reflecting the features of the orthodontic status of children, the prevalence of habits that negatively affect the formation of the maxillofacial apparatus; social characteristics of a child in need of orthodontic treatment, will serve as a theoretical basis for the development of a set of measures aimed at improving the quality and accessibility of specialized medical care provided to children, preserving and strengthening the sthmological health of the children's population of the Bukhara region.

An effective innovative comprehensive "Program for the prevention of dental deformities requiring orthodontic treatment in children" will be developed, scientifically substantiated and implemented in the practical healthcare of the Bukhara region, including the use of various methods of preventive education and hygienic education, as well as clinical examination and orthodontic treatment, implemented in the conditions of the city children's dental clinic, family and school, with mandatory with the participation of teachers, children and parents, as well as dentists of various specialties. The introduction of the developed system of measures for the prevention of dental deformities in children will reduce the prevalence of dental deformities and orthodontic disorders caused by them. To strengthen the preventive orientation of dental care for children, to increase the level of awareness and satisfaction of children, parents and teachers with the quality and accessibility of specialized medical care in the field of prevention of orthodontic pathology, to increase the overall level of dental health of children[25.26.27.28.29.30].

The literature data, the degree of development and relevance of the problem will be studied step by step, the design, concept, subject and subjects of the study will be determined. The work consistently uses the means and methods of scientific cognition, as well as special clinical, instrumental, sociological and statistical methods. In accordance with the purpose of the work, the orthodontic status of school-age children will be determined as an object of research, depending on gender, age, lifestyle and living conditions in the family. The subjects of the study, respectively, are children aged 3 to 16 years, residents of the Bukhara region. The study of the general dental status and orthodontic status of children will be carried out by the method of clinical examination by a pediatric dentist and an orthodontist as part of a large-scale epidemiological dental examination of the population according to WHO criteria conducted in the territory of the Bukhara region, according to the intra-university interdepartmental scientific topics.

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