



Assessment of the Violation of the Psycho-Emotional State and Quality of Life of Patients with Malocclusion in the Process of Orthopedic Treatment

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Annotation: In recent years, the world dental practice has made significant progress in providing high-quality care to patients. This was facilitated by certain achievements in the study of the etiology of dental diseases, the creation of effective methods of their treatment using the latest achievements in dental materials science and modern medical equipment.

At the same time, as clinical experience shows, doctors increasingly have to deal with patients who complain about a poorly manufactured prosthesis, which is, nevertheless, a foreign body, because of the pain and tactile discomfort that occurs in the first time after they are installed in the mouth.

Key words: tooth-jaw; bite deformations; children; algorithm; bite anomaly; orthopedic treatment; malocclusion.

Introduction. Any prosthesis, being a therapeutic and preventive tool, simultaneously acts in the oral cavity as an inadequate irritant. The tissues and organs of the prosthetic field respond to this with appropriate responses. There is no doubt that the development of prosthetic field reactions is based on various pathogenetic mechanisms due to such qualities of the prosthesis as the material property, the method of its fixation, the method of transmitting masticatory pressure, occlusal relationships, the size of the prosthetic base, etc. Without studying these relationships, it is likely to be difficult to assess the therapeutic properties of prostheses and plan the prevention of negative reactions.

For effective rehabilitation of dental patients, it is necessary to have reliable diagnostic information about anatomical and functional landmarks, which is reproduced and implemented in the design of artificial dentitions, provided that articulators and functional diagnostic systems are used.

However, according to all the rules, a prosthesis made using modern technologies and materials can cause dissatisfaction of the patient due to the individual characteristics of his psycho-emotional sphere. It is shown that the fundamental factors of human adaptation to orthopedic dental constructions are individual personal, psychophysiological and vegetative characteristics and features of the reaction to stressful effects in conditions of altered afferentation from the receptor zones of the oral cavity.

Anxiety-depressive manifestations, rigidity and individuality, emotional lability with a tendency to demonstrativeness characterize a patient with potentially unsatisfactory adaptation to orthopedic dental construction. In this regard, methods of psychoprophylaxis in adaptation to dentures are proposed to improve the results of orthopedic treatment.

Materials and methods. As the object of the study, during the period from 2018 to 2022, 140 of children and adolescents between the ages of 10 and 18, living in the Bukhara region, who applied for treatment to a Dentist Specialist at the "Dental educational and scientific-practical center" of the Bukhara State Medical Institute, were examined. Of these, 110 examiners were assigned to children with crossed bites and 30 examiners to children with normal bites. Anamnestic and medico-social



data were obtained from all 140 verifiers of both sexes between the ages of 10 and 18; of these, 78 were male (55.71%) and 62 were female (44.29%).

Dental prosthetics play a crucial role in the choice of food, its quality, type, degree of processing and preparation. A person with missing teeth is not only deprived of the opportunity to eat what he likes, but at the same time, he gradually develops protein and vitamin deficiencies, chewing laziness, the function of the salivary glands and self-cleaning of the oral cavity due to the subconscious choice of food available to him. He ceases to feel comfortable, which he puts up with. The result is a decrease in the quality of life in one of the most important indicators - nutrition.

The second important factor in the impact of teeth on the quality of life is their great importance in creating the appearance of a person. The words "dazzling smile", "Hollywood smile", "teeth like pearls", "white-toothed smile" and others have become synonymous with beauty and well-being, good luck and wealth. Indeed, it is difficult to imagine a happy, successful person with the absence of several teeth, with an unpleasant smile. There are several conditions for the beauty of teeth: they must be all in their places, without exceptions, must have a good natural color and shine; beautiful shape, normal size, one of the physiological types of bite, should look wide and beautiful when talking, smiling, laughing.

The quality-of-life criterion is one of the main criteria for evaluating the effectiveness of medical care. It has been widely used in foreign medicine since the late 1970 as an integral part of the concept of health. According to the WHO definition, quality of life is a characteristic of a person's physical, psychological, emotional and social functioning based on their subjective perception.

Indicators of quality of life and characteristics of the disease picture change during treatment, depending on the patient's condition. This allows you to monitor the ongoing treatment and, if necessary, adjust its course. The patient's participation in the assessment of their own health is also a valuable and reliable indicator of their overall health.

However, there are not enough works devoted to this problem, psychoemotional features in patients with dental defects are not studied, depending on their topography, emotional and personal relationships of the patients themselves, quality of life parameters are not used to assess the results of orthopedic treatment, which was the basis for this work.

Results and discussions. The aim of our study was to optimize the results of orthopedic treatment of patients with malocclusion and develop criteria for a comprehensive assessment of its effectiveness. To achieve this goal, the following tasks were set:

1. Evaluate the dental status of patients with dentition defects and give a clinical description of the patients.
2. To develop a method for assessing the quality of life of patients with dental defects and to study the dynamics of indicators during their orthopedic rehabilitation.
3. To develop an algorithm for the diagnosis and comprehensive assessment of dental, psychoemotional disorders and their correction in patients with malocclusion during orthopedic rehabilitation.

Treatment of crossbite was carried out step by step.

- 1) Preparation period provides for the implementation of activities for cleaning the oral cavity and Prevention of caries, surgical preparation, myogymnastics exercises, elimination of harmful habits, normalization of nasal breathing.
- 2) Treatment period it provides for the use of an orthodontic apparatus that normalizes the shape of dental arches, correction of the position of the upper and lower jaw teeth, normalization of the width of the tooth rows, correction of the occlusion plane. For this, removable orthodontic apparatus consisting of various elements, apparatus for expanding dental alveolar arches were used.



- 3) During the retention period, the final straightening of the upper and lower jaw teeth was carried out, the results obtained by achieving a dense fissur-contact with the help of non-removable retainer, removable retenting apparatus were stabilized.

In the orthodontic treatment of patients, orthodontic apparatus was used, which is mainly obtained from traditional methods of treatment.

A comprehensive study of patients with malocclusion, including the study of dental and neurological status, for the first time established the dependence of the severity of emotional and personal disorders on the topography of the defect (in the visible part with a smile or in the invisible part of the dentition), determined the features of these disorders, as well as the dynamics of parameters in different periods of rehabilitation treatment. For the first time, an algorithm for comprehensive assessment of psychoemotional disorders and quality of life in the rehabilitation of patients with malocclusion was developed. A special questionnaire was developed to assess the quality of life in patients with malocclusion. The role of suggestibility of patients with partial absence of teeth for individualization of psychoemotional correction of dental patients is established. The correlation between the features of psychoemotional disorders and EEG changes in patients with dentition defects, depending on the degree of suggestibility during their orthopedic treatment with fixed dentures, is objectively proved. Features of the dynamics of quality-of-life indicators and their relationship with the process of adaptation to dentures in patients with malocclusion (in the visible part of the dentition and in the lateral areas, in their invisible part), as well as during prosthetics with the use of dental implants during their rehabilitation are shown.

As a result, taking into account the psychological state of children in the treatment of incisors forming in children, the process of getting used to the orthodontic apparatus was reduced, and the patient increased the coefficient of use of orthodontic devices. The proposed complex treatment algorithm for early detection and early initiation of treatment of interstitial bites in children made it possible to determine the working condition of the tooth-jaw system and prevent the apparent development of disease complications.

Conclusion. Additional preventive measures have been established to prevent complications during orthopedic treatment of patients with dental defects, taking into account individual characteristics of their emotional, personal and vegetative spheres. The developed algorithm for comprehensive assessment of psychoemotional disorders and quality of life of patients with malocclusion, used during orthopedic treatment, contributes to the optimization of its results, timely and complete correction of psychoemotional disorders and active participation of the patient in this process.

A simple method of determining the patient's suggestibility before treatment and conducting adequate psychoprophylaxis give positive results, contribute to speeding up the time of adaptation to dentures and an adequate assessment of the results of treatment by patients themselves, and reduce the number of unfounded complaints on their part.

1. Patients with different topography of dentition defects (in the visible and invisible parts of the dentition) have different severity of emotional and personal disorders, and the predominant interest of the suprasedgmental structures of the autonomic nervous system in more pronounced cases.
2. Improving the effectiveness of dental patients' adaptation to dentures and the quality of life is ensured, in addition to their high-quality manufacturing, by determining neurological, emotional and personal disorders before treatment and correcting them during treatment, taking into account the degree of suggestibility of patients and the topography of the dentition defect.
3. Comprehensive assessment of dental and neurological status, including identification of emotional and personal characteristics, as well as the quality of life of patients with different topography of dentition defects, taking into account the degree of their suggestibility, allows



individualizing therapeutic and preventive measures to improve the results of orthopedic treatment.

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