

J.B. Saidmurodova
N.Sh.Nazarova
Samarkand State Medical University
City of Samarkand
The Republic of Uzbekistan

INCIDENCE RATES OF LOCALIZED PERIODONTITIS IN SCHOOL-AGED CHILDREN

Relevance. In our country, active measures are being taken to develop the medical field, in particular, to reduce dental diseases and their complications, as well as to provide qualified medical care to the population suffering from dental diseases, and the following tasks are set: "... efficiency, quality and availability of medical services. Strengthen support for a healthy lifestyle and prevention of diseases, including standardization of the medical system, introduction of high-tech methods of diagnosis and treatment, effective models of patronage and dispensation... . These tasks determine the priorities of advanced scientific research, such as increasing the level of modern medical care, diagnosing and treating complications of dental diseases among the population, and using modern technologies to provide quality medical care.

Purpose of the study: o study the nature of changes in the functional state of periodontal tissues during orthodontic treatment with non-removable appliances based on bio impedance analysis of periodontal tissues and dynamics of indicators of hydration and regeneration ability;

Materials and methods. t was determined that the determination of the level of oral hygiene and, accordingly, the risk of inflammatory complications in the periodontal tissues based on objective criteria is an indication for carrying out treatment and prevention measures, and the normalization of the values of cytomorphological indicators is considered a criterion for evaluating their effectiveness;

new scientific data describing the reduced values of the tissue hydration index, indicating the presence of mechanical pressure on the periodontal tissues, and the predominance of the processes of resorption and osteogenesis were determined according to the indicators of the regenerative capacity of the tissues;

Research results and discussion

The scientific significance of the research results, the comprehensive program developed for the early diagnosis of structural and functional disorders in periodontal tissues, based on objective criteria, allows to determine the level of oral hygiene and, accordingly, the risk of inflammatory complications in periodontal tissues, this is an indication for carrying out treatment and prevention measures, the normalization of the values of cytomorphological indicators and they are the criteria for evaluating their efficiency, which is an important information base in restoring the dental health of persons undergoing orthodontic treatment.

The practical significance of the research results is to improve the processes of prevention of periodontal diseases, to determine rehabilitation tactics for people who use non-removable orthodontic appliances. This, in turn, substantiates the possibility of improving the quality of life in people using the brace system and can be used in the daily practice of the orthodontist.

The validity of modern methods and approaches used in the research work, the compatibility of the obtained results with theoretical data, the accuracy of the conducted tests, the adequacy of the patients, the basis of medical-statistical materials with clinical, immunological, biochemical methods, the comparison of the obtained results with the work of foreign and domestic researchers, the obtained conclusions and results are authoritative. based on approval by the authorities.

Bioimpedance analysis is a method of recording the electric current passing through the thickness of biological tissues under the influence of an applied electric voltage. "AVS-02" device with AVC-02-038 computer program ("Medass" scientific and technical center, Russia) was used for bioimpedance analysis.

Researches were carried out by inserting a recording electrode into the dried oral mucosa in the projection of the roots of groups of teeth corresponding to the periodontal tissue in the area of teeth 17/14, 13/23, 24/27, 34/37, 43/33, 47/44.

Analysis of the functional state of periodontal tissues using bioimpedance analysis was carried out according to two indicators:

1. Hydration level.
2. Regenerative ability of periodontal tissues.

1. The hydration level of periodontal tissues was evaluated according to the index $Mn_{20} = Z_{20} / Z_5 \cdot 0.86355$, where Z_{20} is the impedance (total electrical resistance) of periodontal tissues at the frequency of 20 kilohertz sinusoidal current; Z_5 - periodontal tissue impedance (total electrical resistance) at a sinusoidal current frequency of 5 kilohertz; 0.86355 is the normalization coefficient.

Conclusions. As a result of the analysis of the periodontal tissue hydration parameter in patients undergoing orthodontic treatment, its parameter value before treatment was approximately the same in the periodontal tissues of all teeth except for the periodontal tissue in the area of 24/27 teeth. .5% higher (Figure 5). After 6 months of orthodontic treatment, the values of periodontal tissue hydration parameters decreased in most of the periodontal tissues in the area of the teeth, which allows to demonstrate the increase of mechanical load on the bone after treatment measures. After 12 months of orthodontic treatment, the development of normalization of periodontal tissue hydration was found in the periodontal tissue of each tooth area, except for the periodontal tissue in the area of 24/27 teeth. A further increase in periodontal tissue hydration was found in each zone during treatment lasting more than 13.5 months. Thus, compared to patients before orthodontic treatment, the amount of tissue hydration increased by 11.8% in the periodontal tissue in the area of 12/22 teeth, by 6.1% in the periodontal tissue in the area of 24/27 teeth, 34/37 - It increased by 13.3%, in the periodontal tissue in the area of 32/42 teeth - by 15.3%, in the periodontal tissue in the area of 44/47 teeth - by 13.4%, and in the periodontal tissue in the area of 14/17 teeth - by 7.8%. It should be said that during this final period of therapy, the hydration of the

periodontal tissue in the periodontal tissue in the area of each tooth reached normal values.

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