



Indicators for Assessing the Hygienic Condition of the Oral Cavity in Children Treated with Orthodontic Devices

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Relevance of research. The prevalence of tooth-jawmalias is 50%. According to experts, in 92% of cases associated with tooth-jaw disorders, various unpleasant conditions are observed in the parodont area. In medical practice, the large-scale use of braces, voles, arcs that fixate teeth for the purpose of keeping them in a certain position makes it difficult for the possibilities of strict adherence to oral hygiene, which in 32.7% of cases associated with tooth-jawmalia causes damage to the hard tissue of the teeth, mainly predisposition to caries. Early diagnosis of dental caries is a difficult problem in cases where morphofunctional changes in the hard tissue of the teeth have not yet occurred, and the application of methods that allow the diagnosis of the disease by traditional functional methods is an urgent task. Worldwide, large-scale scientific research is being carried out to determine and determine the prospect of early signs of caries in children in orthodontic treatment, as well as to improve the effectiveness of diagnosis, treatment, and preventive measures. In the early stages, scientific studies are being carried out to develop the maximum close approach to the diagnosis and treatment of caries during orthodontic treatment, to obtain a stable aesthetic result in the treatment of orthodontic patients, and to reduce the number of relapses. Nevertheless, the existing methods of diagnosis are not enough, which creates a strict need for additional methods of research. In this aspect, the development of measures of diagnosis and treatment aimed at increasing the quality indicators of orthodontic care for children is becoming more important.

In our country, reasonable results have been obtained on the radical improvement of the health service, including the early diagnosis of dental diseases and the Prevention of its transition to a chronic form. In this regard, the strategy of action for the further development of the Republic of Uzbekistan defines important tasks aimed at improving the quality of medical and socio-medical services to the population, the formation of a healthy lifestyle in the population. From this, the early diagnosis, treatment and Prevention of dental diseases, including dental caries, is of particular importance. Taking into account the expressed correlation between the development of dental caries and periodontic diseases from the hygienic condition of the oral cavity, the level of hygienic knowledge and skills was determined by assessing survey and Manual skills in all patients before orthodontic treatment. The data obtained showed that the level of proficiency in knowledge and practical skills in the Prevention of suspected dental diseases is low. An assessment of practical oral care skills found that only 10.4% of children showed proper dental cleaning at a good price. Satisfactory practical skills in oral care-19%, unsatisfactory-were found in 69.7% of children. Given that the initial level of awareness of children and adolescents in oral hygiene is low and the percentage of unsatisfactory practical skills is high, it has become necessary to train at all stages of orthodontic treatment, carry out motivational whitening work for a long time and take control every month. Taking into account the direct correlation between oral hygiene and diseases of dental caries and periodont tissue, it should be noted that dental whitening work and professional-level oral hygiene are an important element of the complex of preventive measures. In this, not only will the technique be taught by observing the time and duration of teeth cleaning, but Manual skills will be strengthened with self-control criteria in the form of feeling the smoothness of the surface of the teeth and orthodontic apparatus [1.3.5.7.9.11.13].

Prior to the start of orthodontic treatment, practical skills were re-evaluated after professional oral hygiene and training in individual hygienic procedures. Unsatisfactory tooth cleaning was not



recorded, satisfactory was found in 8% of children, good - in 92% of children, which allows them to be considered ready for questions about oral hygiene for orthodontic treatment using an insoluble technique. A preliminary assessment of oral hygiene on the OHI-s and RNR indices found that the oral hygiene was unsatisfactory in all guruhes in the examination. Before fixing braces, it was observed that after conducting professional oral hygiene, training in individual hygienic procedures, the values of the OHI-s and RNR indices decreased convincingly in all gurus, but in the main gurus, the criteria for assessing their values varied. If, according to the OHI-s index, the hygienic condition of the oral cavity was determined to be good and did not exceed the value of 0.7, then the RNR was satisfactory according to the hygiene index and was around 1.6. With an assessment of the informativity of index data, it is possible to record a reliable assessment of quality using the RNR index, which allows you to identify dental caraches in segments in the neck and aproximal areas of the teeth. Initial dental examination found inflammatory conditions in parodont tissue in all pasients, with an RMA index of around 6.72 ± 0.13 - $8.12 \pm 0.15\%$. Comprehensive treatment after fixation of insoluble orthodontic techniques-preventive measures and results obtained after professional oral hygiene are carried out indicate an improvement in the value of the RMA index among all pasients when compared with the initial examination.

At present, it has been proven that the conduct of dental whitening in patients, professional and individual oral hygiene, control of carbohydrate intake, the use of fluoride compounds are an important component of preventive programs. However, in the presence of a large number of means of prophylaxis of dental caries and periodont diseases, with the help of certain informative criteria, there is a need for their clinical assessment and recommendation based on the individual characteristics of the organism. The average initial value of the KPO index ranged from 1.96 ± 0.13 to 2.44 ± 0.17 , corresponding to the low intensity of dental caries. According to the WHO criteria, the indicators of the intensity of dental caries were from above average - 4.25 ± 0.26 - 4.78 ± 0.23 . Before the examination, an oral cavity dating was carried out to all pasients, after which only the P component remained in the index structure. The sensitivity of dental enamels to acid exposure (ter-test) was around 27.22 ± 0.19 - $32.96 \pm 0.47\%$ in pasients on initial examination, which characterized the structural - functional resistance of the enamel as high. To increase the acidic resistance of enamel in children with tar, a course of preventive measures was carried out-treatment with the use of drugs that contain fluoride in themselves before fixing the braces [2.4.6.8.10.11.13.14].

Light-induced fluorescence allowed the observation of subtle changes in demineralized enamel that were not visible to the human eye at the sight of the tooth surface. When the demineralized enamel area was exposed to green light (530 nm), a high opacity area was identified, which was confirmed by the presence of microbes and their decay products. The higher the opacity of the damaged area, the more active the demineralization process and the higher the fluorescence signal index (+++). The effect of red light (625 nm) in the area bordering the Brequette allowed the identification of secondary caries, manifested as a brown pigmentation furnace of varying intensity.

The transition from green spectrum to Red has been observed in 56.5% of children with EOT and 58.1% of children with constipation. From the data given, it can be seen that before carrying out preventive measures, intact enamel was observed in 43.5% of children with EOT and 41.9% with solid. The process of demineralization of enamel in the form of caries in white blotch has been observed in 26.1% of cases when EOT, in 30.3% of cases when solid. Surface caries has been observed at 21.74% and 16.78%, respectively. In children with EOT, medium and deep caries were recorded at the same frequency from 4.4% respectively, while in children with constipation, medium caries were 5.2%, deep caries - 5.8%. Using laboratory examination methods of mineral exchange in the oral cavity in children, the following results were obtained: (figure 3.2): the RN indicator of oral fluid in 1 group was 6.9 ± 0.3 hydrogen units, in 2 groups- 6.5 ± 0.3 hydrogen units. No statistical significance discrepancies were found in the guruhcs ($R > 0.05$). This indicates about the stability of this parameter of oral fluid in children, which is associated with the active work of the oral buffer system during this period of Child Development. The following results were obtained when the total



calcareous indicator in oral fluid was studied: in 1 group, the indicator was 1.85 ± 0.2 mmol/l, in 2 groups – 1.5 ± 0.3 mmol/l. No statistical significance discrepancies were found in the guruchs ($R > 0.05$). However, there was a convincing decrease in regulatory values (2.02 - 2.6 mmol/l). The phosphorus indicator in oral fluid in 1 Guruh was 3.7 ± 0.5 mmol/l, in 2 Guruh – 2.8 ± 0.6 mmol/l, which became statistically significant ($R < 0.05$). In children undergoing orthodontic treatment with respect to regulatory values, a statistically convincing increase in R was found ($R < 0.05$; 0.87 - 1.45 mmol/l).

Thus, both in 1 Guruh and as well as in 2 Guruh children, the RN indicator was at the normative level, sa indicators, especially in 2 Guruh, were lower, the R level was almost 2 times higher than the normative indicator, which acquired a convincing character. In all pasients who have undergone the examination, it has been found that before orthodontic treatment, there is insufficient hygiene of the oral cavity at unsatisfactory levels and motivation to prevent dental diseases and care for the oral cavity. Manual oral care skills were good in 12% of pasients at high risk for dental caries, and unsatisfactory in 67%. At the final stage of the study, the hygienic condition was satisfactory in preventive groups on the OHI-s index, and unsatisfactory in the RNR index from 1.83 ± 0.14 to around 2.21 ± 0.36 . As can be seen from the above data, when diagnosing caries with the Qrayview C apparatus, in the sampling group, in contrast to the initial data, caries is often detected in a white dot Bosker, which proves the effectiveness of this technique in early detection of damage to demineralization of solid tooth tissues. The data obtained increases the effectiveness of early caries diagnostics by 3 times using the Qrayview C hardware.

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