

CLINICAL AND DIAGNOSTIC CHARACTERISTICS OF THE DEVELOPMENT OF TOOTH DECAY IN CHILDREN DURING ORTHODONTIC TREATMENT WITH REMOVABLE AND NON-REMOVABLE EQUIPMENT

U. A. Fozilov

Bukhara State Medical Institute

Abstract

Taking into account the pronounced relationship between the development of dental caries and periodontal diseases and the hygienic state of the oral cavity, before orthodontic treatment, the level of hygienic knowledge and skills was determined in all patients by questioning and evaluating manual skills. The analysis of the obtained data showed a low level of knowledge on the prevention of dental diseases and the acquisition of manual skills.

Keywords: Clinical evaluation of therapeutic and preventive measures with the use of various fluoride-containing drugs

Introduction

An assessment of manual oral care skills showed that only 10.4% of children demonstrated proper dental cleaning, which was rated as good. Satisfactory manual oral care skills were found in 19%, unsatisfactory - 69.7% of children with orthodontic treatment. Given the low initial level of awareness of children and adolescents about oral hygiene and the high percentage of unsatisfactory manual skills, there was a need for prolonged training, motivational education and monthly monitoring at all stages of orthodontic treatment. Taking into account the direct relationship of oral hygiene and development of dental caries and periodontal diseases, it should be noted that dental education, professional oral hygiene, which is not only teaching the technique, with observance of time and frequency of tooth brushing, but also the consolidation of manual skills with the criterion of self-control in the sense of smoothness of the teeth and the surface of the orthodontic appliance, is an essential element of the complex of preventive measures. Unsatisfactory quality of dental cleaning was not registered, satisfactory was found in 8% of children, good in 92%, respectively, which allowed them to be considered prepared for oral hygiene for orthodontic treatment using fixed equipment.

The initial assessment of the oral hygiene status using the OHI-S and PHR indices revealed unsatisfactory oral hygiene in all the studied subgroups. Before fixing braces, after professional oral hygiene, training in individual hygiene procedures, it was noted that the values of the OHI-S and PHP indices significantly decreased in all subgroups, but the criteria for evaluating their values in the main subgroups were different. If the state of oral hygiene according to the OHI-S index was determined as good and did not exceed the value of 0.7, then according to the PHR hygiene index - as satisfactory, being within the value of 1.6. Evaluating the information content of these indices, we can state a more qualitatively reliable

assessment using the PHR index, which allows us to detect plaque in the cervical and approximal sections of the teeth. The initial dental examination revealed inflammatory phenomena in periodontal tissues in all patients, the values of the PMA index were in the range of 6.72 ± 0.13 - $8.12 \pm 0.15\%$. The results obtained after carrying out a complex of therapeutic and preventive measures and professional oral hygiene before fixing fixed orthodontic equipment indicate an improvement in the values of the PMA index among patients of all subgroups compared to the initial examination.

Currently, it is proven that dental education of patients, professional and individual oral hygiene, control of carbohydrate intake, and the use of fluoride compounds are the most important components of preventive programs.- However, in the presence of numerous means of prevention of dental caries and periodontal diseases, there is a need for their clinical evaluation using well-known informative criteria and prescribing depending on the individual characteristics of the body. Clinical evaluation of therapeutic and preventive measures with the use of various fluoride-containing drugs was carried out by calculating the growth of carious cavities, a TER test, and an electrometric method for diagnosing caries.

The average initial value of the CPI index was in the range from 1.96 ± 0.13 to 2.44 ± 0.17 , which corresponded to a low intensity of dental caries. According to WHO criteria, the intensity of dental caries varied from medium to high-in the range of 4.25 ± 0.26 - 4.78 ± 0.23 . Before the study, all patients underwent oral sanitation, after which only the component was present in the index structure. The compliance of the tooth enamel to the action of acid (TER-test) at the initial examination in patients within 27.22 ± 0.19 - $32.96 \pm 0.47\%$, which characterized the structural and functional resistance of the enamel as high. The indicator of phosphorus in the oral fluid in group 1 was 3.7 ± 0.5 mmol/l, in group 2- 2.8 ± 0.6 mmol/l, which was statistically significant ($P < 0.05$). There was a statistically significant increase in P values in children with orthodontic treatment in relation to the standard values ($P < 0.05$; 0.87 - 1.45 mmol/l).

Thus, in children in both group 1 and group 2, pH values were within the normal range, CA values were reduced, especially in group 2, while the P level was almost 2 times higher than normal, which was reliable.