ASSESSMENT OF PERIODONTAL TISSUE STATUS IN ADOLESCENT CHILDREN UNDER ORTHODONTICS TREATMENT

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Annotation: This thesis discusses the specifics of assessing the state of periodontal tissues in adolescent patients during orthodontic treatment. Due to the variability of the body during adolescence, periodontal tissues are sensitive and require regular monitoring. During orthodontic treatment, patients may experience inflammation, impaired blood circulation, and tissue changes in the periodontal tissues. The study focuses on the diagnosis of the state of periodontal tissues, assessment criteria, and measures to prevent complications arising from these changes.

Key words: orthodontic treatment, periodontal tissue, clinic assessment, hygiene, orthodontic devices, prevention.

Introduction

Orthodontic treatment is one of the important medical procedures that helps to correctly position the teeth and jaw structures during adolescence. Although this procedure provides many functional and aesthetic benefits, it can affect the periodontal tissue. The periodontal tissue is the main structure that ensures the health and supremacy of the teeth. Therefore, by assessing the condition of the periodontal tissue during and after orthodontic treatment, it is possible to identify possible consequences and increase the effectiveness of the treatment.

The main objective of this study is to assess the condition of the periodontal tissues of adolescents during orthodontic treatment and to identify important factors necessary to maintain their health. This study will analyze the interaction between orthodontic procedures and periodontal tissues, as well as effective treatment methods to improve dental and oral health among adolescents. The aim is also to study the effect of orthodontic treatment on the state of periodontal tissues and to develop practical recommendations for maintaining healthy teeth and periodontal health in adolescents.

Materials and methods:

In this study, the following materials and methods are used to assess the state of periodontal tissues in adolescents during orthodontic treatment:

Materials:

Adolescent groups – The patients participating in the study are selected as

children and adolescents of adolescent age (12-17 years), patients who have started or are continuing orthodontic treatment. Among them, those who are in the early or moderate stage of periodontal disease and patients who have received orthodontic treatment are selected.

Adolescent medical records – In order to monitor the history of orthodontic treatment and the state of periodontal tissues of the participants, medical information is obtained about them.

Dental Imaging – Patients are provided with dental radiographs and photographic images showing their previous and current orthodontic treatment status.

Laboratory Analysis – Blood biomarkers that detect changes in periodontitis, as well as microbiological analysis of oral swabs, are used to determine the status of periodontal tissues.

Methods:

Clinical Examination – Examination of the patient's mouth and teeth, the condition of their orthodontic appliances, the presence of gaps between teeth, and tooth movement (changes in tooth position).

Periodontal Assessment – Clinical tests to assess the overall condition of periodontal tissues, such as periodontal prolapse or bleeding. Probing techniques are also used to measure periodontal depth and assess for periodontal tissue advancement, damage, or inflammation.

X-ray examination – The condition of the periodontal tissues, special dental radiographs (Panoramic or OPG) are used to assess the degree of periodontal involvement and the progress of orthodontic treatment.

Statistical analysis – The collected data is studied using statistical analysis. SPSS or other statistical programs are used for analysis. Questionnaires and surveys are conducted among the participants to compare the condition of periodontal tissues and evaluate the effectiveness of treatment methods.

Adolescent periodontal health questionnaires – Adolescents are given questionnaires about periodontal health, which helps to determine their attitude to dental and oral hygiene, orthodontic treatment.

Using these materials and methods, the effect of orthodontic treatment on periodontal tissues, as well as effective methods for improving the dental and oral health of adolescents, are identified.

Conclusion

Orthodontic treatment is one of the most important treatments for children in adolescence, as it can affect the teeth and their supporting tissues. Regular monitoring and preventive measures are necessary to assess the condition of periodontal tissue, maintain its health, and reduce negative consequences. This will ensure the strength of periodontal tissue in young patients and increase the

effectiveness of orthodontic treatment.