

**OPTIMIZATION OF COMPREHENSIVE TREATMENT OF HARD DENTAL TISSUE DISEASES IN PATIENTS BASED ON CLINICAL AND FUNCTIONAL ASSESSMENT**

*Asia International University  
Khalilova Laziza Ravshanovna*

**Keywords:** hard dental tissues, dental caries, erosion, pathological tooth wear, wedge-shaped defect, clinical assessment, functional assessment, comprehensive treatment, remineralization, dental prevention.

**Abstract:** This thesis discusses the improvement of comprehensive treatment methods for diseases of hard dental tissues in patients based on clinical and functional assessment. During the study, various pathologies of hard dental tissues were examined, including dental caries, erosion, pathological tooth wear, and wedge-shaped defects, as well as their clinical manifestations and their impact on masticatory function.

The diagnostic process included clinical examination, the use of dental indices, radiological investigations, and functional assessment methods. Based on the obtained results, a comprehensive approach to optimize the treatment process was developed. It was determined that remineralization therapy, restoration using modern filling materials, improvement of oral hygiene, and the implementation of preventive measures play an important role in treatment. The comprehensive treatment approach contributed to improving the clinical condition of patients, restoring the functional activity of teeth, and reducing the risk of disease recurrence.

Diseases of hard dental tissues are among the most common pathologies encountered in dental practice. Dental caries, pathological wear, erosion, and wedge-shaped defects not only disrupt the anatomical structure of the tooth but also negatively affect masticatory function, aesthetic appearance, and the patient's overall quality of life. Therefore, early detection of these diseases, comprehensive clinical and functional assessment, and the organization of treatment based on a comprehensive approach are of great importance.

The aim of the study was to improve and optimize comprehensive treatment methods for diseases of hard dental tissues in patients based on clinical and functional evaluation.

During the study, the condition of the patients' oral cavity was assessed using clinical examinations, dental indices, radiological investigations, and functional diagnostic methods. The depth and location of defects in the hard tissues of teeth, tooth sensitivity, masticatory efficiency, and oral hygiene status were analyzed.

The obtained results demonstrated that treatment methods based on a comprehensive approach are more effective than conventional treatment methods. The use of remineralization therapy, restorative procedures with modern filling materials, hygienic measures, and preventive interventions significantly improved the clinical condition of patients. In addition, proper organization of oral hygiene and the application of individualized preventive measures reduced the risk of recurrence of these diseases.

**Discussion:** The findings of this study confirm that successful management of hard dental tissue diseases requires a comprehensive diagnostic and therapeutic approach. Isolated treatment methods without functional evaluation may lead to recurrence of lesions and incomplete restoration of oral function.

Modern restorative dentistry emphasizes minimally invasive techniques that preserve natural tooth tissues while ensuring durable functional restoration.

Rehabilitation of teeth affected by structural damage must consider several factors:

- the extent of tissue destruction
- occlusal relationships
- patient hygiene habits
- individual risk factors for caries development

Preventive strategies also play a key role in long-term treatment success. Professional oral hygiene, patient education, and regular dental monitoring significantly reduce the risk of recurrence.

Clinical experience shows that the combination of remineralization therapy, restorative treatment, and preventive measures produces the most stable and predictable outcomes

### Conclusion

In conclusion, optimizing the comprehensive treatment of hard dental tissue diseases based on clinical and functional assessment significantly increases the effectiveness of dental care, restores the functional condition of teeth, and improves patients' quality of life. This approach is considered appropriate for widespread application in modern dental practice.

### References:

1. Ravshanovna X. L. MINIMALLY INVASIVE METHODS OF TREATMENT OF DENTAL CARIES IN ADULTS //ONLINE-CONFERENCES" PLATFORM. – 2021. – С. 118-119.
2. Ахмедова М., Кузиева М., Халилова Л. СОСТОЯНИЕ АЛЬВЕОЛЯРНОГО ОТРОСТКА И ПЕРИОСТА ПРИ ИСПОЛЬЗОВАНИИ СЪЕМНЫХ ПРОТЕЗОВ //Modern Science and Research. – 2025. – Т. 4. – №. 1. – С. 301-310.
3. Khalilova L. GLASS IONOMER CEMENTS USED IN DENTISTRY //Modern Science and Research. – 2024. – Т. 3. – №. 12. – С. 443-450.
4. Кузиева М., Ахмедова М., Халилова Л. ГАЛЬВАНОЗ И МЕТОДЫ ЕГО ДИАГНОСТИКИ В КЛИНИКЕ ОРТОПЕДИЧЕСКОЙ СТОМАТОЛОГИИ //Modern Science and Research. – 2025. – Т. 4. – №. 2. – С. 203-212.
5. Кузиева М., Ахмедова М., Халилова Л. СОВРЕМЕННЫЕ АСПЕКТЫ ВЫБОРА МАТЕРИАЛА ДЛЯ ОРТОПЕДИЧЕСКОГО ЛЕЧЕНИЯ БОЛЬНЫХ, НУЖДАЮЩИХСЯ В ПРОТЕЗИРОВАНИИ ЗУБОВ //Modern Science and Research. – 2025. – Т. 4. – №. 1. – С. 322-333.
6. Халилова Л., Ахмедова М., Кузиева М. ОСНОВНЫЕ АСПЕКТЫ ПРИ ДИАГНОСТИКИ КАРИЕСА //Modern Science and Research. – 2025. – Т. 4. – №. 1. – С. 697-706.
7. Khalilova L. MAIN ASPECTS IN CARIES DIAGNOSIS //Modern Science and Research. – 2025. – Т. 4. – №. 1. – С. 707-715.
8. Халилова Л., Кузиева М., Ахмедова М. ЗАБОЛЕВАНИЯ ВИСОЧНО-НИЖНЕЧЕЛЮСТНОГО СУСТАВА И ЛУЧЕВОЕ ИССЛЕДОВАНИЕ СУСТАВА ПРИ РАЗЛИЧНЫХ ЗАБОЛЕВАНИЯХ ДАННОГО СУСТАВА //Modern Science and Research. – 2025. – Т. 4. – №. 2. – С. 1208-1219

9. Khalilova L. THE ADVANTAGES OF COFFERDAMS TODAY AND THE IMPORTANCE OF LEVEL 4 INSULATION //Modern Science and Research. – 2025. – T. 4. – №. 3. – C. 676-685
10. Khalilova L. CORRECT DIAGNOSIS OF PERIODONTAL DISEASES AND DETERMINING THE COMPETENCE OF DENTISTS IN PERIODONTAL DISEASES //Modern Science and Research. – 2025. – T. 4. – №. 2. – C. 1199-1207.
11. Khalilova L. MODERN ISOLATION TECHNIQUES IN ENDODONTICS //Modern Science and Research. – 2025. – T. 4. – №. 6. – C. 1083-1089.
12. Nurullayev J., Khalilova L. THE SANDWICH TECHNIQUE AND ITS SIGNIFICANCE IN MODERN DENTISTRY //Modern Science and Research. – 2025. – T. 4. – №. 6. – C. 976-982.
13. Khalilova L., Turayeva M. PHOTOPOLYMERIZATION. PRINCIPLES OF OPERATION //Modern Science and Research. – 2025. – T. 4. – №. 5. – C. 1691-1698.
14. Khalilova L. THE IMPORTANCE AND BENEFITS OF COMPOSITE FILLING MATERIALS //Modern Science and Research. – 2025. – T. 4. – №. 5. – C. 1386-13.
15. Khalilova L. PHOTOPOLYMERIZERS. PRINCIPLES OF OPERATION AND ADVANTAGES. THE IMPORTANCE OF HALOGEN PHOTOPOLYMERIZERS TODAY //Modern Science and Research. – 2025. – T. 4. – №. 4. – C. 824-833.