BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg
BG PULSE JOURNAL

MODERN METHODS OF PULPITIS TREATMENT IN DENTISTRY

Kurbanova NodiraVahkidovna
Assistant of DentistryDepartment Asia International University

Abstract

This article discusses modern methods of pulpitis treatment in contemporary dentistry. Pulpitis is an inflammatory disease of the dental pulp caused mainly by bacterial infection, trauma, or advanced dental caries. Early diagnosis and appropriate treatment are essential to preserve tooth function and prevent complications. The article reviews conservative and surgical treatment methods, including biological therapy, vital pulpotomy, pulpectomy, and modern endodontic techniques.

Keywords: pulpitis, dental pulp, endodontics, pulpotomy, pulpectomy, root canal treatment, dentistry.

Introduction

Pulpitis is one of the most common dental diseases encountered in clinical practice. It is characterized by inflammation of the pulp tissue inside the tooth and is usually associated with deep caries, trauma, or bacterial invasion. If left untreated, pulpitis may lead to periodontitis, abscess formation, and tooth loss.

Modern dentistry aims not only to eliminate pain but also to preserve the vitality and function of the tooth whenever possible. Advances in endodontic technology and materials have significantly improved the effectiveness of pulpitis treatment.

Main Part

Classification of Pulpitis

Pulpitis is generally classified into:

- Reversible pulpitis;
- Irreversible pulpitis;
- Acute pulpitis;
- Chronic pulpitis.

The choice of treatment depends on the stage and severity of the disease.

Modern Treatment Methods of Pulpitis

Biological Method

The biological method is used mainly in reversible pulpitis when the pulp tissue remains vital. The inflamed dentin is removed, and лечебный material such as calcium hydroxide or bioceramic materials is placed over the pulp to stimulate healing and dentin formation.

Advantages of the biological method include:

- Preservation of pulp vitality;
- Maintenance of normal tooth nutrition;
- Reduced risk of complications.

Vital Pulpotomy

Vital pulpotomy involves the removal of the coronal part of the pulp while preserving the root pulp. This method is commonly used in young permanent teeth with incomplete root formation.

Modern materials such as mineral trioxide aggregate (MTA) and biodentine improve the success rate of pulpotomy procedures.

Pulpectomy and Root Canal Treatment

Pulpectomy is performed in irreversible pulpitis when the entire pulp tissue is infected. The procedure includes complete removal of the pulp, mechanical and chemical cleaning of the root canals, and obturation with filling materials.

Modern endodontic treatment includes:

- Rotary nickel-titanium instruments;
- Electronic apex locators;
- Digital radiography;
- Ultrasonic irrigation systems;
- Thermoplastic root canal filling techniques.

These technologies increase treatment accuracy and reduce procedural complications.

Laser-Assisted Endodontics

Laser technology is increasingly used in endodontics for canal disinfection and reduction of bacterial contamination. Laser treatment improves sterilization and accelerates tissue healing.

Complications and Prevention

Possible complications of pulpitis treatment include:

- Persistent pain;
- Root canal infection;
- Instrument fracture;
- Periapical inflammation.

Prevention depends on:

- Early diagnosis of dental caries;
- Regular dental examinations;
- Proper oral hygiene;
- Timely restorative treatment.

Conclusion

Modern methods of pulpitis treatment are aimed at preserving tooth structure, eliminating infection, and restoring oral health. Advances in endodontic instruments, biomaterials, and diagnostic technologies have significantly improved treatment outcomes. Accurate diagnosis and appropriate treatment planning remain essential for successful management of pulpitis.

References

1. Khayitova, M. Z. (2024). Modern views on the Causes and Treatment of Caries of Temporary Teeth in Young Children. *International Journal of Alternative and Contemporary Therapy*, *2*(9), 123-127.
2. Khayitova, M. D. (2024). Morphological Features of Bottle (Circular) Caries. *American Journal of Bioscience and Clinical Integrity*, *1*(10), 117-124.
3. Dzhuraevna, K. M. (2024). Features of Caries Morbidity in Preschool Children. *Research Journal of Trauma and Disability Studies*, *3*(3), 300-305.
4. Hayitova, M., & Taylakova, D. (2023). DENTAL CARIES IS A DISEASE OF CIVILIZATION. *Центральноазиатский журнал образования и инноваций*, *2*(8), 61-66.
5. Джураевна, К. М. (2024). Клинико-морфологические аспекты трещин на задних зубах у взрослых. *Научный журнал травматологии и инвалидности* , *3* (5), 429-432.
6. Dzhuraevna, K. M. (2024). Prevalence and Course of Dental Diseases Among Younger Patients. *Research Journal of Trauma and Disability Studies*, *3*(5), 433-436.
7. Хайитова, М. Д. (2023). Особенности Возникновение И Течение Кариеса Зубов. *Research Journal of Trauma and Disability Studies*, *2*(12), 356-363.

8. Хайитова, М., & Тайлакова, Д. (2023). ВЗГЛЯД СТОМОТОЛОГА НА ГИГЕНУ ПОЛОСТИ РТА У ДЕТЕЙ. *Инновационные исследования в современном мире: теория и практика*, *2*(23), 58-59.
9. Хайитова, М. Д. (2023). РАСПРОСТРАНЕННОСТЬ И РАСПРЕДЕЛЕНИЕ ТРЕЩИН НА ЗАДНИХ ЗУБАХ СРЕДИ ВЗРОСЛЫХ ПАЦИЕНТОВ (ОБЗОР ЛИТЕРАТУРЫ). *Лучшие интеллектуальные исследования*, *12*(1), 186-195.
10. Dzhuraevna, K. M. (2024). Clinical and Morphological Aspects of Cracks on The Back Teeth in Adults. *Research Journal of Trauma and Disability Studies*, *3*(5), 429-432.
11. Dzhuraevna, K. M. (2023). THE FREQUENCY OF DENTAL DISEASES IN CHILDREN (LITERATURE REVIEW). *Лучшие интеллектуальные исследования*, *12*(1), 159-168.
12. Dzhuraevna, K. M. (2023). FEATURES OF THE OCCURRENCE OF DENTAL DISEASES IN CHILDREN. *Лучшие интеллектуальные исследования*, *12*(1), 178-185.
13. Khayitova, M. (2025). GUIDELINES FOR DENTAL EMERGENCIES DURING A PANDEMIC. *Modern Science and Research*, *4*(1), 827-835.
14. Хаитова, М. (2025). СТОМАТОЛОГИК КАСАЛЛИКЛАР ПРОФИЛАКТИКАСИДА ФТОР САКЛОВЧИ БИРИКМАЛАРНИНГ АХАМИЯТИ. *Современная наука и исследования* , *4* (2), 1055–1065.
15. Тошбеков Б. и Хаитова М. (2025). ТИШ КАРИЕСИ ПРОФИЛАКТИКАСИНИНГ ИНСОН ОРГАНИЗМИДАГИ АХАМИЯТИ. *Современная наука и исследования* , *4* (2), 591–594.
16. Khayitova, M. (2025). TISH YUZASIDA HOSIL BOLADIGAN KARASHLAR VA TOSHLAR (CHOKMALAR). *Modern Science and Research*, *4*(3), 1405-1412.
17. Хаитова, М. (2025). ТИШ КАТТИК ТО'КИМАСИ РЕМИНЕРАЛИЗАЦИЯ КАРИЕС ПРОФИЛАКТИКАСИДАГИ О'РНИ. *Современная наука и исследования* , *4* (4), 1801–1806 гг.
18. Khayitova, M. (2025). BOLALARDA KARIES PROFILAKTIKASIDA FISSURALARNI MUHRLASH VA ULARNING AHAMIYATI. *Modern Science and Research*, *4*(5), 504-507.