EUROPEAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND MANAGEMENT STUDIES

VOLUME04 ISSUE01
DOI: https://doi.org/10.55640/eijmrms-04-01-52 Pages: 305-309

KNOWLEDGE OF MODERN TEETH WHITENING METHODS: "ZOOM-4" AND "BEYOND POLUS"

Ochilov Hayotjon
Samarkand State Medical University, Uzbekistan

Axmedov Alisher Astanovich
Samarkand State Medical University, Uzbekistan

ABOUT ARTICLE

Key words: Bleaching, hydrogen peroxide, bleaching with "cold light".

Abstract: This article describes the methods of chemical bleaching and contraindications to bleaching.

Received: 21.01.2024
Accepted: 26.01.2024
Published: 31.01.2024

INTRODUCTION

Today, teeth whitening is becoming more and more popular. This is due to the fact that today white, beautiful teeth are recognized as one of the most important signs of aesthetics and success. However, unfortunately, over the course of life, teeth lose their whiteness. These include eating habits (excessive consumption of pigmented foods such as wine, coffee, tea and juices), and natural age-related changes, and genetic characteristics, and smoking, and the results of endodontic treatment, and dental injuries. This is followed by bleaching. There are two main types of bleaching: professional and home bleaching. Here we would like to focus in more detail on professional whitening. Bleaching can be both mechanical (for example, ultrasonic teeth cleaning using special equipment or scalers, Air-Flow equipment, plaque removal using special pastes) and chemical. The molecules of hydrogen peroxide or carbamide peroxide, which are part of the whitening gel, disintegrate on the surface of the tooth to form active radicals. Radicals, penetrating into the surface layers of teeth, change the structure of the pigment that determines the shade of teeth. These changes result in a visual bleaching effect. The gel can act

independently or under the influence of catalysts such as halogen or ultraviolet lamps or laser radiation. Currently, two professional chemical whitening systems are the most popular - "ZOOM-4" and "Beyond Polus". "ZOOM-4" is a teeth whitening system developed by DISCUS DENTAL for dental offices, which uses 25% hydrogen peroxide gel with photosensitive activators. The manufacturer claims that the procedure is more effective, safe and comfortable for patients compared to previous generations. If previously the patient experienced pain or discomfort, today you can forget about it. This is due to the use of a special WhiteSpeed lamp, which is a cold LED light source that prevents overheating of fabrics. At the same time, the system uses a 25percent concentration of hydrogen peroxide, which is 10% lower than in previous versions. This means that the risk of damage to the enamel is minimized. In addition, the whitening gel contains ingredients that protect and strengthen the enamel. The procedure itself is no different from previous generations or other systems. The patient must first be examined by a doctor. This point is not as important as a component of the bleaching process itself, but you can't do without it. The doctor should make sure that there are no contraindications, conduct an examination, suggest eliminating all negative factors (for example, the presence of caries) and conduct professional oral hygiene and remineralizing therapy. For patients with high resistance, bleaching is not contraindicated and can be performed without remineralizing therapy. Bleaching is contraindicated in patients with low or very low resistance. If there are restorations or crowns, please be warned that after whitening, the color of the tooth may differ from its natural color in order to avoid conflict. The next stage is the stage of direct bleaching. Before the procedure, the soft tissues of the oral cavity should be pulled back with a liquid cofferdam to isolate the gums or with a special retractor in combination with complete isolation with a conventional cofferdam. The gel is then applied to the teeth and activated by a lamp. This procedure is performed four times within 15 minutes. The essence of the "Beyond Polus technique" is generally the same as the "ZOOM-4". Blue spectrum light is used as a catalyst for hydrogen peroxide. At the output, this light is filtered through two optical lenses. Their distinctive feature is the presence of 30 layers of special coating at once. The length of the cold blue light hitting the teeth is 480-520 nm. According to medical practice, this length is sufficient to provide an optimal range of teeth whitening. Harmful ultraviolet radiation is also not a concern, since it is completely excluded by the filtration system mentioned above. However, in addition to this, each system has its own contraindications to use. These include pregnant and lactating women, children, people with hypersensitivity of teeth, patients with multiple caries, people with undeveloped dental tissue and people with allergies to components of whitening gel. An important part of whitening is dental care after the procedure. To ensure the best bleaching result, it is recommended to refrain from smoking and eating dark-colored food for at least one week. It is necessary to carry out professional oral hygiene

twice a year. We have read a lot of reviews on the Internet about this procedure to make sure that the manufacturer's statements are true.

CONCLUSION

In general, most patients are very satisfied with the effectiveness of the treatment, but many complain of tooth sensitivity and discomfort, which contradicts the company's promises. A small number of patients reported that the color of the teeth did not immediately align and became even only after a week. There are also complaints that the effect is short-lived. However, perhaps the only real disadvantage of this method is the price.

REFERENCE

1. Абдуллаева П. Р., Ахмедов А. А. СПОСОБ ЛЕЧЕНИЯ ИШЕМИЧЕСКИХ СОСТОЯНИЙ ЗРИТЕЛЬНОГО НЕРВА И СЕТЧАТКИ (ЛИТЕРАТУРНЫЙ ОБЗОР): Medical science //Ethiopian International Journal of Multidisciplinary Research. – 2023. – Т. 10. – №. 09. – С. 18-23.
2. Ризаев Ж. А., Ахмедов А. А. ОСНОВЫ СТОМАТОЛОГИЧЕСКОЙ ПОМОЩИ В РЕСПУБЛИКЕ УЗБЕКИСТАН НА ОСНОВЕ РАЗВИТИЯ ОБЩЕЙ ВРАЧЕБНОЙ ПРАКТИКИ //ЖУРНАЛ СТОМАТОЛОГИИ И КРАНИОФАЦИАЛЬНЫХ ИССЛЕДОВАНИЙ. – 2023. – Т. 4. – №. 3.
3. Абдуллаева Н. И., Ахмедов А. А. ОСТЕО-ИММУНОЛОГИЧЕСКИЙ СТАТУС ПАЦИЕНТОВ С ЗАБОЛЕВАНИЙ ПАРОДОНТА В ПОДРОСТКОВОМ И МОЛОДОМ ВОЗРАСТЕ //TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI. – 2023. – Т. 3. – №. 11. – С. 143-149.
4. Ахмедов А. А. Иммунологические аспекты патогенеза гингивита и пародонтита //IQRO. – 2023. – Т. 3. – №. 2. – С. 121-123.
5. Ризаев Ж. А., Ахмедов А. А. GROWTH AND DEVELOPMENT OF GENERAL MEDICAL PRACTICE IN THE REPUBLIC OF UZBEKISTAN TO IMPROVE DENTAL CARE //ЖУРНАЛ СТОМАТОЛОГИИ И КРАНИОФАЦИАЛЬНЫХ ИССЛЕДОВАНИЙ. – 2023. – Т. 4. – №. 3.
6. Ахмедов А. А., Нарзиева Н. DENTAL PROSTHETICS ON IMPLANTS AND THEIR FEATURES //American Journal of Pedagogical and Educational Research. – 2023. – Т. 16. – С. 132-135.
7. Astanovich A. D. A. et al. The State of Periodontal Tissues in Athletes Engaged in Cyclic Sports //Annals of the Romanian Society for Cell Biology. – 2021. – С. 235-241.
8. Alimjanovich R. J., Astanovich A. A. СОВЕРШЕНТСВОВАНИЕ СТОМАТОЛОГИЧЕСКОЙ ПОМОЩИ В УЗБЕКИСТАНЕ С ИСПОЛЬЗОВАНИЕМ КОНЦЕПТУАЛЬНОГО ПОДХОДА ДЛЯ УЛУЧШЕНИЕ ЕЕ КАЧЕСТВА //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2023. – Т. 8. – №. 4.

9. Ортикова Н. Глобализация биоэтики в период пандемии COVID-19 //Общество и инновации. – 2020. – Т. 1. – №. 1/S. – С. 677-682.

10. Ортикова Н. Влияние психоэмоционального напряжения детей на состояние здоровья полости рта //Общество и инновации. – 2023. – Т. 4. – №. 7/S. – С. 328-333.

11. Ортикова Н. Х., Ризаев Ж. А., Мелибаев Б. А. ПСИХОЛОГИЧЕСКИЕ АСПЕКТЫ ПОСТРОЕНИЯ СТОМАТОЛОГИЧЕСКОГО ПРИЕМА ПАЦИЕНТОВ ДЕТСКОГО ВОЗРАСТА //EDITOR COORDINATOR. – 2021. – С. 554.

12. Ортикова Н. Тенденция эффективности профилактических мероприятий путем коррекции психологического стресса у детей на стоматологическом приёме //Общество и инновации. – 2022. – Т. 3. – №. 6. – С. 181-189.

13. Qobilovna B. Z., Nodirovich E. A. EVALUATION OF ORTHOPEDIC TREATMENT WITH REMOVABLE DENTAL PROSTHESES FOR PATIENTS WITH PAIR PATHOLOGY //Spectrum Journal of Innovation, Reforms and Development. – 2023. – Т. 11. – С. 95-101.

14. Anvarovich E. S., Qobilovna B. Z. INFLUENCE OF DIFFERENT TYPES OF RETRACTION THREADS ON THE DEGREE OF GINGI RECESSION //Spectrum Journal of Innovation, Reforms and Development. – 2023. – Т. 11. – С. 84-86.

15. Tohirovna M. L., Qobilovna B. Z. Optimization of Complex Methods Treatment of Inflammatory Periodontal Diseases //Eurasian Research Bulletin. – 2023. – Т. 17. – С. 138-143.

16. Tavakalova Q. M., Qobilovna B. Z., Sarvinoz Y. Preventive Measures in the Treatment of Caries in School children //Eurasian Research Bulletin. – 2023. – Т. 17. – С. 60-65.

17. Исламова Н., Чакконов Ф. Роль продуктов перекисного окисления липидов и противовоспалительных цитокинов крови в развитии заболеваний полости рта при гипотиреозе //Общество и инновации. – 2020. – Т. 1. – №. 1/s. – С. 577-582.

18. Fakhriddin C., Shokhruh S., Nilufar I. ENDOKANAL PIN-KONSTRUKSIYALARNI ISHLATISHDA ASORATLAR VA XATOLAR TAHLILI //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2022. – Т. 7. – №. 1.

19. Shoxrux S., Shoxrux I., Faxriddin C. PREVENTION AND TREATMENT OF ORAL INFECTIONS IN DENTURE WEARERS //International Journal of Early Childhood Special Education. – 2022. – Т. 14. – №. 4.

20. Xusanovich C. F. COMPLETE REMOVABLE PROSTHESIS SUPPORTED BY IMPLANTS //European International Journal of Multidisciplinary Research and Management Studies. – 2023. – Т. 3. – №. 11. – С. 127-133.

21. Xusanovich C. F. et al. PROSTHETICS A COMPLETE REMOVABLE PROSTHESIS BASED ON IMPLANTS //European International Journal of Multidisciplinary Research and Management Studies. – 2023. – T. 3. – №. 11. – C. 122-126.

22. Najmiddinovich S. N. et al. CARIES IN SCHOOL CHILDREN AND TREATMENT PREVENTIVE MEASURES //American Journal of Pedagogical and Educational Research. – 2023. – T. 16. – C. 44-49.

23. Khusanovich K. B. R. C. F. TYPES AND APPLICATIONS OF DENTAL COMPLIMENTS //Journal of Modern Educational Achievements. – 2023. – T. 5. – №. 5. – C. 95-99.

24. Zarnigor J. MAIN ROLE OF HYGIENIC EDUCATION IN THE SYSTEM PRIMARY PREVENTION OF DENTAL DISEASES OF PATIENT //European International Journal of Multidisciplinary Research and Management Studies. – 2023. – T. 3. – №. 11. – C. 157-163.

25. Qizi J. Z. B. METHODS OF OPTIMIZATION OF TREATMENT OF PERIODONTAL DISEASES USING NEW TECHNOLOGIES //European International Journal of Multidisciplinary Research and Management Studies. – 2023. – T. 3. – №. 10. – C. 234-241.

26. Kobilovna B. Z., Rushana R. COMPARATIVE EVALUATION OF PARTIAL DENTURES WITH VARIOUS FASTENING ELEMENTS //Intent Research Scientific Journal. – 2023. – T. 2. – №. 9. – C. 98-103.

27. Qobilovna B. Z., Maxzuna U. Improvement of Providing Therapeutic Dental Care to Pregnant Women. Therapeutic and Preventive Measures //Eurasian Research Bulletin. – 2023. – T. 16. – C. 146-150.

28. Tavakalova Q. M., Qobilovna B. Z., Sarvinoz Y. Results of the Prevention Program Dental Diseases in School-Age Children //Eurasian Research Bulletin. – 2023. – T. 17. – C. 50-54

29. Jurabek T. D., Qobilovna B. Z. Principles of Prevention of Dental Diseases in Children in Modern Conditions //Eurasian Research Bulletin. – 2023. – T. 17. – C. 55-59.

30. Tavakalova Q. M., Qobilovna B. Z., Sarvinoz Y. Preventive Measures in the Treatment of Caries in School children //Eurasian Research Bulletin. – 2023. – T. 17. – C. 60-65