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The Effectiveness of the Use of the Drug "Proroot MTA" in the Therapeutic and Surgical Treatment of Periodontitis

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Abstract
During the in vitro and in vivo ProRoot MTA study, compliance with the requirements for an ideal material was revealed. These properties make it possible to use ProRoot MTA for various indications. The article describes two studies devoted to the use of this material in the biological treatment of pulpitis of permanent teeth and retrograde filling of teeth with destructive periapical processes. ProRoot MTA material can be used in an outpatient clinic in various clinical situations, taking into account the indications of the use of the material.

Keywords:

Introduction

To date, successful treatment of inflammatory diseases of the pulp and periodontium is considered an urgent problem in dentistry. The main task of treatment is to eliminate infection and the inflammatory process using biocompatible materials and technologies. "ProRoot" (Mineral Trioxide Aggregate, MTA) was developed at Loma Linda University (USA) by M. Torabinejad, Professor of the Department of Endodontics. Compliance requirements for the material in vitro, in vivo research: biological compatibility, reliable germination, absence of inflammation in surrounding tissues, odontotropic effect, regeneration of pulp, dentin, cement, bone, the only material on the surface of which cementogenesis occurs, high tolerance to moisture, high radiopacity, final curing time - 4 hours [2, 4]. Indications for use of the material: protective coating of the pulp, vital amputation, apexification, retrograde filling of the root tip, elimination of root resorption, root perforations and furcation areas.

The aim of the study was to increase the effectiveness of treatment of inflammation of the pulp and periodontal tissues using MTA.

Materials and methods:

MTA has been used in various clinical situations: 1. With the biological method of treatment of pulpitis. The study involved 45 children with vital molars, who were divided into two groups. The material "Pro Root MTA" (Dentsply) was used in the study group. In the control group, the "Life" material (calcium hydroxide, Kerr) was used. Each group included 20 permanent molars with unformed roots in 15 children aged 6 to 10 years. The patients strictly met the inclusion and exclusion criteria. Informed consents were Ravshanova N.,B. Mukhammadiev T.,R. The results of the use of ProRoot MTA in therapeutic ... 399 were obtained before the start of the study. After the presentation of the material, clinical and radiological control was carried out through 1, 3, 6, 12, 18, 24 a month.

The results and their discussion. Based on the results obtained, the effectiveness of pulpitis treatment using MTA (93.3 ± 5.2% compared to the control — 60 ± 2.10%, $P < 0.05$) was achieved 24 months after treatment. Perhaps this is due to the properties of MTA: the material does not dissolve over time, has high biocompatibility and odontotropy, excellent tolerance to moisture. Calcium hydroxide preparations have a powerful antibacterial and odontotropic effect, but at the same time they are able to dissolve under the influence of biological fluids. In this case, micro-spaces are formed, which are the basis for the active reproduction of bacteria. Therefore, a good result is achieved at first, and after a while it is possible to aggravate the process. 2. MTA was applied by us during retrograde sealing. Retrograde filling is a well—known procedure for the treatment of teeth with permanent periapical infection when traditional endodontic treatment is ineffective or impossible, or when a defect in the tightness of the root canal is detected during root resection. A special feature of MTA is its complete biocompatibility with periradicular tissues. This material provides reliable sealing of the apical opening of the root canal, even in the absence or impossibility of its full-fledged orthograde revision. The technique of root apical resection with retrograde filling ProRoot MTA: 1) preoperative preparation; 2) anesthesia; 3) manipulations on soft tissues; 4) manipulations on hard tissues; 5) periradicular curettage; 6) root apical resection; 7) treatment of a bone wound; 8) preparation of a retrograde cavity; 9) retrograde filling; 10) filling of the bone defect with bone regeneration material; 11) control radiography; 12) passive fixation of the flap; 13) postoperative observation, suture removal on the 7th day after surgery; 14) control X-ray examination 3 and 6 months after surgery. ProRoot material was used for retrograde filling in 14 patients in 17 permanent teeth. In all cases, 100% clinical effectiveness of the treatment was obtained. Currently, MTA is the most optimal material for retrograde filling in endodontic surgery. The use of new technologies in the form of a physiodispensor and an ultrasound machine greatly improves the quality of treatment. It is safe to recommend the MTA material in the practice of an outpatient clinic in various clinical situations, taking into account the indications of the use of the material. MTA is especially relevant in the work of a general practitioner dentist or a general practitioner who performs a mixed reception. The ability to work with various methods of using MTA will allow for effective treatment.

References

1. Astanovich, A. D. A., Alimdjanovich, R. J., Abdujamilevich, S. A., & Bakhriddnovich, T. A. (2021). The State of Periodontal Tissues in Athletes Engaged in Cyclic Sports. Annals of the Romanian Society for Cell Biology, 235-241.
2. Alimdjanovich, R. J., & Astanovich, A. A. (2023). Development of dental care in uzbekistan using a conceptual approach to improve its quality. Central Asian Journal of Medical and Natural Science, 4(4), 536-543.
3. Alimdjanovich, R. J., & Astanovich, A. A. (2023). FUNDAMENTALS OF DENTAL CARE IN THE REPUBLIC OF UZBEKISTAN BASED ON THE DEVELOPMENT OF GENERAL MEDICAL PRACTICE. Best Journal of Innovation in Science, Research and Development, 2(8), 163-174.
4. Asrorovna, X. N., Baxriddinovich, T. A., Bustanovna, I. N., Valijon O'g'li, D. S., & Qizi, T. K. F. (2021). Clinical Application Of Dental Photography By A Dentist. The American Journal of Medical Sciences and Pharmaceutical Research, 3(09), 10-13.
5. Bustanovna, I. N., & Sharipovna, N. N. (2023). Research cases in women after menopause clinical and morphological changes in oral organs and their analysis. Journal of biomedicine and practice, 8(3).
6. Bustanovna, I. D. (2021). Socio-ethnic factors of psychological adaptation of foster-families and children. ACADEMICIA: An International Multidisciplinary Research Journal, 11(6), 34-37.
7. Bustanovna, I. N. (2022). Assessment of clinical and morphological changes in the oral organs and tissues in post-menopause women. Thematics Journal of Education, 7(3).
8. Husanovich, C. F. (2024). RESEARCH ON THE ATTITUDE OF PEOPLE TO THE PREVENTION OF DENTAL DISEASES. European International Journal of Multidisciplinary Research and Management Studies, 4(02), 265-268.
9. Islamova, N. B., & Sh, N. N. (2023, May). STUDY OF CHANGES IN PERIODONTAL DISEASES IN POSTMENOPAUSAL WOMEN. In Conferences (pp. 15-17).
10. Исламова, Н. Б., & Чакконов, Ф. Х. (2021). Изменения в тканях и органах рта при эндокринных заболеваниях. In Актуальные вопросы стоматологии (pp. 320-326).
11. Иргашев, Ш. Х., & Исламова, Н. Б. (2021). Применение и эффективность энтеросгеля при лечении генерализованного пародонтита. In Актуальные вопросы стоматологии (pp. 305-310).
12. Исламова, Н. Б., & Исломов, Л. Б. (2021). Особенности развития и течения заболеваний полости рта при эндокринной патологии. ББК, 56, 76.
13. Исламова, Н. Б., Шамсиев, Р. А., Шомуродова, Х. Р., & Ахмедова, Ф. А. (2014). Состояние кристаллообразующей функции слюны при различных патологиях. In Молодежь и медицинская наука в XXI веке (pp. 470-471).
14. Исламова, Н. Б. (2016). Сравнительная оценка противовоспалительных цитокинов крови в развитии заболеваний полости рта при гипотиреозе. Наука в современном мире: теория и практика, (1), 41-44.
15. Исламова, Н. Б., & Назарова, Н. Ш. (2023). СУРУНКАЛИ ТАРҚАЛГАН ПАРОДОНТИТ БИЛАН КАСАЛЛАНГАН ПОСТМЕНОПАУЗА ДАВРИДАГИ

АЁЛЛАРНИНГ ПАРОДОНТ ТЎҚИМАСИНИНГ ДАВОЛАШ САМАРАДОРЛИГИ ОШИРИШ. ЖУРНАЛ СТОМАТОЛОГИИ И КРАНИОФАЦИАЛЬНЫХ ИССЛЕДОВАНИЙ, 4(2).

16. Исламова, Н. Б., & Назарова, Н. Ш. (2023, May). СОВЕРШЕНСТВОВАНИЕ ДИАГНОСТИКИ И ЛЕЧЕНИЯ ХРОНИЧЕСКОГО ГЕНЕРАЛИЗОВАННОГО ПАРОДОНТИТА У ЖЕНЩИН В ПЕРИОД ПОСТМЕНОПАУЗЫ. In Conferences (pp. 13-15).

17. Исламова, Н. Б., & Назарова, Н. Ш. (2023). МЕТОДЫ ИССЛЕДОВАНИЯ ЗАБОЛЕВАНИЙ ПАРОДОНТА У ЖЕНЩИН, НАХОДЯЩИХСЯ В ПЕРИОДЕ ПОСТМЕНОПАУЗЫ. In АКТУАЛЬНЫЕ ВОПРОСЫ СТОМАТОЛОГИИ (pp. 334-338).

18. Исламова, Н. Б., & Назарова, Н. Ш. (2023, May). СОВЕРШЕНСТВОВАНИЕ ДИАГНОСТИКИ И ЛЕЧЕНИЯ ХРОНИЧЕСКОГО ГЕНЕРАЛИЗОВАННОГО ПАРОДОНТИТА У ЖЕНЩИН В ПЕРИОД ПОСТМЕНОПАУЗЫ. In Conferences (pp. 13-15).

19. Maksudjanovna, M. G., & Bustanovna, I. Z. (2020, June). FIRST CELL OBSERVATIONS AND RESEARCH. In Archive of Conferences (Vol. 1, No. 1, pp. 142-143).

20. Назарова, Н., & Исломова, Н. (2022). Assessment of clinical and morphological changes in the oral organs and tissues in post-menopause women. in Library, 22(1), 60-67.

21. Назарова, Н., & Исломова, Н. (2022). Этиопатогенетические факторы развития заболеваний пародонта у женщин в периоде постменопаузы. Профилактическая медицина и здоровье, 1(1), 55-63.

22. Содикова, Ш. А., & Исламова, Н. Б. (2021). Оптимизация лечебно-профилактических мероприятий при заболеваний пародонта беременных женщин с железодефицитной анемией. In Актуальные вопросы стоматологии (pp. 434-440).

23. Sulaymonova, Z. Z., & Islamova, N. B. (2023, May). TAKING IMPRESSIONS IN THE ORAL CAVITY AND THEIR REDUCTION. In Conferences (pp. 21-23).

24. Sharipovna, N. N., & Bustanovna, I. N. (2022). Assessment of clinical and morphological changes in the oral organs and tissues in post-menopause women. Frontline medical sciences and pharmaceutical journal, 2(05), 60-67.

25. Sharipovna, N. N., & Bustonovna, I. N. (2022). Etiopatogenetic factors in the development of parodontal diseases in post-menopasis women. The american journal of medical sciences and pharmaceutical research, 4(09).

26. Xusanovich, C. F., Aliyev, S., Eshqobilov, Q., Majidov, B., & Ebdullayev, M. (2023). Characteristics of Orthopedic Treatment of Diabetic Patients. Open Herald: Periodical of Methodical Research, 1(5), 16-19.