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INTEGRATED APPROACH TO THE CREATION OF ARTIFICIAL SUPPORT FOR ORTHOPEDIC STRUCTURES USING DENTAL IMPLANTS FOR DEFECTS OF THE DENTITION

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Abstract

The combination of different types of dental implants to support orthopedic fixed restorations is an effective way to restore masticatory function, no less effective than the traditional method of using two-stage screw implants as supports for fixed bridges.

Keywords: complex treatment, implant, orthopedic construction.

Introduction

In recent years, in the manufacture of supports for orthopedic structures in fixed bridges, two-stage screw implants have been replaced (in our opinion, unsuccessfully) by other types of implants (subperiosteal implants, plate implants, screw implants fixed using one-stage technology). used [1, 3, 4, 11]. Reliable osseointegration (optimal choice of the length and diameter of the intraosseous part of the implant), the creation of parallelism between the elements while maintaining the maximum height and volume of the fixed bridge support and ensuring reliable fixation are the positive aspects of this technique. At the same time, the use of these implants requires a large amount of bone, which is often lacking due to unfavorable structural features of the jaw (the bottom of the maxillary sinus, severe atrophy both in height and width of the alveolar ridge, the proximity of the maxillary nerve trunk to the periosteum of the alveolar process of the lower jaw, etc. Nowadays, there are many osteogenic materials with various osteogenic mechanisms, and the technique of controlled bone regeneration can be very effective and avoids most of the problems associated with unfavorable anatomical features of the jaw structure (both congenital and acquired) [9]. However, the use of this technique requires several surgical procedures and delays the completion of treatment, which is not always

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possible for general medical reasons. In addition, due to general economic problems, many patients are currently abandoning this expensive technique and looking for alternative solutions to their problems [2, 5-8, 10]. Therefore, based on 20 years of clinical experience, we have studied the possibility of using various types of implants (subperiosteal implants, plate implants and single-stage screw implants) as supports for the non-removable manufacture of prostheses of various lengths, both among themselves and with two-stage spiral cylindrical implants. The aim is to study the possibilities of their use in combination with each other and with two-stage spiral cylindrical implants.

Materials and Methods

The analysis of the results of rehabilitation of secondary orthodontic patients with fixed bridges supported by various combinations of implants of different types and using two-stage screw implants as supports (comparison group) was carried out depending on the need for treatment. At the same time, the study included only those patients who had used our orthopedic structures based on implants for more than two years and had no complaints during that time. Therefore, we believe that when analyzing the results, we were able to exclude patients who had complications due to non-compliance with implant placement protocols. A total of 72 patients were examined, two-stage cylindrical screw implants (group I, comparison group) were used to support the fixed bridge prosthesis; Group II consisted of 25 patients with two-stage screw implants installed in the anterior jaw; group III consisted of two-stage screw implants installed in the distal jaw, and 21 patients with a one-stage screw implant installed in the anterior jaw. Group IV consisted of 16 patients with a combination of two-stage screw implants and one-stage screw implants as a support for a fixed bridge; Group V consisted of 11 patients with a combination of subperiosteal implants and two-stage screw implants as a support for a fixed bridge (Fig. 5); group VI consisted of patients in whom subperiosteal implants and plate implants were combined to support a non-removable prosthesis in nine patients. Please note that in both groups V and VI there were cases when subperiosteal implants were installed first with unilateral or bilateral distal unlimited defects of the dentition to provide distal support for the bridge prosthesis, and two-stage screws and plate implants were installed later due to

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the loss of teeth in the jaws for various reasons. The results of the survey are listed in the table. The number of patients in group I whose bridge prostheses had to be removed due to a violation of the osseointegration of one or more implants was 6 people, which is 8.3% of the total number of patients (the minimum service life of the prosthesis before removal is 7 years and the maximum is 12 years) In group II, bridges had to be removed in 2 patients, which is 8% of the total number of patients. The service life of the prostheses was 8 and 9 years. In group III, two patients had to have a prosthesis removed, which accounted for 9.5% of the total number of patients in the group (the service life of the prostheses was 8 and 10 years); in group IV, one patient had to have the bridge removed, which was 6.3% of the total number of patients (the service life of the prosthesis during removal was 7 years); in group V, complications occurred in 9% of all patients; one patient had to have the bridge removed (the service life of the prosthesis after the installation of a two-stage cylindrical implant was 7 years); in Group VI had to have one prosthesis removed six years after the plate implant was installed, which accounted for 11.1% of the total number of patients in the group. This is 11.1% of the total number of patients in the group. The complication rate in the group with fixed bridges supported by two-stage spiral cylindrical implants (group I) was 8.3% of the total number of patients in this group, while the average time to complications was 8.5 years. In the group where different types of implants were combined to create supports for fixed orthopedic structures (groups II-VI), the complication rate averaged 8.8%. At the same time, the average service life of fixed orthopedic structures requiring removal was 8 years. Thus, based on this study, the following conclusions can be drawn: A multimodal approach to treatment with dental implants is an effective method of creating support for fixed orthopedic structures and is not inferior to using only two-stage implants with a spiral cylinder. The complication rate was 8.3% in the control group and 8.8% in the study group, and the average duration of functioning of fixed orthopedic structures that have lost their functional value was 8.5 years in the control group and 8 years in the study group.

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Conclusion:

Fixed orthopedic support using a combination of different screws of dental implants is an effective method of restoring masticatory function. The complication rate was 8.3% when fixed prostheses were supported by two-stage screw implants and 8.5% when fixed prostheses were supported using a multimodal approach.

REFERENCES:

1. 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.
2. Astanovich A. A. Comparative Analysis of the Stress-Strain State of the Lower Jaw with Different Splinting Systems in Localized Periodontitis of Middle Gravity by Finite Element Modeling //Scholastic: Journal of Natural and Medical Education. – 2023. – Т. 2. – №. 5. – С. 181-187.
3. Ortikova N., Rizaev J. THE PREVALENCE AND REASONS OF STOMATOPHOBIA IN CHILDREN //E-Conference Globe. – 2021. – С. 339-341.
4. Ахмедов А. А. Иммунологические аспекты патогенеза гингивита и пародонтита //IQRO. – 2023. – Т. 3. – №. 2. – С. 121-123.
5. Ортикова Н. POLITICAL ELITE AS A SCIENTIFIC PROBLEM //МЕЖДУНАРОДНЫЙ ЖУРНАЛ КОНСЕНСУС. – 2021. – Т. 2. – №. 1.
6. Alimdjanovich R. J., Khairullaevna O. N., Normuratovich N. A. CORRECTION OF PSYCHOLOGICAL STRESS IN CHILDREN WITH NON-PHARMACOLOGICAL METHODS OF DENTAL ADMISSION //Archive of Conferences. – 2021. – С. 108-114.
7. Xairullaevna O. N., Alimjanovich R. J. Improving the effectiveness of therapeutic and preventive measures by correcting psychoemotional stress in children at a dental appointment. – 2022.
8. Maxzuna U., Zarafruz B. IMPROVING THE PROVISION OF THERAPEUTIC DENTAL CARE TO PREGNANT WOMEN //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 618-623.

ISSN (E): 2980-4612
Volume 2, Issue 9, September-2023
Website: intentresearch.org/index.php/irsj/index

9. Zarafruz B., Hekmat K. H. A. S. MANIFESTATION OF HERPETIC INFECTION IN THE ORAL CAVITY AND THEIR TIMELY ELIMINATION //Spectrum Journal of Innovation, Reforms and Development. – 2022. – Т. 10. – С. 47-52.
10. 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.
11. Ruziyeva K. A., Burhonova Z. K. K. Complex Application Of Magnetic Laser Therapy And Propolis Tincture For The Prevention And Treatment Of Chronic Recurrent Aphthous Stomatitis //The American Journal of Medical Sciences and Pharmaceutical Research. – 2021. – Т. 3. – №. 06. – С. 127-130.
12. Абдуллаева Н. ИСКРИВЛЕНИЕ ШПЕЕ ПРИ ЗУБОАЛЬВЕОЛЯРНОМ УДЛИНЕНИЕ У ДЕТЕЙ С ВТОРИЧНЫМИ ДЕФОРМАЦИЯМИ ЗУБНОГО РЯДА //Collection of scientific papers «ΛΌГОΣ». – 2023. – №. May 26, 2023; Boston, USA. – С. 344-348.
13. Jamshed S. PREVALENCE OF PHYSIOLOGICAL BITE FORMS IN PEOPLE WITH DIFFERENT FACE TYPES //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 451-454.
14. Makhmudova U. B. The Effectiveness Of The Use Of Parapulpar Pins (Ppp) When Restoring Defects In The Crown Part Of The Frontal Teeth //Asian journal of pharmaceutical and biological research. – 2022. – Т. 11. – №. 2.
15. Bakhtiyorovna M. U. Causes Of Removable Denture Breaks And Allergic Reactions //Spectrum Journal of Innovation, Reforms and Development. – 2022. – Т. 10. – С. 374-377.
16. Bustanovna I. N. Assessment Of Clinical And Morphological Changes In The Oral Organs And Tissues In Post-Menopause Women //Thematics Journal of Education. – 2022. – Т. 7. – №. 3..
17. Nizomitdin A. I. Therapeutic Effect Of Improved Enamel Surface Preparation Technique In The Treatment Of Acute Initial Caries Of Temporary Teeth In Children //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 440-445.

ISSN (E): 2980-4612
Volume 2, Issue 9, September-2023
Website: intentresearch.org/index.php/irsj/index

18. Jamshed S. Prevalence Of Physiological Bite Forms In People With Different Face Types //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 451-454.
19. Nazhmiddinovich S. N., Obloberdievich S. J. Optimization of Orthopedic Treatment of Dentition Defects in Patients with Chronic Diseases of the Gastrointestinal Tract //Eurasian Research Bulletin. – 2023. – Т. 17. – С. 157-159.
20. Ахмадов И. Н. КЛИНИЧЕСКИЕ ОСОБЕННОСТИ И ПРИНЦИПЫ ЛЕЧЕНИЯ АЛЛЕРГИЧЕСКОГО СТОМАТИТА ПРИ ИСПОЛЬЗОВАНИИ ЧАСТИЧНЫХ И ПОЛНЫХ СЪЕМНЫХ ПЛАСТИНОЧНЫХ ПРОТЕЗОВ //ББК 72 И66. – 2021. – С. 262.
21. Ахмадов И. Н. Нарушения в системе перекисного окисления липидов при парадантозе //IQRO. – 2023. – Т. 3. – №. 2. – С. 124-127.
22. Ахмадов И. ОБЗОР СРЕДСТВ ДЛЯ ФИКСАЦИИ ЗУБНЫХ ПРОТЕЗОВ //ЗБІРНИК НАУКОВИХ ПРАЦЬ НАУКОВО-ПРАКТИЧНА КОНФЕРЕНЦІЯ З МІЖНАРОДНОЮ УЧАСТЮ ТА НАВЧАЛЬНИМ ТРЕНІНГОМ З ОВОЛОДІННЯМ ПРАКТИЧНИМИ НАВИКАМИ «СУЧАСНІ МЕТОДИ ДІАГНОСТИКИ, ПРОФІЛАКТИКИ ТА ЛІКУВАННЯ ОСНОВНИХ СТОМАТОЛОГІЧНИХ ЗАХВОРЮВАНЬ». – 2021. – С. 43
23. Ikramova F. F. Ikramova Application of lymphotropic therapy for complicated forms of varicosis of the lower limbs: Application of lymphotropic therapy for complicated forms of varicosis of the lower limbs //Архив исследований. – 2021.
24. 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.
25. Fakhriddin C., Shokhruh S., Nilufar I. ENDOKANAL PIN-KONSTRUKSIYALARNI ISHLATISHDA ASORATLAR VA XATOLAR TAHLILI //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2022. – Т. 7. – №. 1.
26. Fakhriddin C., Shokhruh S., Nilufar I. ENDOKANAL PIN-KONSTRUKSIYALARNI ISHLATISHDA ASORATLAR VA XATOLAR TAHLILI //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2022. – Т. 7. – №. 1.