

FEATURES OF SELECTION OF OPTIMAL TYPES OF DENTAL IMPLANT

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Introduction

Dental implantation was introduced into dentistry many years ago. Over the past decade, this direction has become the most common direction in surgical dentistry for the complete restoration of a toothless jaw [1, 8, 17, 23, 26].

The classification of dental implantation can be divided into several categories according to those or properties [3, 6, 9, 16, 25]. According to the shape of the intraosseous part, implants are: in the form of tooth roots (screw, cylindrical); plate-shaped; combined form [5, 7, 13, 27]. By design, implants are divided into: collapsible and non-removable [12, 14, 22, 28]. Cylindrical implants are highly effective when used as a support for orthopedic structures; they have a simple installation method; has different types of abutments, which creates conditions for reliable fixation of orthopedic structures [1, 10, 19, 29].

Plate implants consist of intraosseous and extraosseous parts. The intraosseous part forms a plate with holes and is located in the thickness of the spongy bone of the jaw [4, 20, 21, 24, 30]. The extraosseous part forms a neck and is located at the level of the crest of the alveolar process of the jaw and the mucous membrane. The next part, the support head protrudes above the mucous membrane and is intended for attaching a denture [2, 11, 15, 18].

Purpose of the study. Analyze the characteristics of cylindrical and plate implants and the choice of the optimal implantation technique depending on the patient's age.

Material and methods. Modern scientific literature on the features of cylindrical and plate implants and on the methods of dental implantation. The search was carried out in Pubmed, e-library, cyberleninka and other systems using the keywords: dental implantation, implantation technique, cylindrical implant, plate implant, one-stage method, two-stage method, prosthetics.

In total, 82 works published on the research topic in Russian and English between 2013 and 2023 were critically analyzed.

Results. An analysis of modern literature has made it possible to identify the special characteristics of cylindrical and plate implants and to select the optimal dental implantation technique for each patient with dentition defects [9, 15].

Cylindrical implants have a porous surface and distribute functional loads more evenly on the jaw bone tissue. Installation of the implant is quite easy and quick, less traumatic for patients [17, 32]. Cylindrical implants are coated on top with hydroxyapatite or titanium plasma, and this makes it possible to increase the outer surface of the intraosseous part. Hydroxyapatites have osteoconductive properties, which stimulates bone growth [10, 19]. They contribute to the “engraftment” of the implant, sometimes due to its hygroscopic properties it is subject to contamination. All cylindrical implants are manufactured dismountable and are classified as two-stage implants. Has an intraosseous part and an abutment [4, 20].

At the initial stage of development of implantology, when plate implants were invented, they became very popular and were widely used [14, 30]. But later, when using them, doctors encountered long-term complications. Integration of plate implants occurs when the resulting blood clot is not fixed to the surface of the smooth implant [1, 4, 7]. Due to this, osteogenic cells do not reach the surface of the implant itself, and the process of osteoinduction and osteoconduction occurs at the site of necrosis and from the edges of the resulting bone wound. This process is also affected by the traumatic method of installing plate implants. Due to the fact that osseointegration does not occur sufficiently, the installed plate implants are retained due to a tight fit in the bone [5, 11, 18]. Plate implants are either collapsible or non-removable. Non-separable one-stage plate implants have the same parts as two-stage ones - the intraosseous part and the abutment, but they are connected to each other monolithically, which allows them to be more aggressive [24, 25].

Conclusion. In clinical practice, plate implants can be used as the method of choice. Modern technology such as guided bone regeneration makes it possible to avoid the occurrence of extensive bone tissue defects after removal of unsuccessfully installed plate implants.

The installation of cylindrical implants is less traumatic than the installation of plate implants. Cylindrical implants more evenly distribute the functional load on the bone tissue. The choice of the optimal type of dental implant with cylindrical and plate implants depends on individual characteristics, the condition and amount of preservation of bone tissue and the age of patients with dentition defects.

Literature

1. Камалова М.К., Касимова Р.Р. Особенности оптимального выбора методики дентальной имплантации. Литературный обзор // International Journal of Multidisciplinary Research. - India, 2023. - Vol.9. - Issue 6. - P. 171-175.
2. Камилов Х.П., Камалова М.К. Современные подходы в лечении хронического рецидивирующего герпети-ческого стоматита у детей // «Достижения науки и образования» Международный научный журнал. - Москва, 2018. - №3 (25). - С. 46-48.
3. Камилов Х.П., Камалова М.К. Повышение эффективности комплексного лечения острого герпетичес-кого стоматита у детей // «Norwegian journal of the international science» Международный научный журнал. - Нарвегия, 2017. - №10. - С. 35-37.
4. Камалова М.К. Сравнительная оценка клинико-экономической эффективности программ профилактики лечения кариозных поражений зубов у дошкольников // «Журнал стоматологии и краниофациальных исследований» междисциплинарный подход по заболеваниям органов головы и шеи. - Самарканд, - Специальный выпуск, 2021. - С. 83-87.
5. Камалова М.К. Медико-социальный и клинико-экономический анализ лечения и профилактики кариеса зубов у детей дошкольного возраста // «Tibbiyotda yangi kun» научно - реферативный, культурно - просветительский журнал. - Бухара, 2020. - №3(33). - С. 79-80.
6. Камалова М.К. Оценка результатов внедрения программ профилактики кариеса зубов у детей дошкольного возраста // «Журнал Медицина и инновации». - Ташкент, 2021. - №4. - С. 680-684.
7. Камалова М.К. Оценка экономической эффективности программ профилактики лечения кариеса зубов у детей дошкольного возраста // «Tibbiyotda yangi kun» научно - реферативный, культурно - просветительский журнал. - Бухара, 2020. - №4(34). - С. 173-176.
8. Камалова М.К. Социально-экономический эффективность программ профилактики и лечения кариеса зубов у детей дошкольного возраста // «Образование и наука в XXI веке» международный научно-образовательный электронный журнал. - Россия, 2020. - №9. - Т.3. - С. 149-155.
9. Камалова М.К., Маслак Е.Е., Каменнова Т.Н., Осокина А.С., Афонина И.В., Огонян В.Р. Результаты лечения очаговой деминерализации эмали временных резцов у детей раннего возраста // «Tibbiyotda yangi kun» научно - реферативный, культурно - просветительский журнал. - Бухара, 2020. - №3(31). - С. 355-357.

10. Камалова М.К. Организация стоматологической помощи при лечении кариеса зубов у детей дошкольного возраста // «Биология ва тиббиёт муаммолари» международный научный журнал. - Самарканд, 2019. - №4.2 (115). - С. 221-224.
11. Маслак Е.Е., Камалова М.К. Проблемы организации стоматологической помощи детям дошкольного возраста // Biomeditsina va amaliyot jurnali. - Ташкент, 2020. - №. 1. - С. 26-32.
12. Kamalova M.K., Djuraeva A.A. Improvemen to fmethod sof treatment and prevention of candidiasisin young children // «Образование и наука в XXI веке» Международный научно-образовательный электронный журнал. - Россия, 2020. - № 9. - Т. 3. - С. 160-162.
13. Камалова М.К., Садуллаева Н.А. Современный подход к оперативному лечению переломов скуловерхнечелюстного комплекса // «Журнал Биомедицины и практики» - Ташкент, - 2022. - № 4. - С. 246-251.
14. Kamalova M. K., E.E. Maslak., I.V. Fomenko., A.L. Kasatkina., T.N. Kamennova., T.G. Khmizova., K.V. Nikitina. Reasons for primary teeth extraction in children aged 1-14 years: a retrospective study // Palarch's journal of archaeology of egypt. - Нидерланды, 2020. - Vol.17. - No6. - P. 13947-13964. Retrieved from www.scopus.com
15. Kamalova M.K. Evaluation of the results of the implementation of dental caries prevention programs in preschool children // Integrative dentistry and maxillofacial surgery. - Tashkent, - 2023. Volume 2. - Issue 1. - P. 109-116.
16. Kamalova M.K., Fomenko, I. V., Dmitrienko, D. S., Matvienko, N. V., Arjenovskaya, E. N., Gevorkyan, A. G., Maslak, E. E. Reasons for 1-17-year-old children to visit A dentist during the Covid-19 pandemic. European Journal of Molecular and Clinical Medicine, 2020. 7(7), 546-558. Retrieved from www.scopus.com
17. Kamalova M.K., Kadirova M.K. Analysis of Detecting the Frequency and Cause of Eyelid Deformation in Women of Reproductive Age // Journal of Natural and Medical Education. - USA, 2023. - Vol.2. - Issue 6. - P. 80-84.
18. Kamalova M.K., Kadirova M.K. Evaluation of the results of comprehensive rehabilitation of women of fertile age with acquired eyelid defect // **Galaxy International Interdisciplinary Research Journal**. - India, 2022. - Vol. 10. - Issue 5. - P. 431-436.
19. Kamalova M.K., Kadirova M.K. Innovative approach to surgical correction of acquired eyelid defect in women of fertile age // "Actual problems of dentistry and maxillofacial surgery". V International Congress of Dentists Tashkent, - 2022. - P. 50-52.
20. Kamalova M.K., Komilov H.P. Clinical and economic analysis of the optimization of prevention and treatment of dental caries in preschool children // Scientific journal of International Biology and medical problems. 2019. - № 4.2 (115). 53-56.

21. Kamalova M.K., Maslak E.E. Can Dental Screening of Preschoolers with or without Education of the Parents Improve Children's Oral Health? The Longitudinal Study Results // Integrative dentistry and maxillofacial surgery. - Tashkent, 2022. - № 1(1). - P. 58-62.
22. Kamalova M.K., Raximov S.SH. Congenital cleft lip and palate in children: etiological risk factors, prevention methods // American Journal of Research. - USA, - 2023. - Issue 3-4. - P.155-164.
23. Kamalova M.K., Raximov Z.K., Po'latova Sh.K. Clinical and economic rationale for the organization of dental care for preschool children]. Tibbiyotda yangi kun Ma'rifiy manaviy jurnal. 2019. - № 4 (28). 268-271.
24. Kamalova M.K., Sadullayeva N.A. Modern approach to surgical treatment of fractures of the zygomatic bone and upper jaw // International Journal of Health Systems and Medical Sciences. - USA, 2023. - Volume 2. – No. 2. – P. 60-64.
25. Kamalova M.K., Sadullayeva N.A. Yonoq-yuqori jag` kompleks sinishlarini jarrohlik davolash usuliga zamonaviy yondoshuv // Integrative dentistry and maxillofacial surgery. - Tashkent, - 2023. Volume 2. - Issue 1. - P.127-132.
26. Kamalova M.K., Sadullayeva N.A. Innovations in surgical treatment of fractures of the zygoma- maxillarius complex // «British View» **Journal**. - London, - 2022. -Volume 7. - Issue 2. - P. 144-151.
27. Légeret C, Furlano R. Oral ulcers in children- a clinical narrative overview // Ital J Pediatr. 2021 Jun 30;47(1):144. doi: 10.1186/s13052-021-01097-2.
28. Kamalova M.K., Maslak E. E., V.Naumova. Relationship between General and Oral Diseases: Literature Review // American Journal of Medicine and Medical Sciences. - Америка, 2020. - Vol.10(9). - P. 690-696. Retrieved from www.scopus.com
29. Vokhidov U.G., Kamalova M.Q. The use of various techniques in the treatment of traumatic injuries of the oral mucosa in children // European Journal of Molecular & Clinical Medicine. - England, 2020. - Vol. 7. Issue 7. - P. 3743-3748.
30. Kamilov H.P., Kamalova M.K. The use of laser therapy in the treatment of chronic recurrent herpetic stomatitis in children // Scientific journal European science review Vienna, 2018. - No. 7-8.- pp. 120-121.