OPTIMIZATION OF THE SURGICAL METHOD FOR REMOVING DENTAL IMPLANTS THAT HAVE LOST FUNCTIONAL VALUE

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Relevance: As a method for restoring the integrity of dentition, dental implantation has proven its high efficiency. Despite a significant rate of implant survival and success after 5–10 years of functioning, the number of complications has increased in recent years. According to global estimates, approximately 2 million implants are placed annually, while 200,000–250,000 are removed each year.

Purpose of the study: To optimize the surgical method for removing dental implants that have lost their functional value.

Material and Methods: A total of 39 implants were removed from 20 patients (6 men, 14 women) aged 34 to 74 years. Indications for implant removal included:

- Peri-implantitis (n=25)
- Implant fracture (n=10)
- Central screw fracture (n=3)
- Malpositioned implant (n=1)

Of the 39 removed implants, 31 were located in the molar (masticatory) area. The following removal methods were utilized:

1. Piezo-surgical unit–elevator–forceps (n=27).
2. Bur–elevator–forceps (n=5).
3. Reverse torque instruments (torque wrench with a maximum torque of 450 Ncm, reverse-threaded screw, and key) (n=4).

4. Trepan (n=1).
5. Elevator–forceps (n=1).
6. A combination of all methods (n=1).

Results: Following implant removal via piezo-surgical units, burs, trepans, or elevators/forceps, significant defects in soft and bone tissues were observed, accompanied by postoperative edema in all cases. Patients reported peak pain intensity during the first 3 days after surgery (5–6 points on the Visual Analog Scale - VAS) until a dense fibrin layer formed to protect the wound. Consequently, these patients had a high requirement for analgesics. This was due to the necessity of reflecting a full-thickness flap and performing bone preparation in all such cases.

Conversely, in cases where implants were removed using **reverse torque instruments**, there was no need for full-thickness flap reflection or bone tissue manipulation. Pain sensations in this group were negligible (0–1 point on the VAS scale), and there was no need for analgesic medication. Furthermore, these patients did not experience postoperative edema.

Conclusion: The use of reverse torque instruments for implant removal ensures minimal invasiveness, predictable results, and a lower degree of surrounding tissue trauma compared to other methods. This technique can be highly recommended for broad dental practice.

Reference

1. Makhmudovna T. M. et al. THE COURSE OF MALFORMATION AND CORNEAL EROSION IN TUBERCULOSIS PATIENTS //Open Access Repository. – 2023. – T. 4. – №. 03. – C. 60-66.
2. 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. – T. 11. – C. 95-101.

3. 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. – T. 11. – C. 84-86

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

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

6. Bakhtiyorovna M. U. Causes of removable denture breaks and allergic reactions //Spectrum Journal of Innovation, Reforms and Development. – 2022. – T. 10. – C. 374-377.

7. 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. – T. 11. – №. 2.