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PREVENTION OF ALVEOLITES AND ALVEOLAR GROWTH ATROPHY AFTER TEETH EXTRACTION IN WOMEN DURING LACTATION

Gafurova Dilshodakhon Alisherovna

2nd year master of the Andijan Medical Institute

Abstract. A comprehensive examination of 453 patients included clinical, functional and radiological methods. Evaluation of regional hemodynamics in the area of the sockets of the first lower molars was performed before tooth extraction, after 4 weeks, 3, 6 and 12 months using the method of ultrasound high-frequency Dopplerography.

Keywords: Alveolar bone atrophy, Doppler ultrasound, dental implantation, computed tomography.

INTRODUCTION

In preparation for dental implantation, the traditional approach is most often used in the form of tooth extraction followed by waiting for the socket to heal. This tactic requires a long transformation of the blood clot into bone for 6 months or more, which inevitably leads to bone tissue resorption and worsens the conditions for further dental implantation. Thus, during the first year after tooth extraction, the width of the alveolar process decreases by 5–7 mm, i.e., to approximately 50% of its original size. The maximum activity of the atrophy process is observed during the first 3 months after extraction, reaching 2/3 of the annual loss of the width and height of the alveolar bone from the original volume [1].

MATERIALS AND METHODS

We have examined and surgically treated 453 people, including 241 women and 212 men aged 30 to 45 years, with a diagnosis of "chronic apical periodontitis" at the Department of Dentistry of the Faculty of DPO. From the anamnesis it was established that 15 people have diseases of the gastrointestinal tract and 9 have diseases of the ENT organs in the remission stage.

RESULTS AND DISCUSSION

Patients complained of periodic aching pain in the area of the first lower molars, pain when biting these teeth. The teeth had previously been treated for complicated caries 5 to 10 years ago, which was confirmed by the anamnesis, cone beam computed tomography (CT) and targeted radiography. All patients were diagnosed with chronic apical periodontitis, and tooth extraction was indicated for all of them. When removing multi-rooted teeth, sectioning was performed using a turbine tip and diamond burs. To minimize trauma to the bone walls of the alveolus, root removal was performed with elevators and periotomes. After removing the molars, curettage of the socket was performed, blasting with a 0.05% chlorhexidine solution was performed, an aseptic dressing was applied for 10-15 minutes to control the hemostasis [2].

A comprehensive examination of patients included clinical, functional and radiological methods.

When measuring the ultrasound Doppler, a decrease in the linear blood flow velocities was determined: the average systolic blood flow velocity VAS decreased in the group by 5.7%. The average diastolic blood flow velocity VAD decreased by 6%. The average blood flow velocity VAM by the cross-section of the vessel - by 9.3%. These changes are associated with the relief of inflammation and the disappearance of edema. After 3 months, the patients did not present any complaints, and clinically pale pink gums were determined. The average value of atrophy of the height of the bone tissue of the vestibular plate of the alveolus was 1.98 ±± 0.32 m, i.e. 15%. The average systolic blood flow velocity VAS decreased by 7%; the average diastolic blood flow velocity VAD - by 7.3%, and the value of the average the cross-section of the vessel, the blood flow velocity VAM - by 6.4%. During this period, the decrease in the value of the indicators is associated with the depletion of the capillary network, blood flow disorder due to blood stagnation, a decrease

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in tissue perfusion with blood, and, as a result, a significant shrinkage of the volume of soft tissues occurs [3].

After 6 months, the patients had no complaints. Locally, pale pink gums were noted in the area of the socket of the extracted tooth; the tissues were painless upon palpation in this area and along the transitional fold. According to computed tomography data, bone loss increased in the area of the vestibular plate and amounted to 3.86 ± 0.37 mm, or 29% of the initial height of the alveolar bone. A decrease in linear blood flow velocities in the gum tissues was also determined. The average systolic blood flow velocity VAS decreased by 16%. The average diastolic blood flow velocity VAD decreased by 9.3%; the average blood flow velocity across the vessel cross-section VAM decreased by 18%. During this period, the decrease in indicators is associated with the depletion of the capillary network, blood flow disorder due to the lack of load on the tissues, decreased tissue perfusion with blood, and, as As a result, significant shrinkage of soft tissue volume continues.

After 12 months, the general condition of the patients was satisfactory, there were no complaints. Locally, pale pink, painless to palpation gums were noted in the area of the socket of the extracted tooth and along the transitional fold. Bone tissue resorption continued from the side of the tibular plate and amounted to 5.46 ± 0.46 mm, i.e. 42% of the initial height. The average systolic blood flow velocity VAS decreased by 18.3%; the average diastolic blood flow velocity VAD - by 11.6%; the average blood flow velocity across the vessel cross-section VAM - by 25.5%. During this period, the decrease in hemodynamic parameters is associated with the absence of chewing load.

CONCLUSION

Thus, the obtained data of clinical, functional and radiological studies indicated that the most optimal time for dental implantation is the period from 4 weeks to 3 months, when the level of bone tissue atrophy does not exceed 2 mm. With delayed implantation of 3 months or more, significant bone tissue resorption occurs, which requires additional reconstructive interventions, and, consequently, the treatment period and material costs increase.

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