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### NEW METHODS OF TREATING PERICORONITIS

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**Annotation:** The article describes a new method of treating chronic pericoronitis using a scalpel and using a tissue trimmer. 51 patients diagnosed with chronic pericoronitis were treated. The patients were divided into 2 groups depending on the surgical method of treatment. In the 1st group (26 patients), chronic pericoronitis was treated using a tissue trimmer, in the second group (25 patients) - using a surgical scalpel. Before surgery, all patients were prescribed conservative anti-inflammatory therapy. The examination of patients after surgical treatment was carried out over a period of 6 days; the results of the study showed that in the group of patients who were treated for chronic pericoronitis using a tissue trimmer, pain in the area of the surgical wound was observed for no more than two days; in the second group, patients complained of pain for 4 days. Swelling of the surrounding tissues and pain when swallowing were relieved on the 2nd day. Restriction of mouth opening in the first group of patients was observed for 2 days. Inflammatory phenomena in patients of group 1 decreased twice as fast. In addition, a positive psychological effect from this type of treatment was noted [1,2].

Key words: Pericoronitis, scalpel, tissue trimmer, anti-inflammatory therapy, psychological effect.

Pericoronitis occurs when third molars have incomplete or difficult eruption. Clinically, this is manifested by the occurrence of pain in the gum area, when the mucous membrane covers the crown part of the tooth in the form of a "hood". Exudate will begin to ooze from under the lingering gum hood, causing an unpleasant taste and odor in the mouth [3]. Often, the dense mucous membrane over the tooth makes it difficult for it to erupt; slowing down the process of eruption of the rest of the tooth leads to the fact that pathogenic bacteria begin to accumulate, causing infection. In this case, treatment is carried out through surgery [16]. The operation is carried out on an outpatient basis, the dental surgeon excises the overhanging mucous membrane over the tooth, after which the question of the advisability of preserving it is decided. Laser therapy is successfully used - this is a modern method of treating pericoronitis. The laser, having an anti-inflammatory effect, relieves swelling, stimulates the supply of oxygen and metabolism of gum tissue, thanks to deep penetration under the skin. But this type of treatment lasts 10-15 days and involves one laser procedure every day and has contraindications in patients with general somatic pathology [4]. For the practical implementation of a new treatment method, positive results from its use, ease of use and a reduction in rehabilitation time are extremely The method of using a surgical instrument produced by NTI - Rotary Dental desirable. Instruments for operations on soft tissues of the oral cavity - a tissue trimmer - deserves attention. The fabric trimmer is used in a regular turbine handpiece and does not require additional expensive equipment, as in the case of an electric or laser scalpel. The working part of the trimmer is made of special ceramics, which enhances coagulation by obliterating blood capillaries with the side of the cutting head, a minimally invasive incision simplifies gum restoration, eliminates necrosis, and significantly increases the efficiency of regeneration [5, 6, 71.

Most often, this process is observed around the third molars in the lower jaw (eights or wisdom teeth) and is associated with the process of eruption when the bud is incorrectly positioned or there is not enough space in the jaw. The tooth is forced to change its natural position, deviating

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forward, backward or towards an adjacent tooth and the normal process of eruption is disrupted [16, 17]. The tooth stops growing, the crown of this tooth becomes covered with a hood of mucous membrane, into which pieces of food and harmful microbes penetrate. Such an environment creates good conditions for the emergence of a focus of inflammatory processes. The area injured during the chewing process becomes ulcerated, which entails, in addition to discomfort, a decrease in immunity.

Signs of pericoronitis

- Dull pain at the site of a large chewing tooth, radiating to neighboring areas.
- Exacerbation of pain, then turns into acute pain.
- Swelling, redness and bleeding of the gums.
- Swelling, asymmetry of the cheeks.
- Difficulty chewing and opening the mouth.

If the patient does not consult a specialist in time, the disease becomes chronic, the main signs of which are suppuration, inflammation of soft tissues and an unpleasant odor.

To treat pericoronitis use:

• drug therapy

It includes taking anti-inflammatory, bactericidal, and painkillers. In addition, it prepares the conditions for surgical intervention;

• traditional surgery

With its help, the dental surgeon gets rid of the source of inflammation under local or general anesthesia [18]. First, the diseased area is treated, then the gingival hood is excised, the pus is removed and the mucous membranes are washed with an antiseptic;

•laser exposure

This is the effect of an infrared ray. Manipulation increases blood circulation and metabolism, nourishes tissues with oxygen and relieves inflammation.

In patients after operculectomy with laser radiation without antimicrobial and anti-inflammatory therapy\* on the third day1, in 100% of cases there was no pain and collateral swelling in the postoperative area. After traditional treatment; Despite\* taking antibiotics and non-steroidal anti-inflammatory drugs, 65% of patients complained of pain, and 40% continued to have collateral edema; in 22.7% of patients with a complicated postoperative course, lower third molars were removed. After excision of the overhanging edge of the mucous membrane with erbium laser radiation, wound healing under fibrinous plaque was observed on  $7.0\pm0.5$  days, and after exposure to carbon dioxide laser radiation - on  $11.0\pm1.0$  days. When excision of the mucous membrane with a cutting instrument, healing occurred under an iodoform swab through the granulation phase within  $14.0\pm1.5$  days The use of laser technologies for the surgical treatment of pericoronitis provides an anti-inflammatory effect and restoration of protective systems in the oral cavity, expressed in the disappearance of C-reactive protein, homocysteine

in mixed saliva, normalization of the amount of fibroblast growth factor-3, annexin V, tumor necrosis factor-a., a-defensins, lactoferrin, immunoglobulins A, B and M. With the advent of new laser surgical equipment in dental practice, it became possible to choose the wavelength of the working radiation and the time mode of operation (continuous, pulsed or pulse-periodic), ensuring high efficiency of dissection and ablation, as well as the most gentle effect on soft tissues and the oral mucosa. In dentistry, studying the effect of a new generation semiconductor laser on periodontal tissue and the oral mucosa, determining the optimal parameters and mode of exposure to laser light, taking into account the individual characteristics of the patient and nosological forms of diseases of the mucous membrane and periodontal tissue, will improve the quality and the effectiveness of treatment, reduce the repeated visits of patients, shorten the duration of treatment (including the period of temporary disability), and ensure the

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absence of relapses and complications. The technical characteristics, operational capabilities and therapeutic effect of devices based on semiconductor lasers (laser diodes) allow their use in dental clinics and, in particular, in surgical offices (departments) for mass outpatient visits in the treatment of periodontal diseases and oral mucosa with greater efficiency, than conventional traditional surgical methods for treating these diseases [19]. The therapeutic and economic effectiveness of laser methods using new generation equipment meets modern requirements of insurance medicine Such devices include LS-"IRE-Polyus", which allows expanding the range of possible wavelengths. High reliability, ease of control, low weight, dimensions and energy consumption allow the use of modern laser scalpels based on high-power semiconductor and fiber lasers in medical institutions of mass healthcare that do not have engineering services, while reducing the cost of their operation [20]. Low sensitivity to external influences combined with low power consumption makes it possible to use such devices in non-clinical conditions. An additional advantage is the fact that domestic devices, which have a lower initial and operating cost compared to foreign models, are not inferior to them in terms of characteristics (the devices operate in pulsed, pulse-periodic and continuous modes with a maximum radiation power of 30 W).

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