



## THE USE OF AUTO-PLATELET MASS TO PREVENT COMPLICATIONS AFTER THE EXTRACTION OF A WISDOM TOOTH

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### Abstract

The development and use of various methods and drugs that combine maximum safety and high biological activity against body tissues is a priority. This method today can be said about plasmolifting, a method of injecting platelet-rich autoplasm into the tissue space using special syringes and inserting tissue rich in fibrin fiber that replaces the wound.

**Keywords.** Plasmolifting, alveolar growth, immunomodulatory, physiology, autoplasm.

Today, to prevent complications after tooth extraction, there is no doubt that it can be treated only with the use of antibacterial and anti-inflammatory drugs. [1] This is not enough, today it is necessary to use immunoconstructors in the treatment of such pathologies, in addition to immunomodulatory means, as well as ways to improve hemodynamics, ways to improve tissue metabolism and oxygenation.

Plasmolifting is a very relevant method in gerontostomatology and in the prevention of post-extraction complications, as there are many factors that reduce tissue regenerative processes in old age and worsen the prognosis for complete rehabilitation and are important in filling the cavity in alveolar growth after extraction. It is important to improve the physiology of bone tissue through this method. Plasmolifting should sooner or later be a good adjunct to the treatment of periodontal disease in terms of medical and cost-effectiveness, for patients who rely on complex treatment regimens. (2)

The success of treatment with generally accepted methods is very low, often leading to complications during and after tooth extraction, the transition to acute inflammatory processes, acute subacute and chronic conditions, complication of the recovery process. The period of treatment of its complication after the removal of the wisdom tooth is still relevant today. The treatment of this pathology is very difficult and the elimination of further development of the disease ends with serious complications, which requires the introduction of new methods of treatment in dental practice. Currently, periodontologists are interested in the use of platelet autoplasm (TAP) in the treatment of periodontal tissue injuries, originally called plasmolifting if (3). It should be noted that Plasmolifting™ technology is as efficient, convenient and safe as possible [4]. Platelet autoplasm has several beneficial properties: it accelerates tissue regeneration, has an anti-inflammatory effect and reduces pain, which opens a new phase of its application in dentistry. Platelet-rich autoplasm (use of platelet plasma (PRP)) allows the production of a concentrated suspension of platelets. The use of TAP improves the oxygenation of periodontal tissue, which stimulates the bactericidal and phagocytic ability of the body's immune cells, as well as stimulates the synthesis of active proteins in local tissue. The use of TAP has important



advantages: ease of use, no recovery period after treatment; oral cavity; lack of side effects; possibility of use with other types of treatment; characterized by the absence of the risk of infection (5). The use of platelet autoplasm in the treatment of chronic forms of the disease is relevant because traditional methods of treatment of inflammatory diseases in the extraction and postoperative complications of upper and lower 3 jaw teeth do not increase resistance to pathogenic risk factors. The above problems are also relevant in the Republic of Uzbekistan, there are few scientific works on this problem in the literature. Studies demonstrating the use of platelet autoplasma in the treatment of its complication after tooth extraction are currently insufficient to understand the principle of its action.

The development and use of such methods and drugs that combine maximum safety and high biological activity against body tissues is a priority. This method today can be called plasmolifting, a method of injection using platelet-rich autoplasm into the tissue space using special syringes.

Today, there is no doubt that periodontal diseases can be treated only with the use of antibacterial and anti-inflammatory drugs. [5] This is not enough, today it is necessary to use immunocorrectors in the treatment of such pathologies, as well as to develop immunomodulatory agents, as well as methods to improve hemodynamics, ways to improve tissue metabolism and oxygenation.

Plasmolifting is a very relevant method in gerontostomatology because there are many factors that reduce the regenerative processes of tissues in old age, exacerbate diseases, and worsen the prognosis for complete rehabilitation. This technology is of great importance in the field of periodontology. It is important to improve the physiology of bone tissue through this method. Plasmolifting should sooner or later be a good additional adjunctive method for the treatment of periodontal disease in terms of medical and cost-effectiveness, elderly patients, patients who rely on complex treatment regimens.

The use of platelet autoplasm is one of the most effective ways to modulate and improve tissue regeneration today. Autoplasm extraction involves the separation of plasma and platelets [4]

The strategy of using autoplasm is based on growth factors in platelets, which improve and accelerate the processes in these tissues. [5] Non-toxic or immunoreactive platelet autoplasm accelerates natural regeneration mechanisms due to the presence of growth factors in platelets.

In addition, platelet autoplasm modulates and regulates the activity of primary growth factors. This feature distinguishes the growth factors of platelet autoplasm from recombinant growth factors, each of which is responsible for a separate regeneration mechanism [10, 7].

Platelets contain the following growth factors:

- IGF (insulin-like factor)
- PDGF (platelet growth factor)
- EGF (epidermal factor is true)
- FGF (true fibroblastic factor)
- TGF-I<sub>3</sub> ("semyestvo" transformiruyushchego faktora rosta)
- PDEGF (platelet factor of endothelial cells)
- VEGF or PDAF (growth factor endothelial blood vessels)
- PLGF-1 / -2 (placental growth factor)
- a thrombospondin, osteonecgin «cultural shock protein».



The results of the study summarized the clinical efficacy of platelet autoplasm in the treatment of periodontitis. The use of plasmolifting in the complex treatment of periodontal disease allows earlier cessation of inflammation in the periodontium, compared with the adopted scheme.

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