

## **The Advantages of Utilizing a Preparation Made from the Roots, Leaves, and Seeds of the Medicinal Plant of Kovul in Odontogenic Purulent Inflammation Diseases in the Maxillary Region**

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**Abstract:** In the mountains of Uzbekistan, there are many times more plants per unit of area. More than 6,000 distinct plant species, including some medicinal ones, make up the diverse and abundant flora of the nation. These herbs are used as raw materials to make food, fragrance, and medicinal products and are considered environmentally friendly.

127 patients (ages 28 to 43) with odontogenic purulent inflammation submitted an application to the BRMCC Department of Maxillofacial and Plastic Surgery. Out of the 127 patients, 30 male and 37 female patients made up the main group, while the remaining 60 patients (30 male and 30 female) made up the control group. It was advised that patients in the main group rinse their mouths ten times a day.

**Keywords:** medicinal plant, root of Kovul, tincture, pus, tooth, odontogen.

**Introduction:** In the mountains of Uzbekistan, there are many times more plants per unit of area. More than 6,000 distinct plant species, including some medicinal ones, make up the diverse and abundant flora of the nation. These herbs are used as raw materials to make food, fragrance, and medicinal products and are considered environmentally friendly.

Locals are aware of the plants' miraculous powers beforehand. They are consumed, used as a spice in food, brewed into tea, taken as medication, and utilized in cosmetics. You can purchase monoherbs, unique herbal tinctures, bath preparations, essential oils, and other helpful additives in pharmacies and cosmetic stores. Natural minerals, vitamins, and biologically active ingredients can be found in every product.

These same qualities are also present in the medicinal plant Kovul, which grows in Uzbekistan's mountainous areas. Kovul stands out for its therapeutic qualities. Specifically, it is applied in folk medicine to treat various illnesses. Ripe fruits, leaves, stems, and root bark of ghee are all used in folk medicine. The bark of the kovul plant has been used to treat black liver (spleen), its leaves have been used to treat headaches, and its roots and leaves have been used to make ointments for wounds and sprains. A fruit infusion helps soothe toothaches and strengthen gums. A jaundice cure is a root decoction. Kovul contains a significant amount of rutin, it is used to reduce blood pressure. Women can benefit from kovul medication, which guards against cancerous illnesses [9].

Purulent odontogenic periostitis is a consequence of acute periodontitis in 5-8% of cases and an exacerbation of chronic periodontitis in 74-78% of cases, according to M. Bibermana and A. G. Shhargorodsky (1985). In the remaining cases, odontoma suppuration, cysts in the jaw bones, and the spread of infection from semi-retained and retained teeth are the causes of the inflammatory process. Periostitis can also result from traumatic tooth extraction procedures and endodontic therapy for teeth. Large molars, wisdom teeth, small molars, incisors, and in extremely rare instances, molars and central incisors are the common causes of acute purulent periostitis in the lower jaw.

Acute purulent periostitis in the upper jaw is caused by the spread of infection from the first molars, the first minor molars, and then the second molars. In rare cases, large molars and second incisors, and

even less frequently, first incisors, molars, and wisdom teeth are the cause of inflammation. In acute and exacerbated chronic periodontitis, there is insufficient opportunity for the purulent focus to exit through the dental canal and gum pocket. The exudate begins to spread out of the periodontium from the side of the periosteum. The infection passes through small nutrient channels and osteon channels in the alveolar compact plate.

Through venous and lymphatic blood vessels, the infection enters the soft tissue from primary sources. Later, the purulent process extends along the fascia's natural fissures between the muscles. In this instance, the purulent exudate either damages the surrounding tissue or mechanically passes through these openings. Young microorganisms that are multiplying quickly in the midst of an acute purulent process are known to produce the hyaluronidase enzyme. The tissue's dormant hyaluronic acid is then activated by this enzyme. As a result, the permeability of the tissue increases, the penetration and suppuration of microorganisms into it leads to the damage of this tissue (fascia, muscle fibers). How active this process is, on the one hand, depends on the level of virulence of the microorganism that caused the infection, and on the other hand, on the state of the protective adaptation systems of the microorganism.

Based on the survey, it was determined that the population living in the mountainous regions of Jizzakh region actively uses the decoction made from the roots, leaves and seeds of the Kovul for the treatment of oral cavity diseases and for preventive measures due to the lack of a contingent of doctors.

**The study's goal:** Studying the beneficial aspects of a decoction prepared from the root, leaf, and seed of the medicinal plant Kovul in odontogenic purulent inflammatory diseases of the face and jaw area.

**Materials and methods:** 27 patients with odontogenic purulent inflammation (patients aged 28 to 43 years) applied to the Department of Maxillofacial and Plastic Surgery of BRMCC. Of the 127 patients, 67 were included in the main group (30 male and 37 female patients), and the remaining 60 (30 male and 30 female patients) were included in the control group. Out of 127, 25 patients were diagnosed with purulent phlegmon of the left lower jaw, 25 patients with purulent phlegmon of the upper jaw, 40 patients with purulent periostitis of the upper jaw, and 35 patients with right lower jaw were treated with the diagnosis of retromolar purulent periostitis.

Patients of the main group were recommended to rinse the oral cavity 10 times a day with a decoction made from the roots, leaves and seeds of the Kovul along with the traditional treatment. The patients in the control group were advised to follow the traditional treatment method and to rinse the oral cavity with furatsilin solution 10 times a day.

**Research results and discussion:** In the analysis of the obtained results, the trend of purulent odontogenic inflammation in both compared groups is quantitatively very close to each other. In both groups, the causes of purulent odontogenic inflammation were mainly large teeth (untimely treated teeth, improperly treated teeth, pathological condition of the 8th tooth, teeth under an expired metal crown, oral cavity that the cavity hygiene is in a bad state). In the presence of purulent odontogenic inflammatory diseases in both groups, first medical and specialized aid is of great importance, because the effectiveness of the treatment procedures, the survival of complications, and the high quality of the patient's life depend on these aspects.

In both groups of patients, the microbes that got inside the fat cell gathered around the blood vessels in it, and the inflammatory process started. The development of this process took place in 5 stages: 1) swelling; 2) infiltration; 3) purulent tissue damage; 4) tissue necrosis; 5) surrounding and delimiting the resulting purulent inflammation with granulation tissue. Initially, serous inflammation was observed in the fat cells.

After the purulent area was cut open, the pus was removed from the cavity, the inflammatory process began to be eliminated, and the causative teeth were removed.

**Conclusion:** Following surgery, granulation tissue that had grown on the cavity wall in both patient groups gradually multiplied and partially pushed and squeezed out the necrotic tissue. Replaced by

newly formed connective tissue, the tissue experienced a return to normal blood circulation. Main complaints from patients included varying degrees of pain in the inflammatory area, facial and neck swelling, and asymmetry in the facial structure. There were also notes about: 1) mouth opening limitation; 2) chewing and swallowing movement pain and limitation; 3) speaking and breathing articulation disorder; and 4) complaints like salivation disorder. Certain patients have reported experiencing headaches, general weakness, and discomfort.

All clinical signs of the inflammatory process in the phlegmonous process were intensively developed in both groups of patients. The patient has a high body temperature, strong signs of intoxication, ECHT index and other negative changes in the blood are at a high level, and the maxillofacial system is more disturbed, but in the main group of patients, the above-mentioned complaints and clinical symptoms indicate that the tincture of the root of the skull is painful. By the 4th day after starting to rinse the cavity, it changed positively, first of all, the asymmetric change caused by swelling on the face of the patients disappeared, the pain intensity dropped to a low frequency, and the masticatory function improved, restored.

Based on this, it should be said that the decoction made from the roots, leaves and seeds of the Kovul is analgesic, antibacterial, antiseptic and has the properties of passive microflora passivation, which takes a positive place in restoring the health of patients.

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