

## Experience in the Treatment of Postcovid Inflammation in Adults

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Not only a cascade of leukotrienes, but also active forms of iron, activated hemoglobin from destroyed erythrocytes are related to the development of post-cortical inflammatory changes in the endothelium of blood vessels and tissues. In pathophysiology, an inflammatory phenomenon of the MicroCLOTS type has been proposed, when the mechanism of postcovid inflammatory syndrome is associated with chronic microthrombovasculitis and oxidative stress [1]. This causes a predominant lesion of the endothelium of the vessels of the lungs, nervous system, liver, kidneys, and skin. There are no ideal drugs for the treatment of residual manifestations of cytokine storm (yet). Many doctors see in the effective treatment of post-ovoid conditions the self-recovery of a sick person due to the peculiarities of the immune system [2].

The aim of the study is to analyze the effectiveness of traditional (drug) and original (infusion ozone therapy) approaches in the treatment of residual inflammatory syndrome after covid viral infection in adults.

There were 34 (21 men and 13 women) adults (from 18 to 54 years old) who had previously had a clinically pronounced infection of the bronchopulmonary apparatus of the Covid-19 type and had signs of inflammatory syndrome for a long time (2 to 5 weeks). Of the total number of patients, 24 people complained of pressing pains behind the sternum, accompanied by periodic coughing and sweating. In 10 patients, the main signs of inflammatory manifestations were dorsalgia and spondylitis without distinct morpho-functional objective changes. In 6 people, along with the main inflammatory phenomena, there were complaints of a persistent change in the sensations of odors (dysosmia) or the taste of food (dysgeusia). The indicators of the general blood test did not reflect the existing inflammation. Serological data (PCR test) at the treatment stage were negative, C-reactive protein was elevated (up to 9.2 mmol/L) in 9 people, marked at the upper (5 mmol/L) limit of normal in 14, did not exceed the parameters of normal values in 11 patients. According to the available data of the X-ray examination, there were no signs of an active process in the lung tissue, but clinical signs of bronchitis inflammation persisted in the form of a constant cough, discharge of viscous sputum of various types, thoracalgia, cervical and thoracic spondylitis at rest and during exercise.

At the initial stage of medical rehabilitation, the anti-inflammatory adaptogen isoprinosine was used in 0.5 tablets twice a day after meals in all patients. The anti-inflammatory, antitoxic and antihypoxic effects of trecresan (oxy-ethylammonium methylphenoxycetate) were also used. He was prescribed 0.1 - 0.2 per day for two weeks. Further, in 10 patients, various nonsteroidal anti-inflammatory drugs were used, most often (in 6 people) meloxicam (movalis, amelotex) at a dose of 15 mg - 7.5 mg once a day after lunch for 2 - 3 weeks. Celecoxib (celebrex, dipaxa) or nimesil (naiz) at a dose of 0.1 - 0.2 twice a day (2 - 3 days) was prescribed to 4 patients, then it was taken once a day for the same period. In 4 patients, even short courses of anti-inflammatory drugs led to digestive problems. Usually, it was nausea or aching pains in the epigastrium, which required the withdrawal of drugs.

In 6 cases, short courses of glucocorticoid therapy were used. Prednisolone was used in the form of initial (two to three daily) intravenous infusions (90-60-30 mg) in saline solution with a further transition to tablet forms from 20 mg per day once after breakfast with a decrease of 5 mg every three days until complete withdrawal. The appointment of glucocorticoids requires the doctor to pay increased attention to the patient and exclude smoldering nonspecific and specific infections. After the cancellation of glucocorticoid drugs, 4 patients were prescribed bronchospasmolytics - teopek and teodur together with mucolytics for 7 - 10 days.

Since SARS-CoV-2 has a direct damaging effect, supporting inflammation and violating the anticoagulant properties of the endothelium, it is advisable to use reactive oxygen species in the form of infusion ozone therapy. 18 patients (12 men and 6 women) were observed. To obtain gaseous ozone, an oxygen generator and a domestic device from Nizhny Novgorod "Medozons Beauti" were used. The main course of treatment consisted of 5-6-7 sessions of low-flow (0.8 - 1.2 mcG/l of gaseous ozone) drip infusion (in 200 ml of saline solution) ozone therapy, carried out after 1-2 days by intravenous administration. At the same time, ACC (0.2) or flumucil, trecresan (0.5) or isoprinosine (0.5), as well as hydroxychloroquine (plaquenil) were prescribed daily at a dose of 0.2 - 0.4 per day for gradual saturation and supportive treatment, if necessary. The course application of infusion ozone therapy was the most effective and easily tolerated by patients with a feeling of complete ("I am healthy") recovery and elimination of all manifestations of the inflammatory process.

When comparing the effectiveness of the therapy for the treatment of patients with postcovid inflammation, it should be noted:

1. The use of nonsteroidal anti-inflammatory drugs amelotex (movalis, meloxicam) or naize had a clinical anti-inflammatory effect, but was often accompanied by negative manifestations from the gastrointestinal tract.
2. Treatment with short courses of prednisone led to a pronounced therapeutic effect, allowed to restore satisfactory well-being of patients, but required additional correction of bronchitis manifestations.
3. The use of course infusion ozone therapy provided rapid and complete rehabilitation of patients with the elimination of complaints and excellent clinical effect.

### Bibliography

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