

## BENEFITS OF USING REGIONAL LYMPHATIC ANTIBIOTIC THERAPY IN PURULENT INFLAMMATORY DISEASES IN CHILDREN

<sup>1</sup>Begnaeva Mukhiba Usmanovna, <sup>2</sup>Siddikov Olim Abdullayevich

<sup>1,2</sup>Samarkand State Medical University, Assistant of the Department of Clinical Pharmacology

<https://doi.org/10.5281/zenodo.10696371>

**Abstract.** From the multitude of effects on the lymphatic system, it is reasonable to distinguish two main effects: endolymphatic administration of drugs (primarily lymphotropic and intranodular) and stimulation of lymphatic drainage of organs and tissues (lymphostimulation). Different versions of these effects are used at all levels of medical care - from home to a specialized hospital. When used independently or in combination with other effects, the entire spectrum of therapeutic effects is achieved. Let's list the most important ones.

**Keywords:** regional lymphotropic therapy, regional stimulation of lymphatic tissue drainage, general effect on lymph coagulation.

### **Increasing the effectiveness of drug therapy.**

It is carried out using lymphotropic or intranodular administration of drugs. These methods make it possible to create a high concentration of the drug in the lymphatic system and tissues, to carry out effective chemotherapy, antibiotic therapy, and immunotherapy when other delivery methods are ineffective.

### **Strengthening the barrier function of lymph nodes.**

It is aimed at activating the ability of lymph nodes to retain toxic metabolites, pathogenic microorganisms and malignant cells entering the lymph. Drugs with the indicated effect are achieved by lymphotropic or intranodular administration. Helps in detoxification, prevention of metastasis, restoration of impaired immunity.

### **Creating a block of migration of lymphogenic cells.**

It is aimed at preventing lymphogenic spread of malignant cells and pathogenic microorganisms. Appropriate drugs are administered by lymphovascular or intranodular administration

### **Reducing the toxic effects of drugs.**

If it is necessary to introduce a specific toxic concentration of medicinal substances, it is carried out by lymphotropic, lymphovascular or intranodular methods. Small doses and less toxic drugs allow effective chemotherapy, antibiotic therapy, immunotherapy. Express mobilization of immunity. It is achieved by lymphotropic or intranodular administration of immunomodulators and other drugs with the indicated effect,

### **General stimulation of lymphatic drainage of organs and tissues.**

In pathologies associated with metabolic disorders and destructive processes, extravascular humoral transport carries a heavy burden: it ensures the removal of toxic metabolites and decay products of dead cells from the extracellular space to the lymph and blood. Coping with such intoxication is often very difficult. Stimulation of lymphatic drainage, like no other effect, helps to clean the pericellular space. Medicines with a specific effect are achieved with the help of special physiotherapy and some medicinal plants.

### **Regional stimulation of lymphatic tissue drainage.**

It has the same effect in some areas (organ, tissue area). This is achieved by regional interstitial, lymphotropic, intranodular administration of the drug and special physiotherapy procedures. Certain medicinal plants have been shown to favor lymphatic drainage in a particular organ.

### **General effect on lymph coagulation.**

Evolutionarily formed as a protective reaction, lymph coagulability is naturally accompanied by hypercoagulability of blood. Intravascular coagulation of lymph often occurs independently. Atherosclerosis, hypertension, myocardial infarction, venous and lymphatic insufficiency are the most important factors in the pathogenesis of other chronic and acute diseases and complicate the course of inflammatory and necrobiotic processes. Disrupting extravascular humoral transport, intravascular lymphocoagulation makes it difficult for drugs to penetrate into the pathological center. The anti-lymphoclotting effect is carried out with the help of appropriate drugs and special physiotherapy procedures.

### **Indications and methods of lymphotropic and intranodular therapy**

Drug saturation of the lymphatic system leads to pathological factors localized in the lymphatic system (metastases, foci of inflammation) and (or) passing through the lymph flow (microorganisms, toxic metabolites, migrating tumor cells, etc.) allows to have an effective effect.). Particular attention is paid to the possibility provided by these methods to increase the effectiveness of the effect on pathological processes localized outside the lymphatic system, for example, tumors of the uterus, rectum, prostate and some other localizations; massive and limited inflammation: peritonitis, phlegmon, paraproctitis, tonsillitis, pneumonia, etc. This possibility is realized not only by strengthening the protective functions of the lymphatic system. Endolymphatic administration of a number of drugs, especially some antibiotics, promotes their accumulation in tissues. In addition, by reducing the toxic effects of drugs introduced into the lymphatic system, lymphotropic or intranodular methods allow, if necessary, to increase the doses used and carry out drug therapy when the toxic reaction blocks other options.

### **Lymphotropic use**

The drug is injected subcutaneously, intramuscularly or into the tissues when conditions are created for preferential access to the lymphatic system. There are several ways to create lymphotropia. The simplest ones are used to inject the drug into the tissues of the lower leg, preferably subcutaneously, at the border of the middle and lower third. Lidase is used beforehand. Its dose depends on weight and weight. . the age of the patient does not exceed 8 units for a child up to 3-4 years old, up to 11-12 years old - 16 units, older - 32 units. Usually, the needle is not removed, and after 3-5 minutes the drug is injected through it. The effect of lidase determines its preferential access to the lymphatic capillaries. Moving along the lymphatic channels, it reaches the lymph nodes of the popliteal inguinal, pelvic cavity. will be planned. and is present in mesenteric regions and thoracic duct lymph at concentrations 2-5 times higher than those created by conventional enteral and parenteral administration. A simplified method of increasing lymphotropy, which does not require the introduction of lidase or its replacement drugs, has shown positive results. Immediately after the drug is injected into the indicated area of the leg, a belt (in no case a tourniquet) is applied to the thigh, with the help of which circular pressure is created for 1.5-2 hours. 35-40 mm Hg. Art. Professor V. Bukov's tourniquet, Riva-Rocci apparatus and other devices are used for this. It has been experimentally proven and clinically proven that obstruction

of the venous outflow caused by pressure within the specified limits stimulates the flow of the drug to the lymphatic capillaries.

#### **Intranodular administration.**

It is often necessary to create drug concentrations in the lymphatic system that exceed those achievable by the methods described above. Until recently, there was only one method for this purpose: catheterization of a peripheral lymphatic vessel, usually in the leg. Later, lymph node catheterization was also used. At present, the puncture method of entering the superficial inguinal lymph node is the most common. The puncture and insertion of the needle is not much different from that performed during a puncture biopsy, only a thin needle is used. An important condition is the relatively slow use of the drug. This allows to reduce its exit from the node. The rate of infusion is 0.1-0.5 ml/min. Given that the procedure can take 10-20 minutes, a flexible polyethylene tube is inserted between the needle and the syringe with a cut base to prevent the needle from moving. It is recommended to add 0.5-1 ml of novocaine to the used medicinal solution or the initial injection, which reduces spasm and discomfort events that may occur when the drug passes through the lymphatic system. The amount of solution used varies, but in adults it is better not to exceed 10 ml. Otherwise, there is a risk that a significant part of the solution will pass through the chest and enter the bloodstream without remaining in the lymphatic system.

#### **Regional lymphotropic therapy.**

It allows creating an optimal concentration of the drug in the regional lymph nodes and vessels relative to the pathological focus, helps to accumulate in the focus of tumor growth, inflammation, necrobiosis. Lymphotropic (lidase or its substitute drugs using) fields of application. It has been found that in certain groups the drug accumulates in the lymph nodes and the tissues they control. Access to the mastoid area provides collection in the lateral, deep and superficial lymph nodes of the cervix, postauricular, submandibular, occipital, subclavian.

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