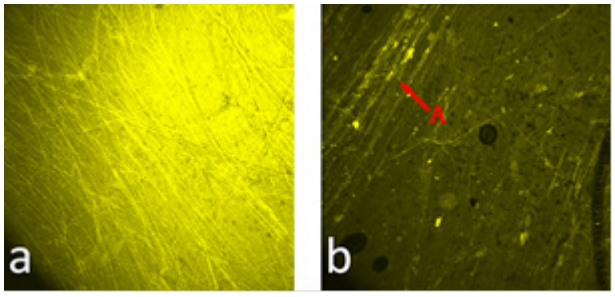

Fig. 3 The images of connective tissue. a was the Zusanli (ST 36) image; b was the general site group image. A was the fiber which had been stained

As a result, compared the images of test group and control group, the test group was more quickly to achieve the fluorescence intensity which could to observed the connective tissue. It was revealed that application at Zusanli (ST 36) could improve the permeation rate. However, the mechanism was not clear, and due to samples capacity was small, we should be studied further more.

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MODELS OF EXPERIMENTAL PLEURITE APPLICABLE ON LABORATORY ANIMALS

Semenov D.A.

Amur State Medical Academy, Blagoveshchensk, Russian Federation

Abstract Currently, there are no models that fully correspond to human inflammatory diseases. The model in laboratory animals should meet several basic requirements: 1. It should provide detailed research and quantification of various parameters. 2. It must be reproducible and ensure that a sufficient number of experiments are performed for statistical analysis.

Key words: experimental pleurisy, irritant, cell and cell-free exudate, inflammation

Separation into acute and chronic inflammation is important in the development or interpretation of animal models. For a histologist, acute inflammation is determined by the presence of polymorphonuclear leukocytes. Chronic inflammation, in contrast, is characterized by the presence of mononuclear cells (macrophages and lymphocytes).

Inflammation, which in its outward manifestations is always the same, can be the result of the activation of many different chemical mediator systems. To this end, two types of inflammation are used: immune and non-immune.

The introduction of irritants into closed body cavities leads to the formation of liquid exudate with a large content of cells. The most suitable cavity for studying the inflammatory reaction was the pleural cavity.

It was revealed that intrapleural injection of silver nitrate, tetracycline derivatives, talc and mitoxantrone results in acute exudative pleural effusion within 12 hours [3].

Irrantant is injected into the pleural cavity of anesthetized rats. Typically, the skin on one side of the chest is pulled and the cut on the III and IV ribs is made with the scalpel blade. Using a thick needle, 0.1 ml of irritant (usually carrageenan) is injected into the pleural cavity. The test compound is administered before intrapleural injection of the irritant. Animals are killed in 4, 6, 24, 48 hours, remove the exudate, measure its volume. Centrifuge, obtaining an acellular composition (pinpointing mediators, histamine, kinin) and cells (perform a general and differentiated cell count in vitro). Various irrigants are used, including terpentine (to its disadvantages is the destruction of migrating leukocytes) and carrageenan. Carrageenan pleurisy provides the secretion of histamine, 5-hydroxytryptamine, kinins and prostaglandins. Experimental models of pleurisy reveal cyclooxygenase inhibitors. Possible inflammation, causing inflammation, the closest to the clinical, is calcium pyrophosphate dihydrate. Its crystals cause a non-immune reaction. The response to steroid and non-steroid drugs is comparable to the response to the carrageenan pleurisy model. The merits of this system include the fact that comparing the findings with the results of this test allows you to give a conclusion about the effects of drugs on the complement system. In the models of pleurisy, steroid and non-steroid preparations can be determined by their effect on 24-hour damage. The merits of the pleurisy model include its easy objectification and accessibility as an exudate for biochemical analysis, as well as cells for morphological research. The drawback of the model is the need to prepare a group of animals for each time interval, which is difficult for the operator and increases the cost of the experiment [1, 4].

Cellular reactions were studied in mycobacteria in pleurisy in mice. The pleurisy caused two peak cellular influx at 1 and 15 days after infection. In the first hour, macrophages were found. Neutrophils appeared after 2 hours of infection and reached a maximum of 4 hours with a high dose of infection. This was accompanied by a large accumulation of eosinophils during the inflammatory cell reaction to M. Bocis M. Bovis in the pleural cavity of the mouse than to other known eosinophilia inducers: IL-5, PAF-acether. Mycobacterial and mouse susceptibility determine the early dynamics of changes in granulocytes [6].

Aluminum lactate, introduced to experimental rats, produced skeletal necrosis of the muscle of the diaphragm and abdominal wall. Ultrastructural studies of the diaphragm showed inoculation covering the collagen fibers that connect near the basal plate of the muscle, and limited within the phagocytes [2].

The results of a number of authors show that when intrapleural injection of des-Arg9-BK occurs with a temporary dependence of migration of the inflammatory cell, characterized mainly by the use of mononuclear cells and neutrophil cells [5].

Pleural reaction to damage is a multifactorial process that can result in the development of fibrosis with obliteration of the pleural cavity, or it can restore the pleura to its normal state. Today, we do not have adequate models of chronic inflammation and all that can be achieved with a set of available tests is to predetermine and evaluate the activity of new compounds, but not their side effects.

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Semenov Dmitry Alexandrovich 675009 Amur Region, Blagoveshchensk, Amurskaya Street 102 apartment 42 E-mail: dimenti3@mail.ru

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Seliverstov S. S., Zinoviev S.V., Shakalo Y.A., Ambrosyeva N.P., Zherepa L.G., Pavlova A.E.

Amur State Medical Academy, Blagoveshchensk, Russia

Morphological examination of mesenterium of the intestine tenue during experimental hypogravitation.

Key words: mesenterium, experimental hypogravitation

Summary. Morphological approaches to the study of the microcirculatory bed of the mesentery of experimental animals have been developed in experimental hypogravity of the organism. It has been established that in the case of antiorthostic hanging of rats, conditions are created for the redistribution of blood, which leads to the accumulation of blood in the veins of the mesentery.

Introduction. Biomicroscopy of the mesenterium is a fundamental way of studying microhemocirculation. Its relevance is indicated by the need to evaluate the obvious effects of gravity on blood circulation, during overload and weightlessness of the body [2]. The aim of the study was to develop morphological approaches to the study of the microcirculatory bed of mesentery of experimental animals under experimental hypogravity of the organism.

Methods of research. The object of the study was white male rats weighing 240 g. We identified two groups of animals. The first control group is 9 animals. The second group of animals-8 animals underwent experimental influence of hypogravity according to the classical Novikov-Il'in method [1]. The obtained film preparation of mesenterium intestine tenue after fixing in formalin the color of the mesentery with an aqueous solution of Azure-2.

Results of the study. According to our data, the composition of the hemocamcirculatory circulation bed of rat mesenterium includes: 1) the main arteriola and 2) the venule; 3) two generations of arterioles; 4) precapillary postcapillary venules; 6) capillaries; 7) two generations of venules that repeat the course of the arterioles.