A high percentage of unemployed patients suggests an antisocial image of their lives and alcohol abuse. Alcohol intoxication and determines the mechanism of occurrence of ruptures, the course of pathology and the development of possible complications.

THE PRE-ORGAN SEPARATION OF THE BLOOD AND ITS ROLE IN THE DEVELOPMENT OF THE FUNCTIONAL HYPEREMIA OF THE MYOCARDIUM

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Key words: *myocardium, working hyperemia, blood separation*

Background. The continued increase of the mortality from the ischemic disease of the heart indicates that it has become the most unreliable organ in human. The situation is aggravated by the fact that until now many questions about the regulation of blood-lymph circulation in the intact heart remain either controversial or unresolved. First of all, this concerns the mechanism of development of functional (working) hyperemia of the myocardium.

Aim. The purpose of this study is the morphological and functional substantiation of the concept about the significance of pre-organ blood separation in the mechanism of development of functional myocardial hyperemia.

Material and Methods. The investigation was performed on inbred seven cats and inbred five dogs in full accordance with Russian and International ethical principles. The blood and lymph channel of the heart was studied by the intravascular methods of Grant and Ranier-Goyer in the supravital conditions. The movement of the ultrafiltrate of blood plasma in the interstitial space and its resorption in the lymphatic vessels was studied by using the vitally coloring dyes (1% solution of the hematoxylin and 0.25% solution of the silver nitrate), which to allow to reveal of the local features of the vascular permeability.

Results and Discussion. The morphological and functional data obtained in this study may serve as the grounding for a new conception about the role of the pre-organ separation of the blood in the development of functional hyperemia of the myocardium.

A NEW UNIVERSAL METHOD OF IMPREGNATING — NEW RESULTS IN MORPHOLOGY

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Key words: *impregnation, argyrophility, nerve tissues, blood micro vessels*

Background. Methods of the impregnating of the nerve tissue and the walls of blood micro vessels which determined with solutions of silver salts, still remain empirical, little-informative, and give numerous artifacts.

Aim. The aim of this study is to develop and test a universal method of selective detection of argyrophilic structures in various organs and tissues.

Material and Methods. The investigation was carried out under etheric anesthesia on next experimental animals: on 5 inbred dogs, on inbred 7 cats and 17 white inbred laboratory rats. The first stage of the experiment was the preparatory procedure-perfusion into the bloodstream through the abdominal aorta of a 0.7% solution of salt of the silver nitrate $AgNO_3$ and 0.1% hydroquinone (the authorship certificate of USSR № 1619, 08/09/1990). The second stage was an increasing of the argyrophility of the wall of the blood micro vessels and surrounding tissues with barium hydroxide. The third stage was the impregnation of frozen sections with a thickness of 25.0–100.0 μm and an square of up to 10.0–15.0 cm^2, which was modified by the histological method of Bielschowsky—Gross.

Results and Discussion. The developed new method allows improving the quality and informativity of the impregnated preparations, the value and reliability of the results of histological studies. With using of this method new data have been obtained on the structural organization of the lymphatic vessels, and syncytial connections of neurocytes in the ganglia of the autonomous nervous system of the intestinal wall.

DISC HERNIATIONS AND CAUDA EQUINA COMPRESSION IN BILATERAL OSSEUS AND COMBINED FUSION LUMBOSACRAL TRANSITIONAL ANATOMY TYPES

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Key words: *spine, lumbosacral transitional vertebra, MRI, disc herniation, cauda equina*

Background. The relationship between different lumbosacral transitional vertebra (LSTV) types, disc herniations and neural structures compromise has been sporadically reported.

Aim. To analyze disc herniations prevalence and distribution and to grade cauda equina compression in the LSTV types with osseus fusion of the last lumbar vertebra.

Material and Methods. A total of 75 patients (mean age 55.54±9 years) with lumbosacral radicu-