indirectly appreciated on acceleration AT with ristomycinum.

The research сочетанного of influence inductors on process AT at the sick calves has shown them interpotentiation action. The registration AT under influence of a combination two индукторов allows to come nearer to understanding of real conditions current of blood the animal with dyspepsia and testifies to expediency of purpose of the appropriate therapy capable to normalize hemorheology.

The revealed infringements thrombocyte hemostasis at calves with dyspepsia require adequate correction directed on break of „vicious circles", developing at dyspepsia.

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The summary

At newborn calves with dyspepsia the increase aggregative function of thrombocytes in vitro and in vivo is revealed. In a basis of these infringements the deep shifts of lipide structure of membranes thrombocytes, increase of the contents in plasma and in blood platelets of level average molecules, activation of peroxide oxidation of plasma lipids, intensifying of synthesis in a wall of vessels of Willebrand factor and intensification thromboxanoformation in blood platelets lay. The activation thromboplastinoformation is the conducting reason of increase of curtailing of blood at newborn calves with dyspepsia. The correction of infringements thrombocyte of a link hemostasis should include pathogeneticly the caused complex capable to reduce a level of average molecules in organism and to treat dyspepsia.

SMOOTH MYOCYTES IN THE AORTIC VALVE

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Condition of the problem.

The passive functioning, limiting of the retrograd blood flow and movements of the valves of heart by the gradient of blood pressure are accepted as correct. But the last years investigations call the rigidity of the same affirmations into question. Thus T.H. Williams & J.Y. Jew [3] have found the cardiomyocytes, smoth myocytes and interstitial cells and also nervous fibers in mitral valves of the rat's hearts. M. Cimini et al. [1] have described the smooth myocytes in semilunar valves of hearts of human

and pig. A. Deb eat al [2] affirm that fibroblasts, originated from bony marrow locate in the cardiac valves of adult man.

Take into consideration an important role of aortic valve in the blood flow organization, the work with the aim to study the structural bases of its semilunar cuspsmovements was fulfiled.

Matherial and methods.

The investigation was carried out on 20 adult human cadavers and 30 both sexes white rats of 5-12 monts old. Semilunar cusps of a valve were choosed from the aortic wall, serial longitudinal (from base to tip) and transverse (in plane of the stretched cusp) histological sections (5-10 mkm in thickness) were made. Sections were stained by picrofuxine by VanGieson and Verhoef methods. The electron microscopic investigation of the rat's aortic valve was also carried out, at that its the nearest to free border thin area was collected.

Results.

Smooth myocytes were determined in the aortic valve fom the base up to free border of cusp. In the much more great human valve the quantity and sizes of smooth myocytes larger than in rat.

Smooth myocytes irregular distribute in thickness of rte aortic valve and by its length. They have primary transverse and oblique transverse orientation. Muscular bundles are arcuated as a parabola in the base of valve. Their branches pass through lateral segments of each semilunar cusp to its free border. Large myocytes form the multylayer stratum in the base of valve – valvar roller. In direction to free border of the semicircular cusp, the quantity of muscular layers and also theis thickness and compactness decrease. Thinning, dispersion and straightening of muscular bundels becoming parallely to free border take place. In contrast to thick valvar roll, the thinning cusp contains the gradually loosening network with different orientated myocytes. Longitudinal and oblique-longotudunal bundles are better appeared in the axial (inner) sector of valve (Figure 1). But even the continous muscular layer appears near the free border of valve (Figure 2). Smooth myocytes are surrounded by their's own basal membrane and bundles of connective tissue fibers, the connective tissual cell can divide them from endothelium (Figure 3).

Conclusion.

The results of the realized investigation evidens that aortic vcalve contains the great number of smooth myocytes, but their distribution in thickness and length of semilunar cusp is irregular such as a whole valve constuctionis unequal. The fixed parietal part of valve (roll) counteracts to blood flow by its strustures thickening, compacting and interlacing. The free luminar part of valve (cusp) is movable and is able to react on the blood pressure by displacing and contortioning. Dispersioning and decreasing of muscular structures in the direction from base to free border of the cusp are possible to be explained by the functional load decreasing. Concentration and enlargening of the smooth myocytes near the free border of cusp may be determined by the local increasing of load on it in situation of locked valve: the retrograde blood flow contains to act on the thightly locked (fixed) free borders of semilunar cusps. Longotudinal blows of direct blood flow stimulate the development of musculo-elastic complex and longitudinal structures in the axial sector of cusp.

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Signatures to figures of the paper of V.M. Petrenko “Smooth myocytes in the aortic valve”:

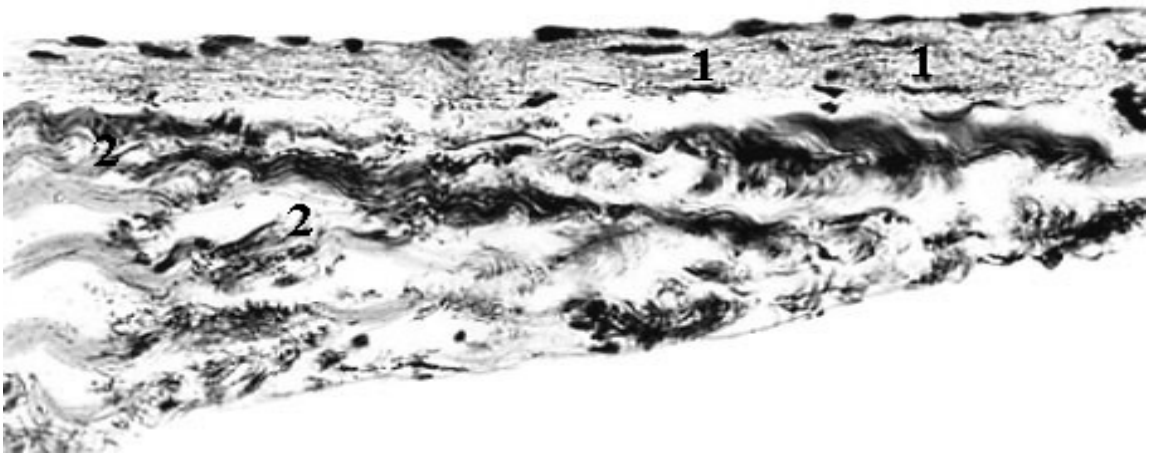

Figure 1. Aortic valve of man, longitudinal section:
1 – longitudinal myocytes in axial sector; 2 – myocytes between fold-liked bundles of collagen fibers of the parietal sector. Picrofuxine. x 200.

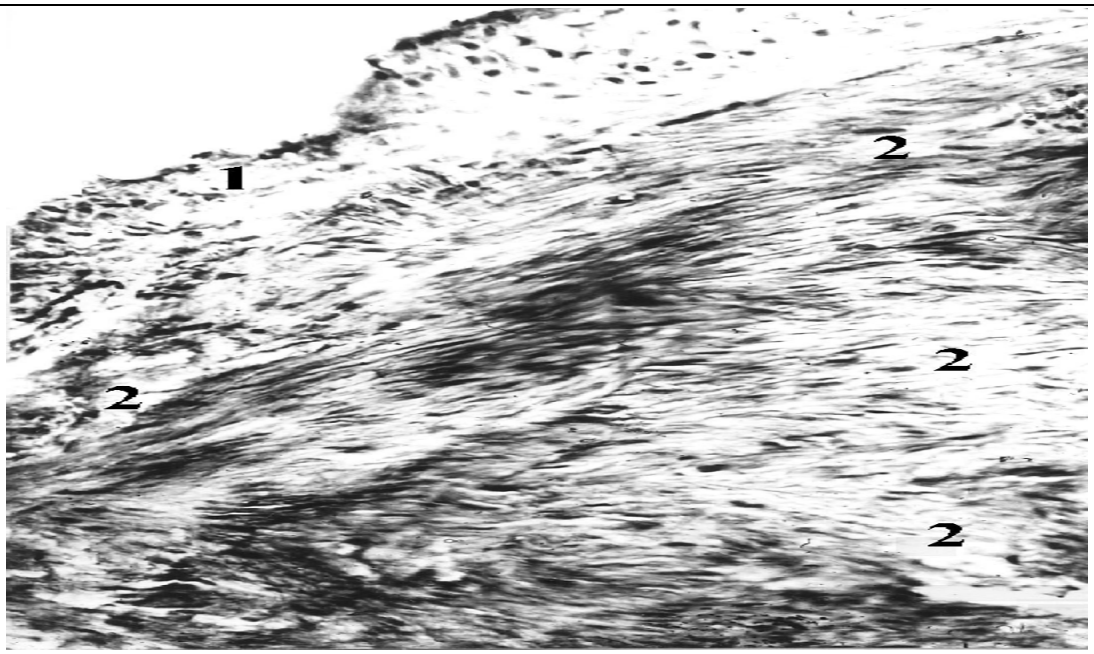

Figure 2. Aortic valve of rat, section in the plane of cusp:
1 – endothelium of the free border; 2 – intimating bundles of myocytes. Picrofuxine. x 400.

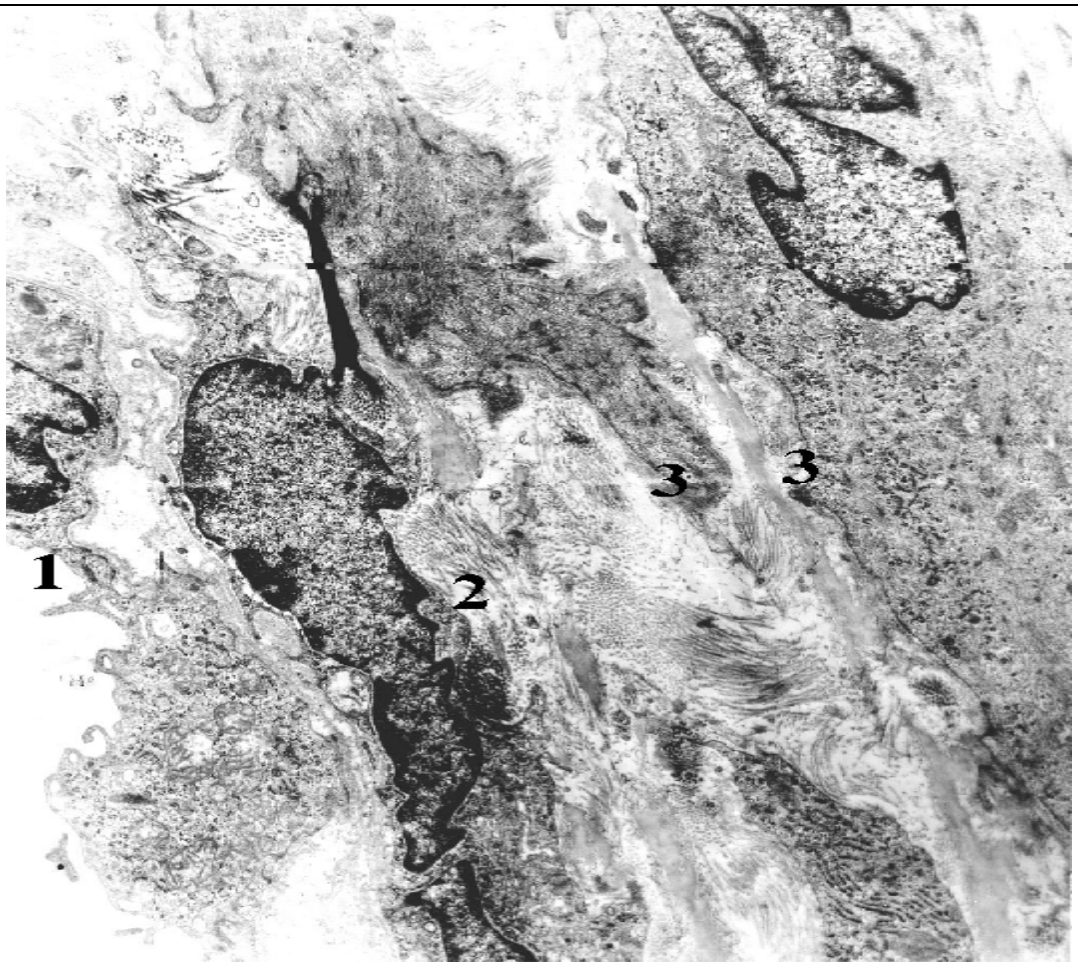

Figure 3. Aortic valve of rat, electron microscopic picture: 1 – endotheliocyte; 2 – connective tissual cell; 3 – smooth myocytes. x 10000.