

*Materials of Conferences***ULTRASTRUCTURAL CHANGES
OF EXOCRINE PARENCHYMA
IN EXPERIMENTAL PANCREATITIS**

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Research purpose: to study in a dynamics (on the first, on the third, on the 7th and 14th days after an operation) the ultrastructural changes of pancreas of rats at experimental acute destructive pancreatitis and in number to estimate character of changes of exocrine parenchyma of pancreas of rats.

For research 40 not thoroughbred males of white rats served material by weight 180-200 g. Experimental acute destructive pancreatitis reproduced by cooling of splenic segment of pancreas of chloroethylum. For ultramicroscopic research the pieces of pancreas processed in obedience to the generally accepted methods and probed by the electronic microscope of JEM-100C (Japan). For the micrometric estimation of the functional state of acinocytes utilized analysis of images of Image Scope Color M (Leica, Gmbx).

There was an edema of acinocytes at development of sharp destructive pancreatitis, kernels are dropsically and wrong form, have fine-grained chromatin which is localized on periphery. A nuclear-cytoplasm relation is increased on 6% as compared by intact animals. The granules of zymogene are diffusely dissipated in a protoplasm, have a high electronic closeness, their sizes was different. The mature granules of zymogene have the appearance of the dense rounded little bodies, along with them there are prezymogene and «light» immature granules. It testifies to the dystrophic processes, what be going on in acinocytes. The relative area of zymogene grains for certain is increased to 20,3% to the general area of cage. There is plenty of immature zymogene granules with a small diameter ($19,3 \pm 0,84$ nm) and small area ($393,0 \pm 26,6$ nm²).

It is set that at development sharp destructive pancreatitis takes a place a synchronization of secretory cycle with appearance of heterogenic acinocytes and diminishing of stake of zymogene granules, having insignificant sizes, their diameter makes $28,5 \pm 1,56$ nm, for intact rats – $42,6 \pm 4,38$ nm. Litical destruction elements of parenchyma, accompanied an edema and necrosis of acini's cages that testifies to the decline of outside secretory function of organ and development of destructive defeats of pancreas.

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**ACID PHOSPHATASE OF LEUKOCYTES –
CYTOCHEMICAL TEST IN THE STUDY
OF ACUTE DESTRUCTIVE PANCREATITIS**

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Inflammatory processes in the pancreas increase the permeability of cell membranes of acinar structures body, which causes an increase in enzyme levels in blood and urine, including acid phosphatase (AF). It formed in the endoplasmic reticulum of metabolically active cells, and includes a number of isoenzymes, with a common property – the ability to release phosphate from many alcoholic or phenolic phosphomonoethyrol in acidic medium. We have performed cytochemical study using semi-quantitative method, which made it possible to identify changes in the content of AF in blood cells of rats with acute destructive pancreatitis (ADP).

In the experiment was used cryogenic model of acute pancreatitis. Experiments were set at 25 mongrel white male rats weighing 190-270 g (group 1). The second group ($n = 15$) consisted of animals that were subjected to median laparotomy and 1,5 – min exposure of splenic segment of the pancreas without influencing it chloroethylum. Control (intact) group consisted of 5 rats. AF was detected in the form of pellets red in the cytoplasm of neutrophils and lymphocytes.

During the experiment the animals of experimental group with the development of acute destructive pancreatitis index content in neutrophils of average cytochemical factor ranged from $0,99 \pm 0,06$ to $1,41 \pm 0,09$ ($p \leq 0,05$) and increased 2,1 times since the beginning of the experiment when compared with intact animals ($0,66 \pm 0,01$). At laparotomy average cytochemical factor (CBFV) in granular white blood cells remained unchanged ($0,42 \pm 0,06$), as well as at the beginning of the experiment ($0,43 \pm 0,12$).

In the lymphocytes stained grain that signals the presence of acid phosphatase, located diffusely in the cytoplasm. In intact rats cytochemical factor was in average $0,18 \pm 0,01$. Since the beginning of the ADP (CBFV during the first day – $0,79 \pm 0,1$) increased 4,3 fold higher compared with intact animals, indicating an increase in phagocytes function and lysosomal activity agranulocytes. In animals with severe forms of development pancreatitis significantly risen in the cells of the blood content of acid phosphatase (a marker of lysosomal enzymes), reflecting a more pronounced and profound degree of destructive changes in the parenchyma of the pancreas prostate. Elevated AF in leukocytes indicates the metabolic activity and the ability of these cells for phagocytosis. The proposed technique