

complements the classical cytochemical laboratory and immunological studies to identify cell surface markers and functional state of the organelles of blood cells in acute destructive pancreatitis.

The work is submitted to the International Scientific Conference «Modern Problems of Experimental and Clinical Medicine», Thailand, 20-28 February 2012, came to the editorial office on 13.01.2012.

ENDOTHELIAL DYSFUNCTIONS IN PATIENTS WITH DIABETIC ENCEPHALOPATHY

Parakhonsky A.P., Tertychnaja G.V.

*Kuban medical institute, Regional hospital of veterans,
Krasnodar, e-mail: para.path@mail.ru*

Vascular endothelium damage is known as one of the major mechanisms in pathogenesis of chronic complications diabetes mellitus (DM). Encephalopathies of various genesis tend to be the most important problem of present medicine. Diabetic encephalopathy (DE) is commonly considered to be a variant of dyscirculatory encephalopathy. The indices of circulating desquamated endotheliocytes and endothelium-dependent vasodilatation (EDVD) of brachial artery were studied to detect the degree of endothelial dysfunction in patients with DE in comparison with patients that suffer from dyscirculatory encephalopathy of non-diabetic genesis. The aim of our study was to study differential peculiarities of EDVD in patients with diabetic and non-diabetic encephalopathy. EDVD was evaluated according to Celermayer-Sorensen's test. The study demonstrated, that dyscirculatory encephalopathy was followed by reliably significant ($P < 0,001$) decrease of EDVD rate ($5,6 \pm 0,21\%$) as compared with controls ($10,8 \pm 0,51\%$). In case of DE the rate of EDVD was more than two times decreased ($4,9 \pm 0,23\%$) as compared with control rate ($P < 0,001$). EDVD was more affected in type 2 DM ($4,5 \pm 0,29\%$, $P < 0,05$), than in type 1 ($5,5 \pm 0,31\%$), that indicated more severe damage of vascular endothelium in case of non-insulin-dependent DM. It is necessary to mention, that changes of EDVD in DE were reliably more evident as compared with patients suffering from non-diabetic dyscirculatory encephalopathy ($6,4 \pm 0,29\%$). This is explained, as we concluded, by the direct toxic influence of increased glucose concentration on vascular endothelial cells. This toxicity may lower the endothelium-dependent vasodilatation, elevate the vasoconstriction, and stimulate the hyperplasia of smooth muscles cells, lead to vascular remodeling and development of atherosclerosis. Endothelial cells line the entire circulatory system, from the heart to the smallest capillary. These cells reduce friction of the flow of blood allowing the fluid to be pumped further. Circulating endothelial cells might be used as a surrogate non-invasive marker for the study of vascular alterations. findings demonstrated,

that endothelial desquamation was observed in the group of healthy individuals as well as in the group of patients, suffering from DE. In healthy individuals blood level of desquamated endotheliocytes accounted $3,2 \pm 0,36 \cdot 10^4/l$. In patients with stage I DE this index reached $12,8 \pm 0,64 \cdot 10^4/l$, stage II DE – $16,5 \pm 0,58 \cdot 10^4/l$, stage III DE – $19,2 \pm 0,71 \cdot 10^4/l$. Statistically significant changes were found between groups of patients with stage I and stage I DE ($P < 0,001$), and with stage II and stage III DE ($p < 0,01$). Consequently, the progression of DE was followed by proportional augmentation of the blood concentration of desquamated endotheliocytes. The index of endotheliocytemia was reliably higher in type 2 DM as compared with type 1 diabetics ($P < 0,05$), that indicated more significant implication of vascular endothelium damages in the pathogenesis of non-insulin-dependent DM. The role of endothelial dysfunction in type 2 diabetes is more complicated than that for type 1. The effects of aging, hyperlipidemia, hypertension, and other factors add to the complexity of the problem.

The work is submitted to the International Scientific Conference «Modern Problems of Experimental and Clinical Medicine», Thailand, 20-28 February 2012, came to the editorial office on 07.02.2012.

APPLICATION OF ENZYMES IN COMPLEX TREATMENT ODONTOGENIC INFECTIONS

Parakhonsky A.P., Sveshnikov G.G.

*Kuban medical institute, Regional stomatologic
polyclinic, Krasnodar, e-mail: para.path@mail.ru*

Despite improvements in treatment of inflammatory diseases of the maxillofacial region, the problem of purulent infection continues to actual. Reduced effectiveness of antibiotics, delayed clearance of necrotic purulent cavities of the masses, which are a kind of barrier to the penetration of drugs into the inflammatory focus, dictate the necessity of finding new treatments for odontogenic inflammatory diseases. Of surgeons for a long time drew attention of idea of ability to influence a course of rebellious processes with biologically active pharmaceutical enzymes. The aim of the work was to study the histomorphological changes of the skin from underlying dermis using the drug «Wobenzym» and its influence on the healing of the wound. The material of our observations was the 35 patients with acute odontogenic purulent processes of the soft tissues of the maxillofacial area in age from 20 to 60 years (12 women, 23 men). Admission and in the dynamics of the disease were carried out clinical and laboratory research. Morphological study of skin exposed to the underlying dermis. In the initial period, sides and bottom of the wounds were presented purulent-necrotic masses, the thickness of which depended on the extent of tissue damage. Detritus was closely associated with develop-