THE SCREENING STUDY OF STRESSPROTECTIVE EFFECT OF NEW OLIGOPEPTIDES

Kudina O.V., Shtrygol' S.Yu., Tsyvunin V.V., Tyllayeva K.A.,
Shirinova M.G., Umarov U.A.
The National University of Pharmacy, Kharkiv, Ukraine
kudina81@mail.ru

Life of a modern human is related to a huge amount of stress influences, which are the basis of the pathogenesis of diseases of the cardiovascular, endocrine and central nervous systems. A long effect of stressors significantly reduces the adaptive capacity of a human body and leads to the development of a disease adaptation. Based on this a topical problem of the modern pharmacology is the search for new stressprotectors.

The purpose of the study. To screen a stress protective effect of new oligopeptides – the analogues of adrenocorticotropic hormone (ACTH15-18) ciphers under KK-1, KK -2, KK -3, KK -4 KK -5, KK-6, KK-9 KK -10.

Materials and methods. Screening studies have been carried out on the model of neuro-muscular tension by Selye by immobilizing the animal for three hours on a operating table, fixing antraumatically by their limbs. The studied drugs have been administered at a dose of 20 mg / kg intranasal, the drugs of comparison semax and glycine at doses of 20 mg / kg and 10 mg / kg, respectively, in the same mode. The presence of stress protective activity has been determined by the weight coefficients of the adrenal glands and thymus, the frequency of ulceration in a stomach.

Results. The presence of the stress protective activity has been found in oligopeptides ciphers under KK-1, KK-2, KK-3, KK-5, KK-10, because in these experimental groups we have revealed some statistically significant differences from the control pathology group of animals in all investigated parameters. These peptides have significantly reduced the adrenal mass index, increased the thymus weight ratio, reduced the incidence of ulceration in a stomach, exceeding the effect of the drugs of comparison. In the groups of animals treated with oligopeptidies KK-4, KK-6 and KK-9 with the expressed stress protective action has not been observed, because of the fact that no differences have been observed in all investigated indices.

Conclusion. According to the results of the screening tests for the further in-depth study of stress protective actions the most promising peptides are KK-1, KK-2, KK-3, KK-5, KK-10.