EXPERIMENTAL TEST OF LIPOSOME ACTIVITY FOR ACUTE PANCREATITIS

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The dramatic arising of the pancreatology development during last years are caused by increase of incidence of patients disease and mortality from acute pancreatitis (AP), insufficient efficiency of conservative and operative AP treatment. We showed that lipid peroxidation in the blood is the leading pathogenetic factor of the acute pancreatitis inducing in the experiment. From the other side, there are well known data about liposomes certain antioxidant effects which lead in general to the positive effects of liposomes including onto the complex treatment of the inflammatory diseases of gastrointestinal system.

The purpose of the work was the evaluation of the liposome efficiency in conditions of experimental acute panceratitis (EAP) in rats. The experimental researches were carried out on male Wistar rats weighting 180-250 g. Acute experimental pancreatitis (AEP) was simulated in rats narcotized by calipsol (0.2 mg/kg) by traumatic damage of pancreas after laparotomy. New liposome produced in the Laboratory of biochemistry of Odessa Stomatology Institute was injected to rats in a doze of 50 mg/kg. Control animals were injected the analogous volumes of the isotonic NaCl solution. Such group contained not less than 8 animals. Animal autonasv was performed by sodium ethaminal overdosage (100 mg/kg) after 1, 12 and 24 hrs after the moment of ALP reproduction. Concentrations of the MDA, DP and TA were defined in annuals serum. The results obtained were processed statistically-using the Wilcoxon criterion. $P<0.05$ is considered as criterion of reliability. Our next results testify that ALP formation in rats is accompanied with marked LP intencification. Thus, in blood of animal with ALP without treatment the MDA concentration has exceeded those in intact animal in 2.5 times ($P<0.001$), DP concentration- in 1.9 times ($P<0.001$) together with an essential suppression of antioxidant system activity. Liposome in rats with ALP in 1 hr promoted decrease of an MDA level on 25% and DP on 19 % ($P<0.05$), however, the levels of peroxidation products were essentially exceeded those parameters at control animal. In these conditions the remedy essentially did not change TA concentration. The similar orientation of results under influence of liposome was marked in 12 hrs from the moment of AEP modeling. In AEP 24 hrs the essential reduction of MDA concentration (in 1.6 times; $P<0.001$) and DP (on 47%; $P<0.05$) and increase of TA concentration (in 1.7 and 1.9 times, accordingly; $P<0.05$).

Thus, we received a complex of experimental results which interpretation is represented rather perspective in aspect of drawing up of the concept about the AEP complex pathogenetic therapy. The obtained experimental data have shown new liposome high efficiency which proved by antioxidant system activity increasing and reduction of lipid peroxidation final products concentration. These data concerning new liposome positive effects on LP at AEP have served as an experimental substantiation of testing of clinical effects of the given remedy.