

N-STEAROYLETHANOLAMIN IN ANTITUMOR THERAPY

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Nowadays such natural compounds as N-acylethanolamines (NAE), present in numerous biological objects, are regarded to be minor biologically active lipid molecules, which play regulatory role in vital functions of the cell and have endocannabinoid-like characteristics. Our preliminary data showed that N-stearoylethanolamine, one of the NAE class members, inhibited growth of Lewis carcinoma, decreased quantity of metastases and volume of metastatic affection of lungs when used in *per os* treatment of tumor-bearing mice. Its membrane protective, antioxidative and antiinflammatory characteristics are known. This investigation was aimed to find out possible variants of N-steroylethanolamin use during antitumor therapy to reduce toxic appearance of cytostatic medications (in particular cisplatin). It was shown that the use of NSE during antitumor therapy with cisplatin did not have influence on cytostatic effect of cisplatin but decreased the level of urea and creatinine in blood of mice with Lewis carcinoma. It is necessary to emphasize on important protective action of NSE - slowing down peroxide oxidation of lipids in kidneys of tumor bearing mouse during combined therapy with cisplatin. NSE prevents accumulation of TBA-active products. Apparently, their level in kidneys of tumor bearers grew up during therapy with cisplatin. NSE prevents generation of reactive oxygen species in tissues and improves internal conditions of tumor bearer. In the case of combined therapy with cisplatin and NSE, one can observe decrease of lysophosphatidylcholine level in kidneys of tumor bearers in comparison with animals which received cisplatin alone. Increase of content of phospholipid lysoforms in membranous structures causes disturbance of structural integrity and functional activity. Thus, decrease of lysophosphatidylcholine level supports recovery of membrane structure and normalizes membrane-bound processes. On our opinion, discovered effects of NSE can be explained by its membrane-stabilizing action. Thus, recovery of lipid surrounding can support normalization of physicochemical characteristics of membranes and hence increase cell protective ability against cytotoxic medication.