

METABOLIC COMPETITION AND COMFORT IN ONCOLOGY: PERSPECTIVES FOR THE USE OF REGULATORY ACTIONS OF FREE AMINO ACIDS IN ENDOGENIC (PHYSIOLOGICAL) CONCENTRATIONS

Nefyodov L¹ and Karavay P²

¹Yanka Kupala State University of Grodno, Belarus

²Grodno State Medical University, Belarus

Introduction: Changes in amino acid pool of liquids and their fund tissues of patients specifically characterize a cancer illness. To a large extent, they arise as a result of metabolic competition for common substrates for the plastic needs of the body cells and tumors. Correction of intermediate metabolic changes at a cancer can be reached at use of separate amino acids or their combination.

Purpose: The aim of this minireview is the formulation of a hy-pothesis and methodology creation of practical application of the regulatory action of endogenous (physiological) concentrations of separate amino acids for the design of new effective medicines against can-cer.

Materials & Methods: The results and our concept is based on research of formation of free amino acids fund in biological liquids and tissues of about 1500 patients with cancer of mammary gland, lungs, prostate, ovaries, bladder or digestive tract.

Results: Separate amino acids or their minicompositions in oncological practice should be applied according to their physiological concentrations and change in structure of amino acids fund of patients and tumors. Amino acids with anticarcinogenic effects may include leucine, tryptophane and taurine.

Conclusions: The new methodology of development of multicomponent infusion solutions offered by us on the basis of amino acids intended for correction of the metabolic imbalance arising at various localization and stages of the malignant growth is based on results of research of regularities of formation of amino acid fund in biological liquids and tissues. The ratios of the individual components in such mixtures should comply with the standard blood plasma, and their quantity in the order of magnitude of their content in an absolutely complete proteins (for example, human breast milk proteins).

I.nefyodov@mail.ru