

INFLUENCE OF OZONOTHERAPY ON LIPID PEROXIDATION OF ERYTHROCYTES AT PATHOLOGIES

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Adaptation of a human organism to an environment subject to pollution of the various nature, is a complex process negative consequences of which are expressed in occurrence of various pathologies. Recently the attention of experimenters and clinical physicians has been turned to a problem of lipid peroxidation (LP) as superfluous accumulation of peroxide products is a pathogenetic attribute of many, and the most widespread, diseases. Besides it, uncontrollable use of such methods of treatment as hyperbaric oxygenation, ultraviolet radiation treatment, laser- and ozonotherapy can cause the activation of this process. For estimation of a condition of LP determine the quantities both primary, intermediate, final molecular products and an activity of antioxidative enzymes besides it is doubtless, measurement of intensity of a luminescence induced chemiluminescence is important. This method allows to receive idea about total activity the LP and the general antioxidative activity. In this connection, the purpose of our work was to define the maintenance malonic dialdehyde, as index of oxidation and antioxidation systems status of erythrocytes of the blood of the patients who are passed the course of big autohemotherapy with application of ozone by the standard technique. For research at patients after carrying out of the course of big autohemotherapy took away to a 5 ml of venous blood. In experiment used only erythrocytes, subjected to an osmotic hemolysis. In the hemolysate we defined the general oxidation and antioxidation activity after incubation in presence of the twin-80 as a substratum.

The principle of the method is based on interaction between LP products and thiobarbituric acid at boiling, with formation of the painted complex which optical density we defined to be $X = 532$ nanometers. (Gorachovsky, 2005) The results of our researches have shown that pathologies are accompanied by change of a level of LP of erythrocytes. With the patients of completing course of large autohemotherapy with the use of ozone parameters of the LP change in due course: parameters of the general oxidation and antioxidation activity vary. It is possible conclude, that use of ozone increases the general antioxidation activity of erythrocytes (at norm 39, 6 - 44, 8 % it increases in 1, 5 times). Our data will be coordinated with published data on studying activity superoxide dismutase (Dudina, 2006). Thus, our data specify that application of ozonotherapy strengthens protective mechanisms of cells.

ВЛИЯНИЕ ОЗОНОТЕРАПИИ НА ПЕРЕКИСНОЕ ОКИСЛЕНИЕ ЛИПИДОВ ЭРИТРОЦИТОВ ПРИ ПАТОЛОГИЯХ
Семченок Д.А.

Наши исследования показали, что патологии сопровождаются активизацией перекисного окисления липидов, о чем свидетельствует увеличение содержания малонового диальдегида эритроцитов. Использование озона при проведении большой аутогемотерапии сопровождается повышением уровня их общей антиоксидантной активности, что говорит о стабилизации мембран.