

PROCESSES OF LIPIDS PEROXIDATION AND ACTIVITY OF ANTIOXIDATIVE ENZYMES IN ERYTHROCYTES OF PATIENTS WITH CIRRHOSIS OF LIVER

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It is known, that under different diseases the balance in prooxidative and antioxidative processes is destroyed and oxidative stress is realized. The development of oxidative stress is connected with production of oxygen active forms [1, 2]. Today we have much data about that under some diseases erythrocytes are involved in pathological process as demonstrated by biochemical changes occurring in them [3, 4].

In this regard, it is interesting to examine the state of processes of lipids peroxidation and antioxidative system in erythrocytes of patients with cirrhosis of liver.

The materials for the study were the erythrocytes of patients with cirrhosis of liver (20 persons, middle age 45,0 years) and healthy subjects (control group). The blood of patients with diseases was taken before treatment for an illness.

The erythrocytes were hemolysed by distilled water. The membranes of erythrocytes were separated from hemolysate by centrifugation. In membranes of erythrocytes the content of total lipids [5] and lipids peroxidation products was determined [6, 7].

The activity of catalase [8], superoxidedismutase (SOD) [9] and glutation-reductase [10] was determined in hemolysates. All indexes were studied by spectrophotometric methods of biochemical analyses.

It has been shown, that in membranes of erythrocytes of patients with disease the level of total lipids is lowed: at 2,2 times as compared with control group; the level of primary and secondary products of lipids peroxidation is rised: at 4,9 and 2,0 times in middle, accordingly.

At the same time, the activity of antioxidative enzymes is changed also. The activity of glutation-reductase was lowed at 4,8 times and the activity of catalase and SOD was rised: at 4,8 and 2,7 times, accordingly, as compared with control group.

The obtained dates evidence about development of oxidative stress under cirrhosis of liver and about mobilization of adaptative reactions in erythrocytes under this pathology.

Keywords: erythrocytes, lipids peroxidation, catalase, superoxidedismutase, glutation-reductase, cirrhosis of liver.

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