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CHANGES IN LIVER INDICATOR ENZYMES LEVELS AT CHRONIC HYPODYNAMIC STRESS

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BACKGROUND-AIM

The war in Ukraine has become one of chronic stress factor for the population. It is commonly known that chronic stress affects cardiovascular system as well as the certain parts of digestive tract. The significant influence of stress of arterial hypertension and stomach ulceration is also proved. However there is not enough data about liver damage of continuously stressed organism.

The aim of present work was to evaluate the changes in liver indicator enzymes levels under the chronic stress.

METHODS

The experiments were carried out on 13 WAG population female rats, 6 of them were in the control group and another 7 underwent chronic hypodynamic. The complex biochemical analysis of blood serum and immunohistochemical examination were conducted for stress impact assessment.

RESULTS

Enzyme activity assessment and immunohistochemical analysis showed the moderate increase of both aspartate- and alanine-aminotransferases (AST and ALT) together with normal level of sorbitol dehydrogenase (SORD) and decrease of γ -glutamyltransferase (GGT). Also lowering of eNOS expression was detected. These changes point out the evidence of organic damage in female rats which was directly connected with liver parenchyma as a result of reactions cascade launched by stress.

CONCLUSIONS

Thus, the negative impact of hypodynamic stress on liver structure and functions through enzyme activity alteration that came from parenchymal damage was demonstrated.