

Conclusion: The results of the current study are supported by the results of other previous research and confirm that the PID-5 represents a dimensional model for evaluation and understanding of personality disorders in the clinical and scientific purposes.

Key words: DSM-V, PID-5, personality disorders.

262. THE MAIN PATHS OF REACTIVE OXYGEN SPECIES PRODUCTION IN DISORDERS CAUSED BY ISCHEMIA/REPERFUSION

Cornelia Lazar

Department of Biochemistry and Clinical Biochemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction: There are a significant number of diseases in which injuries occur as a consequence of tissue ischemia (myocardial infarction, ischemic stroke, ovarian torsion, etc.). The initial therapeutic intervention is to remove as soon as possible the cause of the ischemia. However, it has been found that reperfusion can induce changes that worsen the initial injury and, finally, organ damage in such diseases is given by the sum of the changes that occur during ischemia and reperfusion period. Thus, it is important to understand what happens during reperfusion to act in a manner to minimize negative effects on the affected tissue.

Materials and Methods: We studied 120 articles in MEDLINE and PubMed database over the last five years describing mechanisms injuries in ischemia/reperfusion in different organs.

Discussion results: There are a lot of mechanisms involved in reperfusion injury: generation of reactive oxygen species (ROS), mitochondrial pore opening, inflammatory response, increase the intracellular calcium concentration, endothelial dysfunction, protrombogenic phenotype development, etc. One of the most important is the production of reactive oxygen species. There are several sources for the production of reactive oxygen species in a process of reperfusion, but the main are: complexes I and III of the electron transporting chain, the enzyme xanthine oxidase and NADPH oxidase. In addition, it was found that the generation of ROS is related to the deregulation of calcium homeostasis, for instance, in ischemia the increase in intracellular calcium concentration induces dephosphorylation of complexes of respiratory chain, and in the case of reperfusion, when an increased amount of oxygen penetrates the tissue, increases the production of ROS. ROS lead to cell and tissue damage, membrane lipid peroxidation, alteration of cellular proteins and DNA damage.

Conclusion: The production of reactive oxygen species in the process of reperfusion plays an important role in the exacerbation of the initial lesions caused by ischemia. ROS produced alters cellular macromolecules. The main elements involved in the production of ROS are mitochondria, xanthine oxidase and NADPH oxidase, and modifications of intracellular calcium concentration support pathological changes.

Key words: free radicals, oxidative stress, ischemia/reperfusion.