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Elevation of free radical oxidation in combatant related PTSD patients with obesity associated with decrease cortisol levels and increase IL-1 levels

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There is a strong association between PTSD and the risk of central obesity. Recent data have suggested that high cytokines levels are observed in blood in many but not all populations with posttraumatic stress disorders (PTSD). An increased prevalence of pro-inflammatory cytokines is associated with a low cortisol levels in PTSD subjects. Moreover cytokines are induced the free radical oxidation in animal PTSD models. However, it is not known how the relation between IL-1 levels and free radical oxidation intensity changes in PTSD patients with obesity. 50 male subjects were examined including 13 patients diagnosed obesity in combat-related PTSD (PTSD), 13 patients a group of PTSD related combatants without obesity (trauma control). 11 patients involved in a group with obesity without PTSD. Only healthy controls (13 male subjects) that did not report traumatic experiences and did not report obesity were included in this study. The study group of combat-related PTSD with obesity was characterized by increased IL-1 levels compared with the trauma control group and the healthy control. We also observed elevation of carbonylated protein content in combat-related PTSD patients with obesity compared with the trauma control. Moreover, combat-related PTSD patients with obesity showed higher intensity of lipid peroxidation as compared to the trauma control and to the group obesity without PTSD. These findings suggest that high level of IL-1 as well as a high level of Free Radical Oxidation is a promoting condition for obesity in patients with combat-related PTSD.

Biography

Vadim Tseylikman is a Professor and Head, Biochemistry Department, South Ural State Medical University. Education and Scientific Degrees: 1982, Chelyabinsk State Pedagogical University, M.S. Degree in Biology. Thesis: "Condition of erythron in hypokinetic stress ." Department of Human and Animal Physiology, Faculty of Biology. 1992, Siberian State Medical University, Tomsk, Russia PhD Thesis: "Adaptive influence of the short stress exposures on the erythron system." 1999, Institute of General Pathology and Pathophysiology, Moscow, Russia D.Sc. Thesis: "The role of the Blood in the choice of an adaptation strategy."

His research interests are: Stress and insulin sensitivity, Stress and its effects on the liver, CYP450 dependent shifts in the brain, He is the author of more than 150 papers on these topics

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