The Third International Anxiety Congress
Shefa Neuroscience Research Center, Tehran, Iran, 23-24 November, 2016
The Neuroscience Journal of Shefaye khatam
Volume 4, No. 3, Suppl 1

Poster Presentation

Role of Brain-Derived Neurotrophic Factor in Pathogenesis and Treatment of Post-Traumatic Stress Disorder

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Published: ***23-24 November, 2016***

Abstract

Post-traumatic stress disorder (PTSD) is a syndrome causing from a severe traumatic happening that leads to threatened death or injury. PTSD is associated with changes in limbic, hippocampal, and prefrontal cortical region function due to changes in synaptogenesis, dendritic modifying, and neurogenesis. Changes in neuron in PTSD patients result from pathophysiological disturbances in inflammatory, metabolic, and apoptic processes. Brain-derived neurotropic factor (BDNF) is a neurotrophin that functions as survivorship factor for selected neurons of central nervous system and it can regulate synaptic plasticity, memory processes and behavior in the limbic system. Failure to produce BDNF in the brain can lead to a variety of central nervous system disorders. Researches indicate that impairment in the regulation of neural BDNF occurs in conditions of PTSD. It is found that level of BDNF in serums of PTSD patients were lower as compared to related controls. It is suggested that BDNF may be involved in pathophysiology of PTSD and enhancing BDNF-related signaling and restoring level of BDNF in serum may be considered as consequently therapeutic.

Keyword: Patients, Brain-derived neurotrophic factor, Post-traumatic stress disorder

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