The 2nd International Neurotrauma Congress &
the 4th International Roads Safety Congress

Shefa Neuroscience Research Center, Tehran, Iran, 18-20 February, 2015

The Neuroscience Journal of Shefaye Khatam

Volume 2, No. 4, Suppl. 3

Poster Presentation

Neurological Outcomes after Traumatic Brain Injury Affected by Concomitant Administration of Progesterone and Erythropoietin

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Published: ***18 February, 2015***

Abstract

Traumatic brain injury (TBI) is one of the most common neurological diseases with no definite treatment. Erythropoietin (Epo) and progesterone (Prog) have been shown to have neuroprotective effects in different types of experimental brain injury models. This study was designed to determine the effect of Epo, Prog and combination of Epo/Prog on neurological outcome after traumatic brain injury. Fifty-four male Wistar rats were divided into 5 groups including; intact (n=6), TBI (n=12), TBI+16 mg/kg Prog (n=12), TBI+5000 U/kg Epo (n=12), TBI+16 mg/kg Pro+5000 U/kg Epo (n=12). Neurological evaluation was performed using modified Neurological Severity Score on days 1, 2, 7 and 14 post TBI. The results revealed that Prog and Epo individually ameliorated neurological deficit following TBI while the combination of Prog and Epo exacerbated the neurological dysfunction. In conclusion, our study indicates that the combination of Prog and Epo does not improve neurologic outcome after TBI.

Keywords: Traumatic Brain Injury, Progesterone, Neuroprotective.

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