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Poster Presentation

Progesterone in TBI Treatment

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Abstract

The brain edema is one of remarkable injuries after traumatic brain injuries (TBI). The common treatments for limiting edema are included mannitol, barbiturates, corticosteroids, hyperventilation and central nervous system derange. The most of these treatments for edema is problematic. For example, mannitol can be effective for the short period of time (24 hours) after brain injuries but is not appropriate for long-term treatments after TBI. Also, the application of corticosteroids such as methylprednisolone was encountered with limited treatments. On the other hand, the studies were shown that biological gender effects incidence and the result of ischemia and TBI and gender and menstruation may have an effect on animal response to experimental TBI and finally lead to progesterone development as a neuroprotective factors. Progesterone is synthesized in males and females' brain by oligodendrocytes and some neurons in equally volume. Progesterone receptors are expressed in adult brain, thus the various regions of brain are natural target of progesterone. The investigations on progesterone were shown that this hormone has been used as a treatment after injury due to stroke and TBI in males and females. Moreover, animal studies were shown that the use of progesterone after experimental TBI decreases neuronal apoptosis and limit gliosis. progesterone injection leads to decrease neuronal death, increase remyelination and improve function and overall decrease in brain edema.

Keywords: Progesterone, TBI, Edema.

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