

عنوان مقاله:

Erythropoietin Effects on Pathological Changes of Brain Tissues and Motor Balance Functions after Traumatic Brain Injury in Animal Model

محل انتشار:

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خلاصه مقاله:

Objectives: In this control trial study we showed the neuroprotective effects of the erythropoietin (EPO) in traumatic brain injury in animal model. **Methods:** The research was carried out on 50 male Wistar rats weighing 200 to 250 g. They were divided into two groups of control and case. The rats were anesthetized, right frontal craniotomy was performed and then the brain damage was caused by weight-drop model. In the case group, after 3 hours and again after 24 hours of craniotomy and creation of brain lesions in the right hemisphere, 500 u/kg erythropoietin was injected into peritoneum but in the control group, the rats did not receive any drug. Then the behavior, motor function and balance on the second day and the fourteenth day after injection of erythropoietin were evaluated. After that, the rats were killed and the brain tissues sent to the laboratory for pathological assessment of brain tissues. **Results:** The average of cross-sectional damage in the case group that received erythropoietin drug was reported 22.55% and in the control group 37.41%, and the motor balance function after fourteenth day in the group that received erythropoietin was 69.12% and better in comparison with the control group (46.27%) that did not receive any drug. **Conclusions:** erythropoietin has a protective effect on neurons and improves the sub-acute changes in head after brain injury and increases the motor balance abilities in rats.

کلمات کلیدی:

Traumatic Brain Injuries, Erythropoietin, Neuroprotection

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