



Poster Presentation

HCG and Trolox Reduced the Apoptotic Hippocampus Neuronal Cells in Ischemia Reperfusion Mice Model

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Abstract

Ischemia has an important role in spread of pathologic injuries in the neuropathies. It is widely accepted that most damages such as reperfusion injuries, are related to the activity of free radicals. Apoptotic signaling was exacerbated by free radicals. The aim of this study was to evaluate the neuroprotective effect of Human Chorionic Gonadotropin (HCG) and vitamin E (trolox) in the hippocampus. In this study we used 40 male mice. Then, animals randomly divided into 5 groups: ischemia, HCG, trolox, HCG+trolox and control. We cut off 2 sides of carotid vein about 15 minutes to induce ischemia. Then through reperfusion, Trolox was injected in inner Peritoneum and after 48hrs HCG was injected in muscle for 5 days. We extract protein from the brain tissue for western blotting test and the brains were fixed for nissl staining. Western blotting test shows significant increase of NF-KB (anti apoptotic protein) expression and decrease ratio of Bax/bcl2 (the apoptotic proteins) expression in the treatment groups. Injection of HCG+Trolox after ischemia-reperfusion increased density of normal cells and significantly enhances the number of CA1 pyramidal neuronal cells. Our findings indicated that the application of Trolox and HCG in the same time after ischemia-reperfusion had neuroprotective effect and improved the neuronal cell survival.

Keywords: Ischemia-Reperfusion, Hippocampus, HCG, Trolox.

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