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Poster Presentation

The Role of Cryotherapy in Progression of Brain Stroke

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Abstract

Stroke is a leading cause of mortality and morbidity in developed countries and has increased incidence due to progression of average population age. Pharmacological and mechanical reperfusion therapy, as primary therapeutic approaches, are only applicable to less than 10% of patients with a 50-70% efficacy. but about 90% of patients are severe restricted to these treatments. Glutamate excitotoxicity is associated to the deleterious effects of hyperthermia during the acute phase of brain stroke; therefore management of body temperature is becoming one of the most promising neuroprotective strategies during the acute phase of stroke for patients with resistance to routine treatment. on this subject researches have shown a direct correlation between increase Glutamate concentration in blood that is reflected in an increase of extracellular Glutamate levels on the ischemic brain. Glutamate-Oxaloacetate transaminase (GOT) is a blood-borne enzyme. Glutamate and Oxaloacetate are competitive substrates for this enzyme. so it seems that reduction of temperature or competitive inhibition of GOT, can eliminate Glutamate related damage in brain stroke.

Keywords: Glutamate, Cryotherapy, Brain Stroke

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