ABSTRACT

THE EFFECT OF ERYTHROPOIETIN ON THE MOTOR AND SENSORY FUNCTIONS IN ANIMALS WITH ISCHEMIC STROKE MODELS

RENI DWI FIRLYANI

Ischemic stroke is caused by a sudden reduction in the blood supply to the brain and causes brain damage. This study was aimed to determine the potency of erythropoietin as neuroprotectan in ischemic stroke mice model. Animal model was induced by left unilateral common carotid artery occlusion (lUCCAO) for 2 hours. Stroke model was characterized by decreasing motor and sensory functions. Animals were randomly divided into 4 groups: sham, stroke, stroke with rHuEPO 5.000 IU/Kg and 10.000 IU/Kg. rHuEPO was intraperitoneally administrated 2 hours after lUCCAO. Motor function was evaluated by ladder rung walking test and narrow beam test. Sensory function was evaluated by adhesive removal tape test. The tests were conducted on day 1, 4, 7, 10, and 14. The result showed that treatment with rHuEPO 5.000 IU/Kg and 10.000 IU/Kg significantly improved motor and sensory functions as compared to stroke group by ladder rung walking test, narrow beam walking test and adhesive removal tape test.

Keyword: ischemic stroke, rHu erytrhropoietin