ABSTRACT

THE EFFECT OF CURCUMIN ON MOTOR AND SENSORY FUNCTIONS IN ANIMAL ISCHEMIC STROKE MODEL

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Ischemic stroke is a type of stroke caused by circulatory disorders to the brain due to obstruction or blockage that blocks the supply of glucose and oxygen to the brain. This research was designed to investigate the efficacy of curcumin as a neuroprotective agent in mice with ischemic stroke induced by left unilateral common carotid artery occlusion. Animals were randomly divided into five groups: sham group, ischemic stroke group and ischemic stroke group treatment with 50, 100, and 300 mg/kgBB curcumin. Curcumin or vehicle was administered intraperitoneally 30 minutes after occlusion and were continued for 6 days. Mice were assessed for motor repair by ladder rung walking test and narrow beam walking test and sensory repair by adhesive removal test. Motor and sensory repair were measured on day before and day 1, 4, 7, 10, and 14 after occlusion. The result showed that treatment with curcumin significantly restore motor and sensory functions through ladder rung walking test ($p<0,0001$), narrow beam walking test ($p<0,05$) and adhesive removal test ($p<0,0001$).

Keywords: Ischemic stroke, Curcumin, Ladder rung walking test, Narrow beam walking test, Adhesive removal test