Histogranin reduced brain injury after transient focal ischemia in rats

蒋永孝

Chiang YH;Chen GJ;Shen H;Chou J;Wang Y

摘要

Abstract

Excitatory amino acids (EAAs) play an important role during ischemic brain injury. In this study we examined the protective effect of histogranin (HN), an endogenous peptide that antagonizes excitatory amino acids-mediated activity noncompetitively, in an animal model of cerebral ischemia. Adult rats were anesthetized with chloral hydrate. Histogranin was given intracerebroventricularly before a 60-min middle cerebral artery occlusion (MCAo). Animals were examined for their locomotor activity 2 days after MCAo. Histogranin significantly increased locomotor activity in the stroke rats. Histogranin pretreatment reduced the volume of cerebral infarction and the caspase-3 immunoreactivity in the stroke animals. Taken together, our data suggest that histogranin is protective against ischemic brain injury. The protective effect may involve anti-apoptotic mechanisms..

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