



***Ginseng radix* Suppresses Ischemia-induced Increase in c-Fos Expression and Apoptosis in the Hippocampal CA1 Region in Gerbils**

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Ginseng radix, the root of *Panax ginseng* C.A.Meyer (Araliaceae), has traditionally been used for the treatment of various disorders including cerebrovascular accident (CVA). In the present study, the effect of *Ginseng radix* on c-Fos expression and apoptosis in the hippocampal CA1 region of gerbils following transient global ischemia was investigated *via* immunohistochemistry for c-Fos and caspase-3 and terminal deoxynucleotidyl transferase-mediated dUTP nick end labeling (TUNEL) assay. Enhanced c-Fos-, TUNEL-, and caspase-3-positivities were detected in the hippocampal CA1 region in ischemic gerbils. Administration of the aqueous extract of *Ginseng radix* suppressed this ischemia-induced increment in the numbers of c-Fos-, TUNEL-, and caspase-3-positive cells. These results suggest that *Ginseng radix* has an inhibitive effect on the induction of c-Fos expression and apoptosis seen following transient global ischemia.

Key words : *Ginseng radix*, ischemia, c-Fos, apoptosis, caspase-3