عنوان مقاله:

Neuronal damage of the dorsal hippocampus induced by long-term right common carotid artery occlusion in rats

محل انتشار:

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خلاصه مقاله:

Objective(s):The present study investigated the effect of long-term mild cerebral hypoperfusion induced by permanent unilateral (right) common carotid artery occlusion (UCO) on the dorsal hippocampal neurons in rats. Materials and Methods:Sixty four male Sprague-Dawley rats aged ۴ months were divided into two groups of sham and UCO. These two groups were further divided into ۴ sets of histopathological observation periods at ۸, ۱۶, ۴۸ and ۵۶ weeks after arterial occlusion. Pathological changes were observed in three regions (CA۱, CA۳ and DG) of the dorsal hippocampus. Results:Significant increase of damaged neurons in CA۱ region at ۸, ۱۶, ۴۸, and ۵۶ weeks were observed, whereas in CA۳ and DG regions it was at ۱۶, ۴۸, and ۵۶ weeks. Gradual increase of damaged neurons was found without significant change in hemodynamic parameters. Conclusion: Long-term right common carotid artery occlusion in rats induced delay and progressive damage to the dorsal hippocampus with regional vulnerability from CA۱ followed by CA۳ and DG regions

کلمات کلیدی:

Delay neuronal death, Hippocampal neurons, Mild cerebral hypoperfusion, Permanent right common, Carotid artery occlusion