

عنوان مقاله:

Ischemic and Reperfusion Injury of Adult Rat Sciatic Nerve

محل انتشار:

مجله علمی پژوهشی دانشگاه علوم پزشکی زنجان، دوره 14، شماره 55 (سال: 1385)

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خلاصه مقاله:

Background and Objective: Ischemia plays a major role in development of pathological changes in various neuropathies. Reperfusion amplifies physiological and pathological abnormalities in ischemic nerves. In this research, we studied ischemic-reperfusion (IR) injury of sciatic nerve up to 14 days of reperfusion. **Materials & Methods:** IR was produced by ligation and release of nooses around supplying vessels to the sciatic nerve. 30 rats were assigned into 5 groups of 6. Group 1 (control) did not undergo IR while the 4 remaining groups after three hours of complete hind leg ischemia underwent reperfusion within 0hr, 3hrs, 7 days and 14 days. **Results:** Pathologically, two phases were identifiable. During phase 1 (0- 3 hrs) fiber degeneration and endoneurial edema were observed. During phase 2 (7 days and, 14 days) prominent fiber degeneration and prominent endoneurial edema were observed. Loss of function occurred in more than 75% of the rats with ischemia alone, in comparison with the control group the maximum reduction in activities was observed amongst the group of rats reperfused within 3 hours. **Conclusion:** IR injury depends on duration of reperfusion. Microvascular events during reperfusion may enhance the nerve fiber damage following the ischemia period.

کلمات کلیدی:

Ischemia, Reperfusion, Sciatic nerve

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