

SHORT COMMUNICATION

EFFECT OF INTRAPORTAL VERAPAMIL INFUSION ON HEPATIC ISCHEMIA-REPERFUSION INJURY

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Effect of intraportal verapamil infusion on hepatic ischemia-reperfusion injury. O. ERDOĞAN, S. YILDIZ, A. BAŞARAN, A. DEMİRBAŞ, A. YEŞILKAYA. Pol. J. Pharmacol., 2001, 53, 137–141.

Removal of free oxygen radicals, generated during reperfusion of an ischemic organ by scavengers protects the tissue from reperfusion injury. The calcium channel blocker verapamil is an effective cytoprotective agent, preventing against reperfusion injury. The effects of verapamil were investigated previously using hepatic, renal or cardiac ischemia-reperfusion injury models. We investigated the effects of intravenous and intraportal administration of verapamil in prevention from the injury caused by free oxygen radicals generated during hepatic ischemia-reperfusion in rats. Thirty six male Sprague-Dawley rats after laparotomy were subjected to hepatic ischemia for 30 and 45 min followed by 60 min of reperfusion. Two minutes before ischemia the rats were pretreated by intravenous or intraportal administration of verapamil. The levels of glutathione and thiobarbituric acid reacting substances (TBARs) referred to as malonyldialdehyde (MDA) and the serum levels of transaminases were measured in liver tissue 1 and 24 h after the onset of reperfusion. Statistical analysis of the data by Student's *t*-test showed statistically significant differences between the group pretreated intraportally with verapamil and the other groups. Verapamil given intraportally exerted more beneficial effect. Therefore, we conclude that intraportal verapamil administration reduces the ischemia-reperfusion injury caused by free oxygen radicals.

Key words: *verapamil, reperfusion injury, liver*

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