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제 목	Acute hepatic injury following ischemia and reperfusion in rats
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내 용

Since total hepatic ischemia(IS) occurs with transplantation, there has been interest in evaluating hepatic function after ischemia and subsequent reflow of blood. Four groups of animals were studied: group 1 (sham), group 2 (30mins IS), group 3 (60mins IS), and group 4 (90mins IS). Serum transaminase(STA), wet weight-to-dry weight ratio(W/D), lipid peroxides(LPO), glucose-6-phosphatase(G-6-Pase) activity, Na^+/K^+-ATPase(ATPase) activity were measured at 1, 5 and 24hrs after hepatic ischemia. Significant changes occurred between 1 and 5hrs of reperfusion. STA was 3579 ± 401, 4593 ± 675 and 6348 ± 808 U/L in group 2, 3 and 4 respectively. These changes were ischemic time-dependent manner. W/D in group 3 and 4 were significantly increased than that in sham group at all time points measured. In sham group, the level of LPO in the liver microsome remained constant at approximately 0.5nmole MDA formed/mg protein throughout the experiment. In all ischemic groups, on the other hand, the level of LPO started to increase at ischemia and markedly increased at all reperfusion period. Similar to STA, these changes were also dependent on duration of ischemia. Although G-6-Pase activity remained unchanged in both group 2 and group 3 until 5hrs of reperfusion, marked decrease in G-6-Pase activity was observed at group 4. ATPase activity was significantly decreased at 1, 5 and 24 hrs of reperfusion in group 3, whereas it was not changed in group 2. Furthermore, ATPase activity in group 4 started to decrease at ischemia and markedly decreased for entire reperfusion period. These data suggest that severity of hepatocellular injury is associated with period of ischemia as well as period of reperfusion.