中国病理生理杂志 2008 24 (1): 112-115 ISSN: 1000-4718 CN: 44-1187/R

论著

肝上下腔静脉控制性失血减轻大鼠肝脏缺血再灌注损伤

贾长库[1],王文擘[1],朱有法[2],郑树森[1]

浙江大学医学院1附属第一医院肝胆外科，卫生部多器官联合移植重点实验室，2病理教研室，浙江 杭州 310003

收稿日期 2006-7-26 修回日期 2006-11-21 网络版发布日期 2008-11-10 接受日期 2006-11-21

摘要 目的：确定肝脏缺血再灌注（HIR）时肝上下腔静脉（SH-VC）血中氧自由基（ROS）产生的时相及峰值，探讨SH-VC控制性失血处理对HIR损伤的影响。方法：用大鼠HIR损伤模型，分别测定再灌注后0 min、5 min、10 min、30 min、1 h、2 h、6 h模型组与假手术组SH-VC及肝下下腔静脉（IH-VC）血中MDA的含量；在再灌注后的10 min分别在SH-VC及IH-VC进行放血处理，观察其对HIR损伤的影响。结果：HIR时SH-VC血中MDA的含量随时间的延长逐渐升高，并在再灌注后10 min达到高峰，并且再灌注后0、5和10 min 3个时段，SH-VC内MDA的含量明显高于IH-VC内的含量；2%SH-VC放血输血处理组血清MDA的含量明显低于未处理组，处理后6 h血清ALT和AST的含量都显著低于未处理组，并且生存率明显提高达7 d左右。结论：本研究首次发现HIR 时SH-VC血中的ROS含量随着再灌注时间的延长而增高，并在10 min时达高峰。在10 min高峰期进行20%SH-VC放血输血处理，明显减轻HIR损伤。

关键词 肝； 再灌注损伤； 活性氧； 腔静脉

分类号 R675.3

Suprahepatic vena cava manipulative bleeding alleviates liver ischemia-reperfusion injury

JIA Chang-ku[1],WANG Wen-bo[1],ZHU You-fa[2],ZHENG Shu-sen[1]

1Department of Hepatobiliary Pancreatic Surgery, The First Affiliated Hospital, 2Department of Pathology, Zhejiang University School of Medicine, Hangzhou 310003, China

Abstract

<FONT face=Verdana>AIM: To determine the time course and peak production of reactive oxygen species (ROS) in suprahepatic vena cava (SH-VC) after hepatic ischemia-reperfusion(HIR) and to study the effects of posthepatic manipulative bleeding on HIR injury in rat model.
METHODS: Rat 35 min total hepatic ischemia model was used in this study. Blood was taken, from
SH-VC and infrahepatic vena cava (IH-VC), for MDA detection at 0 min, 5 min, 10 min, 30 min, 1 h, 2 h and 6 h after reperfusion respectively. Then the experimental rats were treated with posthepatic manipulative bleeding or IH-VC manipulative bleeding at 10 min after reperfusion.
RESULTS: MDA concentration in SH-VC elevated obviously with time and peaked at 10 min after reperfusion. Two percent of body weight posthepatic manipulative bleeding with blood transfusion at 10 min after reperfusion significantly decreased circulating MDA，ALT and AST levels and improved survival rate.
CONCLUSION: ROS concentration in SH-VC elevates obviously after reperfusion. Two percent of body weight suprahepatic vena cava manipulative bleeding with blood transfusion at 10 min after reperfusion can afford significant protection against warm HIR injury.</FONT>

Key words Liver Reperfusion injury Reactive oxygen species Venae cavae

DOI: 1000-4718

通讯作者