[1]何孝崇,柴进,何宇,等.阻塞性肝胆汁淤积下转录因子NR5A2和SP1、胆酸转运蛋白MRP3与肝脏损伤的相关性[J].第三军医大学学报,2012,34(24):2474-2478.

He Xiaochong,Chai Jin,He Yu,et al.Correlation of transcriptional factors NR5A2 and SP1, bile acids transporter MRP3 with liver injury in human obstructive cholestasis[J].J Third Mil Med Univ,2012,34(24):2474-2478.

点击复制

阻塞性肝胆汁淤积下转录因子NR5A2和SP1、胆酸转运蛋白MRP3与肝脏损伤的相关性(PDF)

《第三军医大学学报》[ISSN:1000-5404/CN:51-1095/R] 卷: 34 期数: 2012年第24期 页码: 2474-2478 栏目: 论著 出版日期: 2012-12-30

Title: Correlation of transcriptional factors NR5A2 and SP1, bile acids transporter MRP3 with liver injury in human obstructive cholestasis

作者: 何孝崇; 柴进; 何宇; 王槐志; 陈文生
第三军医大学：护理系护理管理学教研室，西南医院全军消化病研究所，西南医院全军肝胆外科研究所

Author(s): He Xiaochong; Chai Jin; He Yu; Wang Huaizhi; Chen Wensheng
Department of Nursing Management, School of Nursing, Institute of Gastroenterology,Institute of Hepatobiliary Surgery, Southwest Hospital, Third Military Medical University, Chongqing, 400038, China

关键词: 转录因子; NR5A2; SP1; MRP3; 胆汁淤积

Keywords: transcriptional factors; NR5A2; SP1; MRP3; cholestasis

分类号: R363; R394.2; R575

DOI: -

文献标识码: A

摘要: 目的 研究阻塞性胆汁淤积下肝脏中转录因子NR5A2、SP1表达是否上调，以及其表达上调与胆酸转运蛋白MRP3基因的表达是否密切相关；MRP3表达上调是否具有减轻阻塞性胆汁淤积肝脏损伤的作用。 方法 收集阻塞性胆汁淤积组（胆结石或肝内胆管结石引起的黄疸患者手术切除的肝脏）和正常对照组（排除肝脏疾病的活检肝组织及肝转移癌无黄疸的患者肝脏）肝脏样品各15例。采用半定量PCR和免疫荧光方法检测NR5A2、SP1基因的表达，利用独立样品t检验和线性回归分析阻塞性胆汁淤积肝组织样品中MRP3 mRNA表达上调是否与NR5A2或SP1呈正相关，以及MRP3表达上调与反映肝脏损伤的指标ALT、AST是否存在负相关性。HE染色观察胆汁淤积组肝细胞坏死程度和MRP3蛋白表达高低的关系。 结果 阻塞性胆汁淤积肝脏中NR5A2和SP1 mRNA表达显著上调，其中NR5A2 mRNA增高3.7倍（P<0.01），SP1 mRNA上升3.2倍（P<0.01）。免疫荧光结果表明，阻塞性胆汁淤积组NR5A2和SP1蛋白表达也显著增加，NR5A2或SP1蛋白与胆酸转运蛋白MRP3 mRNA表达呈显著正相关（分别为r^2=0.47，P<0.05和r^2=0.51，P<0.01）；MRP3蛋白表达与肝细胞坏死程度存在密切相关，并且MRP3蛋白表达量与ALT和AST均呈显著负相关（分别为r^2=0.52，P<0.01和r^2=0.39，P<0.05）。 结论 人阻塞性胆汁淤积下NR5A2和SP1表达上调，可诱导胆酸转运蛋白MRP3的表达，而MRP3表达上调可能有减轻肝脏损伤的作用。

Abstract: Objective To determine the expression of transcriptional factors liver receptor homolog 1 (NR5A2) and specificity protein 1 (SP1) in obstructive cholestasis, explore their expression levels with that of multidrug resistance-associated protein 3 (MRP3), and investigate the role of MRP3 in liver injury from the accumulation of toxic bile acids under cholestatic condition.

Methods Live tissue samples from 15 patients with identified obstructive cholestasis and 15 control patients excluded liver diseases were collected. The expression of NR5A2 and SP1 was detected with RT-PCR and immunofluorescence staining. The correlation of the expression of MRP3 mRNA with the levels of NR5A2 and SP1, and with serum levels of ALT and AST were analyzed by liner regression. The correlation of the expression level of MRP3 protein and hepatic necrosis in human cholestasis (HE staining) was also studied. Results The expression levels of NR5A2 and SP1 were extremely increased in human cholestatic tissues, compared with normal controls (3.7-fold, $P<0.01$, and 3.2-flod, $P<0.01$, respectively). NR5A2 and SP1 were predominately expressed in the nucleus of cholestatic hepatocytes but not in that of normal controls. There was a significantly positive correlation of the expression levels of NR5A2 and SP1 proteins with hepatic MRP3 mRNA level in cholestatic tissues ($r^2=0.47$, $P<0.05$, and $r^2=0.51$, $P<0.01$, respectively). HE staining also indicated that hepatic necrosis was more severe in the tissue samples with elevated expression of MRP3 protein under cholestatic condition. There was a markedly negative correlation between MRP3 protein expression and serum ALT and AST levels ($r^2=0.52$, $P<0.01$, and $r^2=0.39$, $P<0.05$). Conclusion Hepatic NR5A2 and SP1 are upregulated in the liver tissue under cholestatic condition, which are positively correlated with the expression of MRP3. Meanwhile, the elevated MRP3 expression may alleviate the liver injury caused by the accumulation of toxic bile acids under cholestatic condition.

参考文献/REFERENCES

何孝崇,柴进, 何宇, 等. 阻塞性肝胆汁淤积下转录因子NR5A2和SP1、胆酸转运蛋白MRP3与肝脏损伤的相关性[J]. 第三军医大学学报,2012,34(24):2474-2478.

备注/Memo: -