

pAkt、Skp2和P27kip1蛋白在肝细胞癌中的表达及意义

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Expression and Clinical Significance of pAkt, Skp2 and P27kip1 Protein in Hepatocellular Carcinoma

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摘要 目的探讨人肝细胞癌组织中pAkt、Skp2和P27kip1蛋白的表达及其临床意义。方法应用免疫组织化学方法检测78例肝细胞癌及21例正常肝组织中pAkt、Skp2和P27kip1蛋白的表达,分析其与肝细胞癌临床病理特征及预后的关系。结果肝细胞癌组织中pAkt及Skp2蛋白的高表达率分别为43.6%和47.4%,显著高于正常肝组织($P<0.05$),P27kip1蛋白的阳性表达率为34.6%,显著低于正常肝组织($P<0.05$)。pAkt蛋白的表达与肿瘤直径、侵犯周围脏器或淋巴结转移及TNM分期有关($P<0.05$);Skp2蛋白的表达与肿瘤直径、门静脉癌栓及TNM分期有关($P<0.05$);P27kip1蛋白的表达与肿瘤直径、数目及TNM分期有关($P<0.05$)。Skp2与pAkt蛋白表达呈正相关($r=0.356$, $P=0.001$),与P27kip1蛋白表达呈负相关($r=-0.313$, $P=0.005$)。pAkt、Skp2蛋白高表达患者术后生存率明显低于低表达患者($P=0.000$),P27kip1蛋白的表达与患者术后生存率无关。Cox模型多因素分析结果显示,TNM分期、pAkt及Skp2蛋白的表达是影响肝细胞癌预后的独立因素。结论肝细胞癌组织中pAkt、Skp2及P27kip1蛋白的表达失调与肝细胞癌的恶性生物学行为密切相关,pAkt及Skp2可以作为评价患者预后的指标。

关键词: 癌 肝细胞 免疫组织化学 pAkt S期激酶相关蛋白2 P27kip1

Abstract: Objective To explore the expression and clinical significance of pAkt, Skp2 and P27kip1 in hepatocellular carcinoma (HCC) patients. Methods The expression levels of pAkt, Skp2 and P27kip1 in 78 HCC and 21 normal liver tissues were evaluated by immunohistochemistry. The relationship between these molecules and clinicopathological variables was further analyzed. Results The positive expression rates of pAkt and Skp2 in HCC were 43.6% and 47.4% respectively, and significantly higher than those in normal liver tissue ($P<0.05$). P27kip1 was expressed in 34.6% samples of HCC, and significantly lower than that in normal liver tissue ($P<0.05$). pAkt expression level was correlated with tumor size, invasion (or lymph node metastasis) and TNM stage. Skp2 expression level was correlated with tumor size, cancer-embolus in portal vein and TNM stage. P27kip1 expression level was correlated with tumor size, tumor number and TNM stage. Moreover, There was a positive correlation between Skp2 and pAkt expression level ($r=0.356$, $P=0.001$), while an inverse correlation between Skp2 and P27kip1 expression level ($r=-0.313$, $P=0.005$). HCC patients with high pAkt and Skp2 expression could survive much longer than those with low pAkt and Skp2 expression ($P=0.000$, Log-rank test). No significant difference of survival time was observed within different P27kip1 expression groups ($P>0.05$, Log-rank test). A multivariate analysis based on Cox regression model demonstrated that TNM stage, pAkt and Skp2 expression might be independent factors affecting the survival time of HCC patients. Conclusion The expression levels of pAkt, Skp2 and P27kip1 were closely correlated to the malignant biological behavior of HCC. Skp2 and pAkt were potential biomarkers evaluate the prognosis of HCC.

Key words: Hepatocellular carcinoma Immunohistochemistry pAkt Skp2 P27kip1

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