

LGR5与肝癌上皮间质转化的关系

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Title: The relationship between LGR5 and epithelial-mesenchymal transition in hepatocellular carcinoma

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摘要: 目的: 研究LGR5与原发性肝癌侵袭转移过程中上皮间质转化(epithelial-mesenchymal transition, EMT)间的关系。方法: 采用免疫组织化学的方法(SP法), 分别检测20例原发性肝癌组织、20例癌旁组织及14例正常肝组织中LGR5、E-钙黏蛋白(E-CAD)及N-钙黏蛋白(N-CAD)的表达情况。并分析它们与原发性肝癌临床病理参数的关系。结果: LGR5、E-CAD、N-CAD的表达: 在20例肝癌组织中, LGR5、E-CAD、N-CAD的阳性表达分别为15例(75%)、7例(35%)及16例(80%)。在20例癌旁组织中, 阳性表达分别为11例(55%)、11例(55%)及11例(55%)。在14例正常肝组织中, 阳性表达分别为4例(29%)、11例(79%)及4例(29%)。统计分析表明, LGR5在肝癌中的阳性表达率均明显高于癌旁及正常组织($P<0.05$)。而E-CAD在肝癌中的阳性表达率则明显低于癌旁及正常组织中的阳性表达($P<0.05$)。同时, N-CAD在肝癌中的阳性表达率明显高于癌旁及正常组织($P<0.05$)。LGR5、E-CAD、N-CAD在原发性肝癌中的表达与临床病理参数的关系: LGR5的表达与患者术前肝功能有关($P<0.05$), 而与患者的年龄、性别、肿瘤大小、肿瘤TNM分期、分级、HBV、肝硬化、甲胎蛋白(AFP)等差异无统计学意义; 而E-CAD、N-CAD的表达与术前肝功能、年龄、性别、肿瘤大小、肿瘤TNM分期、HBV、肝硬化、甲胎蛋白差异均无统计学意义($P>0.05$)。相关性分析结果: E-CAD、N-CAD表达呈负相关($r=-0.999$, $P<0.05$)。而LGR5与E-CAD表达呈负相关($r=-1.00$, $P<0.05$), 与N-CAD的表达呈正相关($r=0.998$, $P<0.05$)。结论: 原发性肝癌中存在明显的上皮间质转化现象。LGR5与原发性肝癌侵袭转移过程中上皮间质转化有关。

Abstract: Objective: To research the relationships between Orphan G-protein-coupled Receptor (LGR5) with epithelial-mesenchymal transition (EMT) of primary liver carcinoma. Methods: Test the expression of LGR5, E-CAD and N-CAD in 20 primary liver carcinoma tissues, 20 paracancerous tissues of primary liver carcinoma and 14 normal liver tissues by immunohistochemistry method, and analyze the expressions of them with some clinic-pathological parameters. Results: In 20 primary liver carcinoma specimens, the positive expressions of LGR5, E-CAD and N-CAD had 15 cases (75%), 7 cases (35%) and 16 cases (80%) respectively. In 20 paracancerous tissues of primary liver carcinoma specimens, the positive expressions had 11 cases (55%), 11 cases (55%) and 11 cases (55%). While in all 14 cases of normal liver tissues, the positive expressions had 4 cases (29%), 11 cases (79%), 4 cases (29%) respectively. Statistical analysis showed that the positive expression rate of LGR5 in primary liver carcinoma were obviously higher than that in paracancer and normal liver ($P<0.05$). But the positive expression rate of E-CAD in primary liver carcinoma was apparently lower than in paracancer and normal liver ($P<0.05$). While the positive expression rate of N-CAD in primary liver carcinoma was apparently higher than in paracancer and normal liver ($P<0.05$). The expression of LGR5 was correlated with liver function ($P<0.05$), but no statistically significant with age, gender, tumor size, tumor TNM stages, tumor grade, HBV and liver cirrhosis, serum alpha fetoprotein. But there was no statistical significance between the expression of E-CAD,

N-CAD with the function of liver, age, gender, tumor size, tumor TNM stages, HBV and liver cirrhosis serum alpha fetoprotein ($P>0.05$).The correlation analysis revealed that the expression of E-CAD had negative relationship to N-CAD ($r=-0.999$, $P<0.05$).The expression of LGR5 had negative relationship to E-CAD ($r=-1.00$, $P<0.05$), but positive relationship to N-CAD ($r=0.998$, $P<0.05$).Conclusion: Primary liver carcinoma occurs obviously the phenomenon of EMT.LGR5 is related to EMT of invasion and metastasis in primary liver carcinoma.

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