

HIF-1 α 和VEGF 的表达与肝细胞癌侵袭转移的关系

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Correlation of HIF-1 α and VEGF Expression with Invasion and Metastasis of Hepatocellular Carcinoma

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摘要 目的 探讨HIF-1 α 、VEGF的蛋白表达与肝细胞癌血管新生及侵袭转移特性之间的关系。方法 采用免疫组化SP法检测肝细胞癌、癌旁肝组织和正常肝组织中HIF-1 α 、VEGF的表达,并计数MVD值。结果 HIF-1 α 在肝细胞癌中的阳性表达率为50.0%,显著高于癌旁(16.1%)和正常肝组织的(8.3%)($P=0.001$); VEGF在肝细胞癌中的阳性表达率为81%,显著高于癌旁(59.4%)和正常肝组织(41.7%)($P=0.044$); 肝细胞癌组织中MVD值显著高于癌旁和正常肝组织($P=0.001$)。HIF-1 α 蛋白表达与有无门静脉或胆管癌栓及肿瘤分化程度有关($P<0.05$); VEGF蛋白的表达与有无肝内或淋巴结转移及有无门静脉或胆管癌栓有关($P<0.05$)。HIF-1 α 与VEGF表达有关($P=0.005$); HIF-1 α 与VEGF共同表达阳性组的MVD值显著高于共同表达阴性组MVD值($P=0.001$)。结论 HIF-1 α 可能通过调节VEGF的表达促进肝细胞癌血管新生,从而促使肝细胞癌侵袭转移。

关键词: 肝细胞癌 HIF-1 α VEGF MVD

Abstract: Objective To test the expressions of HIF-1 α , VEGF and counting microvascular density (MVD) in HCCs, paratumor tissues and normal liver tissues and determine the relationship between the former three factors and neoangiogenesis in HCCs. Methods SP method of Immunohistochemistry was used to detect the expression of HIF-1 α , VEGF and MVD in HCCs, paratumor tissues and normal liver tissues. Results Statistical analysis revealed that HIF-1 α -positive and VEGF-positive stain rate were higher in tumor tissue than that in tumor-surrounding tissue and in normal liver tissue ($P < 0.05$). Numerical value of MVD was significantly higher in tumor tissue than that in tumor-surrounding tissue and normal liver tissue ($P = 0.001$). HIF-1 α expression is significantly higher in HCC with portal vein or biliary duct tumor thrombosis than that in without. In poorly differentiated HCC HIF-1 α -positive stain expression is significantly higher than that moderately and well differentiated HCC ($P < 0.05$). VEGF expression is significantly higher in HCC with intrahepatic or lymphatic metastasis, and portal vein or biliary duct tumor thrombosis than that in without respectively ($P < 0.05$). In tumor tissue samples with both HIF-1 α -positive and VEGF-positive stain, the value of MVD is higher than that in both HIF-1 α -negative and VEGF-negative stain tissue samples ($P = 0.001$). Conclusion HIF-1 α could accelerate angiogenesis by up-regulating VEGF expression, and then accelerate invasion and metastasis of HCC.

Key words: Hepatocellular Carcinoma HIF-1 α VEGF MVD

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