



肝细胞癌中 β -arrestin1、MMP-9表达的相关性

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Correlative Expressions of β -arrestin1 and MMP-9 in Hepatocellular Carcinoma Tissues

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- 摘要
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摘要 目的探讨 β -arrestin1和MMP-9在肝细胞癌组织中的相关表达及意义。方法收集不同临床分期与病理分级的肝细胞癌组织标本35例, 其中II期23例, III期12例, 同时收集这些病人的癌旁组织作为对照, 以非肝癌患者的肝组织15例为正常对照。采用实时荧光定量RT-PCR法检测 β -arrestin1 mRNA的表达, 并用Western blot方法检测 β -arrestin1蛋白水平变化, ELISA方法检测MMP-9蛋白浓度。结果正常肝、肝细胞癌和癌旁组织中均有 β -arrestin1 mRNA和蛋白的表达。与正常和癌旁组相比, 不同分期的肝细胞癌组织中的 β -arrestin1 mRNA和蛋白表达水平均明显升高 ($P < 0.05$), 且其表达水平随临床分期增加而增加; 其表达水平与MMP-9的浓度密切相关 ($P < 0.05$)。结论肝细胞癌组织中 β -arrestin1和MMP-9呈现明显相关表达, 这对肝癌血管生成和转移可能具有重要作用。

关键词: 肝细胞癌 β -arrestin1 MMP-9

Abstract: objective To investigate the expressions and significance of β -arrestin1 and matrix metalloproteinase-9 (MMP-9) in hepatocellular carcinoma patients. Methods The tumor tissues and tumor adjacent tissues were simultaneously collected from 35 patients in operation with diagnosed hepatocellular carcinoma, which included 23 cases of phase II and 12 cases of phase III. And 15 non-tumor tissues were enrolled in this study as the normal control (NL group). Then the mRNA and protein expression of β -arrestin1 were detected by using quantitative real time RT-PCR and Western blot respectively. The protein concentration of MMP-9 of these tissues was measured by ELISA. Results All the mRNA and protein expressions of β -arrestin1 were measured in the samples of normal liver tissues, HCC tumor and its adjacent tissues. Compared with the normal group and tumor adjacent group, the mRNA and protein expressions of β -arrestin1 in HCC group of different clinical phases increased significantly ($p < 0.05$). The expression level was increased with the advanced phases. The concentration of MMP-9, increased in HCC tumor tissues, was positively correlated with β -arrestin1 expression ($p < 0.05$). Conclusion The expressions of β -arrestin1 significantly up-regulated in HCC tumor tissues, which was positively related to the concentration of MMP-9, indicating that they might be related to progression of hepatocellular carcinoma and to be the diagnosis and therapy target of HCC.

Key words: Hepatocellular Carcinoma β -arrestin1 Matrix Metalloproteinase-9

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