

论著

肺癌组织中MRP-1和FAK蛋白的表达及其临床意义的探讨

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摘要 背景与目的: 肿瘤细胞发生浸润转移的首要基础是细胞移动性增强, 此过程受到极其复杂的多基因调控, 移动相关蛋白-1(Motility-related-protein-1, MRP-1)是一种能抑制细胞移动能力的蛋白, 它表达的下调可能是肿瘤细胞获得浸润转移恶性表型的关键, 但其调控机制仍不清楚。局部粘着斑激酶(Focal adhesion kinase, FAK)是整合素介导的信号转导过程中的中心分子, 它与细胞癌变、分化、浸润相关。但二者在肺癌中的表达情况, 与临床病理学参数之间的关系及二者之间的相关性如何国内外报道尚不一致。本文拟通过分析MRP-1和FAK两种蛋白在肺癌组织中的表达及其与临床病理学参数之间的关系, 探讨二者在肺癌发生发展、浸润转移中的作用。材料与方法: 采用免疫组化链霉亲和素过氧化物酶法(Streptavidin peroxidase, SP)检测10例正常肺组织、89例肺癌组织和12例淋巴结转移肺癌组织中MRP-1和FAK蛋白的表达。结果: MRP-1在正常肺组织中阳性表达率为100.0%, 在肺癌组织中为41.6%, 而在转移癌组织中仅为8.3%, 显著下调; FAK蛋白在正常肺组织中仅微弱表达, 阳性率为10.0%, 在肺癌组织中阳性表达率为48.3%, 而在转移癌组织中为83.3%, 过度表达, 3组之间差异有统计学意义。MRP-1和FAK蛋白呈显著负相关。在肺原发癌组织中MRP-1的表达与患者年龄、性别、肿瘤大体类型均无关, 而与肿瘤的组织类型、分化程度、临床分期、以及是否伴有淋巴结转移密切相关; FAK的表达与患者年龄、性别、肿瘤大体类型及组织学类型均无关, 而与肿瘤的分化程度、临床分期、以及是否伴有淋巴结转移密切相关。结论: MRP-1、FAK的异常表达可能参与了肺癌的浸润转移, 检测这两项指标对预测肺癌的进展有一定的参考价值。

关键词 [移动相关蛋白-1](#); [局部粘着斑激酶](#); [肺癌](#); [蛋白表达](#); [浸润](#); [转移](#)

The Expression of MRP-1 and FAK Protein in Lung Cancer Tissues

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Abstract BACKGROUND & AIM: Increased motility is the basis of tumor cell invasion and metastasis. The complicated process modulated by multiple genes. The expression of motility-related-protein-1(MRP-1), a cell-motility-inhibiting protein was reported to be down-regulated and gave rise to the malignant phenotype associated with invasion and metastasis. But the mechanism was unclear. Focal adhesion kinase, as a key component of integrin-stimulated signal transduction pathways, was also reported as a kinase associated with malignant change of cell and differentiation and invasion. But the reports about the expression of these two proteins in lung cancer and the relationship with clinical parameters and their correlation between each other were inconsistent. We hope to explore the role of MRP-1 and FAK proteins in occurrence, development, invasion and metastasis of lung cancer and their value in predicting its prognosis. The expression levels of MRP-1 and FAK proteins in lung cancer, their relationship with each other and with some clinicopathological parameters. MATERIAL AND METHODS: 89 patients with lung cancer and 10 cases of normal lung tissue and 12 with metastatic cancer were analyzed for their MRP-1 and FAK protein levels using immunobiochemical streptavidin peroxidase method (SP). The χ^2 test and Spearman analysis were used. RESULTS: The positive rate of MRP-1 was 100.0% in normal lung tissue, 41.6% in lung cancer and 8.3% in metastatic cancer. The difference was significant($P<0.05$). The expression of FAK was opposite. The

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positive rate of FAK was weak in normal tissue and elevated to 48.3% in cancer tissue and to 83.3% in metastatic cancer. The difference of the above three groups were significant($P<0.05$). There was a negative relationship between MRP-1 and FAK. The expression of MRP-1 protein in lung cancers had no relationship with age or gender of the patients and the macroscopic type of cancer. However it was significantly correlated with histological type, degree of tumor differentiation, clinical stage and whether there was lymphoid metastasis($P<0.05$). The expression of FAK protein in lung cancer had no relationship with age or gender of the patients and the macroscopic type and histological type of cancer($P<0.05$). But it was significantly correlated with the degree of tumor differentiation, clinical stage and lymphoid metastasis. CONCLUSION: The abnormal expression of MRP-1 and FAK proteins may participate in the invasion and metastasis of lung cancer. Monitoring the expression levels of MRP-1 and FAK proteins probably predict the Malignant progression of lung cancer.

Keywords [motility-related-protein-1](#) [focal adhesion kinase](#) [lung cancer](#) [protein expression](#) [invasion](#) [metastasis](#)

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