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Expression of ezrin in human lung carcinoma and its clinicopathologic significance

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摘要

Background and objective Metastasis is the main cause of cancer related mortality, and identification of genes involved in tumor metastasis is important for effective therapies. The membrane cytoskeletal crosslinker participated in several functions including cell adhersion, motility and cell survival, and there is increasing evidence that it regulates tumor progression. However, the role played by ezrin in lung cancer metastasis has not been clearly delineated. The aims of this study are to investigate the ezrin expression pattern in human lung carcinoma and the correlation with clinicopathologic characteristics. Methods Ezrin expression was detected by two- step immunohistochemical staining technique in tumor tissues from 75 lung cancer cases and in normal lung tissues from 16 cases with benign disease and analyzed by the lung cancer clinicopathologic characteristics.The gene and protein level expression of Ezrin in lung cancer cell lines was also detected by Confocal Laser Scanning Microscope(CLSM)and RT-PCR. Results The positive incidence of ezrin expression (77.3%) was significantly lower in lung cancer tissues than that in normal tissues (100%) ($P<0.05$) and the down-regulated of ezrin expression was significantly correlated with lymph node metastasis and distant metastasis ($P<0.05$) and was not correlated with gender, age, tumor size, pathological type, the degree of differentiation of tissue and clinical stage.Otherwise, the subcellular redistribution of ezrin from cell membrane to cell plasma was significantly correlated with lymph node metastasis ($P<0.05$), in consistance with in vitro experimental result. High metastasis cell line BE1 had the lowest expression of ezrin under CLSM, similar to RT-PCR, and ezrin was mainly located in cell plasma under CLSM. Conclusion Ezrin expression is down-regulated in lung cancer tissue and lung cancer cell line and the locational change from cell membrane to cell plasma may be associated with the oncogenesis and development of lung cancer.

关键词

Lung neoplasms;Ezrin; Neoplasm metastasis

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