

Expression and clinical significance of caspase -3, survivin and k-ras in non-small cell lung cancer

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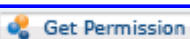
摘要

Background and objective The prognosis of non-small cell lung cancer (NSCLC) is related to many factors. Apoptosis-related genes play an important role in occurrence and development of tumors. The significance of apoptosis as a biological and prognostic factor has not been clearly established in NSCLC. The aim of the study is to evaluate the relationship between expression of caspase-3, survivin, k-ras protein and the relationship between the expression of above proteins in NSCLC and theirs clinicopathological characteristics and prognostic significance and their potential relevance existing in NSCLC. **Methods** Caspase-3, survivin, k-ras protein expression were detected in NSCLC tissues and normal lung tissues adjacent to carcinomas Archival formalin fixed, paraffin embedded specimens from 91 patients who had undergone radical surgery by streptavidin-peroxidase immunohistochemistry. **Results** The positive rate of caspase-3 was significantly lower in NSCLC than in normal lung tissues adjacent to carcinomas; The positive rate of survivin, k-ras was significantly higher in NSCLC than in normal lung tissues adjacent to carcinomas ($P < 0.05$). The positive rate of caspase-3 was related to the age, histological type, TNM stage, lymph node metastasis and differentiation ($P < 0.05$), but not related to tumor size, smoke ($P > 0.05$); the positive rate of survivin was related to the age, TNM stage, lymph node metastasis and differentiation ($P < 0.05$), but not related to histologic type, tumor size, smoke ($P > 0.05$); the positive rate of k-ras was related to the histologic type and smoke ($P < 0.05$), but not related to the age, TNM stage, lymph node metastasis, differentiation, tumor size ($P > 0.05$). Expression of caspase-3 was negatively correlated with survivin ($r = -0.662$, $P < 0.001$). The multivariate analysis with Cox hazard model, survivin, caspase-3, histologic type, differentiation, TNM stage could be indicators for the prognosis of patients with NSCLC ($P < 0.05$). **Conclusion** There are over-expressions of survivin, k-ras protein in NSCLC and both are significantly higher than those in the normal tissue. However, caspase-3 presents the reverse result; Higher expression of survivin, lower expression of caspase-3 might be the adverse prognostic index for survival in resected NSCLC patients which indicate they might act synergistically in apoptosis of NSCLC; the relationship between the expression of k-ras and the prognosis of NSCLC is still not clear.






关键词

Lung neoplasms; Apoptosis; Immunohistochemistry; Prognosis



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