

非小细胞肺癌组织中caspase-3 及其底物PARP、DFF45 蛋白表达的意义

蒋 晖¹,朱润庆^{2*},陈洪雷²

1. 430079 武汉,湖北省肿瘤医院肿瘤内科(武汉大学医学院研究生);2. 武汉大学医学院病理学教研室(* 通讯作者)

Caspase-3 , Its Substrates PARP and DFF45 Proteins Expression and Their Significance in Human Non-small Cell Lung Cancer

JIANG Hui¹ ,ZHU Run-qing^{2*} , CHEN Hong-lei²

1. Department of Chemotherapy , Hubei Cancer Hospital , Wuhan 430079 , China; 2. Department of Pathology , Medical College , Wuhan University ,Wuhan 430071 , China(* Pondering Author)

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摘要

目的 探讨caspase-3及其底物多聚ADP-核糖聚合酶(PARP)、DNA裂解因子(DFF45)在非小细胞肺癌(NSCLC)组织的表达及与临床病理的关系. 方法 采用第二代免疫组化Elivision法和Western blot法检测87例NSCLC原发灶中caspase-3、PARP、DFF45蛋白的表达. 结果 在87例肺癌原发灶中caspase-3、PARP、DFF45 3种蛋白表达阳性率分别为: 66.67%,33.33%,29.88%.caspase-3 和DFF45蛋白的阳性表达率与组织学类型无关(P=0.05),而与分化程度和淋巴结转移均显著相关(P<0.05);但PARP仅与淋巴结转移显著相关(P=0.014).87例NSCLC组织中,caspase-3的表达与PARP呈显著负相关(P=0.000);caspase-3与DFF45的表达之间具有显著正相关性(P=0.020). 结论 caspase-3通过降低其底物PARP的表达从而促进肿瘤细胞的凋亡,明显地抑制了肺癌的侵袭和转移.caspase-3和DFF45蛋白的低表达,通过使肺癌细胞更耐受凋亡而促进了肺癌细胞的生长和淋巴结的转移.

关键词: 肺肿瘤 caspase-3 PARP DFF45 免疫组织化学 Western blot

Abstract: Objective The current study was designed to investigate the relationship between the expression of caspase-3 , PARP and DFF45 proteins and the clinicalpathological characteristic of non-small cell lung cancer (NSCLC) . Methods Levels of caspase-3 , PARP and DFF45 protein in 87 patient s with NSCLC were detected by the second generation immunohistochemical Elivision methods and Western blot . Results In 87 NSCLC patients. The rates of caspase-3 , PARP and DFF45 proteins positive was 66. 67 % , 33. 33 % , 29. 88 % ,respectively. The positive expression of caspase23 and DFF45 protein were not associated with the pathological types (P > 0. 05) , but was highly associated with cellular differentiation degree and lymph node metastasis (P < 0. 05) . But PARP expression was only associated with lymph node metastasis (P = 0. 014) . In 87 NSCLC , a negative correlation were present between caspase-3 and PARP protein expression (P = 0. 000) , a positive correlation was present between caspase23 and DFF45 protein expression (P = 0. 020) . Conclusion Caspase-3 obviously inhibit s invasion and metastasis of pulmonary carcinoma by extensively degrading target proteins such as PARP. The down-regulation of caspase-3 and DFF45 may cont ribute to tumor growth and lymph node metastasis in pulmonary carcinoma by making the pulmonary carcinoma cell more resistant to apoptosis.

Key words: Lung neoplasms caspase-3 PARP DFF45 Immunohistochemist ry Western blot

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