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论著

KAI1基因转染ATRA诱导对小细胞肺癌细胞株恶性特征的抑制作用

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摘要 背景与目的： 探讨新抑癌基因KAI1与全反式维甲酸(all－trans－retinoic acid,ATRA)对小细胞肺癌NCI－H446细胞株抑制增殖和诱导分化的作用。材料与方法： 用脂质体介导的基因转染方法，借助质粒表达载体(PCMV－NEO－XhoI),将抑癌基因KAI1转入小细胞肺癌NCI－H446细胞中，经G418筛选，获得稳定表达的细胞克隆。用10－6 mol/L ATRA作用于转染及未转染KAI1基因的小细胞肺癌NCI－H446细胞株,集落形成率检测细胞体外增殖能力，流式细胞仪进行细胞周期和凋亡分析,间接免疫荧光染色结合流式细胞仪检测转染前后细胞CD82蛋白的表达。免疫组化测定MYC的表达，放射免疫测定LN(层连蛋白)表达。结果： ATRA处理脂质体－KAI1基因转染的小细胞肺癌细胞CD82表达降低，细胞增殖能力下降，凋亡增加，更多的细胞被阻止于G1/G0期，MYC及LN表达下降。结论： 抑癌基因KAI1与ATRA对抑制小细胞肺癌NCI－H446细胞株的增殖和促分化有协同作用。

关键词 KAI1抑癌基因；全反式维甲酸；小细胞肺癌

The Inhibition of Suppressor Gene KAI1 and ATRA on the Small Lung Cancer Cell

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Abstract BACKGROUND & AIM: To investigate the inhibition of suppressor gene KAI1 in the process of all－trans－retinoic acid on the NCI－H446 small lung cancer cell. MATERIAL AND METHODS:To establish NCI－H446 cell line with stably expressing tumor suppressor gene KAI1,the gene KAI1 was transfected into NCI－H446 cell by the Vector ector(PCMV－NEO－XhoI).We obtained clone cells after selected by G418.After that,the cells were treated with ATRA at the dosage of 10－6 mol/L.The proliferation and differentiation of the cells were examined by the methods of the clone formation and cytometry analysis. The CD82 protein expression was detected by cytometry analysis,The change of MYC was tested by immunohistochemical staining and the expression of LN was tested by radioimmunoassay. RESULTS: The CD82 protein expression was up－regulated in the cells treated by ATRA.There were more cells arrested in G1/G0 phase.The expressions of MYC and LN were descended. CONCLUSION:The suppressor gene KAI1 cooperate with ATRA in inhibiting proliferation and promoting differentiation of the Small Cell Lung cell.

Keywords suppressor gene KAI1； all－trans－retinoicacid； small cell lung cancer

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