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论著

缺氧诱导对人非小细胞肺癌A549凋亡及Survivin基因表达的影响

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摘要 背景与目的： 观察缺氧诱导对非小细胞肺癌细胞株A549凋亡及其Survivin基因表达变化的影响。 材料与方法： 利用CoCl2构建缺氧诱导模型，采用MTT法观察不同浓度CoCl2(0、50、100、200、400 μmol/L)作用A549细胞以及相同浓度CoCl2 (200 μmol/L)作用不同时间(4、12、24 h)后，A549细胞增殖的变化，实验同时设对照组；荧光显微镜观察细胞核的形态变化； RT-PCR法检测A549细胞Survivin mRNA表达水平。 结果： CoCl2作用A549细胞后，其生长抑制率呈现一定的时间、剂量依赖性，且随着CoCl2浓度的增加细胞的Survivin mRNA表达水平呈下降趋势。 结论： 缺氧能抑制A549细胞增殖，并诱导其凋亡；Survivin基因表达水平的下降与缺氧诱导的细胞凋亡有关。

关键词 缺氧； 非小细胞肺癌； 凋亡； Survivin

Effect of Hypoxia on Inducing Apoptosis in Non-small Cell Lung Cancer A549 and Expression of Survivin Gene

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Abstract BACKGROUND AND AIM: To explore the effect of hypoxia on cell growth and apoptosis of non-small cell lung cancer cell line and the change in expression of Survivin gene. MATERIALS AND METHODS: The hypoxia model was set up by using cobalt chloride (CoCl2). MTT assay was used to detect the growth inhibition of A549 in the presence of CoCl2 .Cell morphological transformation was examined with fluorescent microscope. The change of Survivin gene expression was measured by RT-PCR. RESULTS: The growth inhibition rate of A549 effected by CoCl2 was increased in a concentration and time-dependent manner. After exposure to CoCl2 at high concentrations, the Survivin mRNA expression in A549 was down-regulated. CONCLUSION: Hypoxia could inhibit the proliferation of A549 cell and induce apoptosis. The mechanism may be related to the down-regulation of Survivin gene expression.

Keywords hypoxia non-small cell lung cancer apoptosis Survivin

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