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论著

甲基丙烯酸环氧丙酯致人支气管上皮恶性转化细胞DNA修复基因点突变的研究

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摘要 背景与目的： 研究甲基丙烯酸环氧丙酯(glycidyl methacrylate，GMA)致人支气管上皮(16HBE)恶性转化细胞DNA修复基因点突变情况。 材料与方法： 采用聚合酶链式反应-限制性片段长度多态性方法(PCR-RFLP)检测GMA致16HBE恶性转化细胞DNA修复基因hMSH2、XRCC1、XPD及XRCC3的重要位点的突变情况，并以DNA测序方法加以验证。 结果： 16HBE细胞hMSH2 IVS12-6(T>C)位点发生了突变，由野生基因型TT型突变为TC基因型，其它位点未检测到突变。DNA测序结果相符。 结论： 错配修复基因hMSH2 IVS12-6(T>C)位点的突变可能为GMA诱导人支气管上皮细胞恶性转化过程中的重要起始分子事件之一。

关键词 甲基丙烯酸环氧丙酯； DNA修复基因； 点突变； 恶性转化

Point Mutation of DNA Repair Genes of Human Bronchial Epithelial Cells Malignant Transformation Induced by Glycidyl Methacrylate

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Abstract BACKGROUND AND AIM: To examine the mutation of DNA repair genes of human bronchial epithelial cells malignant transformation induced by glycidyl methacrylate. MATERIALS AND METHODS: To evaluate the mutation of DNA repair genes XRCC1, hMSH2, XPD and XRCC3 by polymerase chain reaction-restriction fragments length polymorphism(PCR-RFLP), and the result was verified by the DNA sequencing. RESULTS: The mutation of hMSH2 IVS12-6 (T>C) was observed, while mutations in the other genes were not found.The results from PCR-RFLP and DNA sequencing were consistent. CONCLUSION:The mutation of DNA repair genes hMSH2 IVS12-6 (T>C)might be important and an initation step during the malignant transformation of human bronchial epithelial cells induced by glycidyl methacrylate.

Keywords glycidyl methacrylate； DNA repair genes； point mutation； mglignant transformation

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