

论著

塞替派诱发人支气管上皮恶性转化成瘤细胞的染色体畸变

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摘要 目的 旨在了解转化细胞在成瘤过程中的细胞遗传学改变。方法 运用染色体G显带技术研究永生化人支气管上皮细胞 (BEAS-2B) 恶性转化后的裸小鼠接种成瘤细胞 (BEAS-TT) 的染色体畸变。结果 瘤细胞在传代早期基本以近二倍体细胞为主, 随着细胞代龄的增加, 各肿瘤细胞系的细胞染色体数目变化趋势不同, 其中BEAS-TTa逐渐形成以多倍体细胞为主的细胞群, 而BEAS-TTb, BEAS-TTc则以近二倍体细胞为主份额细胞。核型分析表明3个瘤细胞系的核型与BEAS-TE不同, 在其基础上有新的染色体 (14号染色体) 丢失和标记染色体 (M4) 的增加。结论 细胞染色体数目不稳定, 14号染色体的丢失和M4染色体的增加, 可能与BEAS-TE的裸小鼠成瘤性有关。

关键词 塞替派 上皮细胞, 支气管, 人 转化, 恶性 染色体

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Chromosome aberration of tumorigenic human bronchial epithelial cells induced by thiotepa

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Abstract

AIM To analyze cytogenetical changes in transformed cells in tumorigenesis. **METHODS** G-banding technique was used to analyze the karyotype of BEAS-TTs. BEAS-TTa, BEAS-TTb and BEAS-TTc are tumor cells derived from subcutaneously implanted malignantly transformed immortalized non-tumorigenic human bronchial epithelial cells by thiotepa (BEAS-TE) in nude mice. **RESULTS** The modal chromosomal number of three tumor cells was near diploid at passage 7, 6, 6 for tumor cell BEAS-TTa, BEAS-TTb and BEAS-TTc, respectively. Proceeding with subcultures, there was a shift for BEAS-TTa from near diploid toward poly-ploid at passage 27, the proportion of poly-ploid cells was up to 96%, while the BEAS-TTb and BEAS-TTc were maintained near diploid. On the chromosomal basis of BEAS-2B and BEAS-TE, BEAS-TT continued to lose the chromosome 14 and showed a new abnormal chromosome, the marker 4. **CONCLUSION** The progressive chromosomal changes that occurred during tumorigenesis process in nude mice was significantly related to BEAS-TE acquisition of strong tumorigenicity in nude mice.

Key words [thiotepa](#) [epithelial cells](#) [bronchial](#) [human](#) [transformation](#) [malignant](#) [chromosome](#)

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