

研究报告

BGC823和A549细胞染色体着丝粒点变异

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摘要 癌细胞的一个显著细胞遗传学特征是染色体非整倍性畸变,但其畸变的机制至今仍然不清。因此,本文从与染色体分离直接相关的着丝粒点变异的角度,采用Cd-NOR同步银染技术对BGC823细胞和A549细胞染色体Cd变异进行了分析,以探索癌细胞非整倍性畸变的发生机制。结果表明:(1)BGC823细胞染色体Cd缺失率为1.75%、迟滞复制率为0.28%、小Cd率为1.82%、Cd-NOR融合率为0.95%,与正常人胚胎绒毛细胞染色体Cd相比较,BGC823细胞染色体Cd缺失和Cd-NOR融合显著升高($P<0.0125$),而Cd迟滞复制和小Cd两者没有显著性差异。(2)A549细胞染色体Cd缺失率为2.73%、迟滞复制率为0.94%、小Cd率为1.73%、Cd-NOR融合率为0.71%,与正常人胚胎绒毛细胞染色体Cd相比较,A549细胞染色体Cd缺失和Cd迟滞复制显著升高($P<0.0125$),而小Cd和Cd-NOR融合两者没有显著性差异。提示BGC823细胞染色体非整倍性畸变可能主要源于Cd缺失和Cd-NOR融合,而A549细胞染色体非整倍性畸变可能主要源于Cd缺失和Cd迟滞复制。

关键词 [BGC823细胞](#); [A549细胞](#); [着丝粒点](#); [非整倍性畸变](#)

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Study on Centromeric Dots Variation of BGC823 Cells And A549 Cells

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Abstract

Chromosomal aneuploidy was a notable cytogenetic character in cancer cells. However, the mechanism of aneuploidy aberration is not clear up to the present. In order to probe into the mechanism of aneuploidy aberration of cancer cells, Centromeric dots (Cd) variation on chromosomes of BGC823 and A549 cells were studied by a simultaneous silver staining of both NOR and Cd from centromeric dots variation. The results showed that: (1) Frequency of Cd loss in BGC823 cells was 1.75%, Cd duplication laggard was 0.28%, small Cd was 1.82%, and Cd-NOR amalgamation was 0.95%. Compared to normal embryonic villi cells, frequencies of Cd loss and Cd-NOR amalgamation of BGC823 cells increased significantly ($P<0.0125$), and that frequencies of Cd replication laggard and small Cd showed no difference between BGC823 cells and normal embryonic villi cells. (2) Frequency of Cd loss in A549 cells was 2.73%, Cd duplication laggard was 0.49%, small Cd was 1.73%, and Cd-NOR amalgamation was 0.71%. Frequencies of Cd loss and Cd replication laggard in A549 cells were significantly higher than those of normal embryonic villi cells($P<0.0125$), moreover frequencies of Cd-NOR amalgamation and small Cd showed no difference between A549 cells and normal embryonic villi cells. We suggested that Cd loss and Cd-NOR amalgamation might be related with aneuploidy formation of BGC823 cells, and that Cd loss and Cd replication laggard might be related with aneuploidy formation of A549 cells.

Key words [BGC823 cells](#); [A549 cells](#); [Centromeric dots](#); [Aneuploidy aberration](#)

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