

论著

威猛(VM - 26) 诱导Hela 细胞G2 期停滞及染色体损伤分析

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摘要 本文采用抗癌药物VM - 26 诱导Hela 细胞周期G2 停滞,并应用染色体预凝集技术,显示其对染色体的影响。结果表明:5 μ g/mlVM - 26 作用24h 后,G2 期停滞细胞的染色体异常主要表现为染色体不规则凝缩和较严重的染色体断裂。由此提示;VM - 26 通过抑制拓扑异构酶II 活性,除可造成的DNA 和染色质纤维的断裂外,染色体骨架本身的断裂或也是引起细胞周期G2 期停滞和细胞死亡的原因之一。

关键词 [威猛](#) [抗癌药](#) [染色体预凝集](#) [染色体损伤](#)

INVESTIGATION OF THE HELA CELL CHROMOSOME DAMAGES IN G2 PHASE ARRESTED BY VM - 26

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Abstract It was unclear about the changes of chromosome condensation in G2 phase arrested by teniposide (VM - 26) . To that , the premature chromosome condensation (PCC) assay was used in the present study. Hela cells were cultured for 24h with 5 μ g/ml (7.75 μ M) VM - 26. The PCC were induced by mixing the Hela cells with mitotic CHL cells in 50 %polyethylene glycol. It was revealed that the chromosome aberrations in G2 phase yielded by the VM - 26 were mainly in two types ,the irregular condensation of the chromosomes and the type of chromosome breaks . Such aberrations might response for the DNA strand breaks , the chromatin breaks at the scaffold attachments and especially the breaks across the chromosome cores , due to the inhibition of the VM - 26 on topoisomerase II . Together with the results of the cloning efficiency by measuring the Hela cells after cultured with the VM - 26 ,it was thought that the chromosome damages might result in the cell death when they lost the DNA , or chromosome repair in G2 phase.

Keywords [teniposide](#) [antineoplastic agents](#) [premature chromosome condensation](#) [chromosome damage](#).

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