

عنوان مقاله:

Investigating the Effects of Morphine on Survival and Sensitivity to Cisplatin in Ovarian Cancer Cells

محل انتشار:

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خلاصه مقاله:

Morphine as an analgesic drug is used frequently in cancer patients. Contradictory results have been achieved from previous studies related to morphine effects in different concentrations. In current study, we examined the effect of clinical concentrations of morphine on A2780Cp cell line related to ovarian cancer. Moreover, its effect on the cytotoxicity of cisplatin was investigated. A2780CP cells were cultured in RPMI1640 medium and treated with clinical doses of morphine alone or in combination with cisplatin. The rate of cell proliferation was measured using MTT assay, morphological changes of nuclei were revealed by 4',6-diamidino-2-phenylindole (DAPI) staining, and expression of B-cell lymphoma 2 (Bcl-2) was measured using flowcytometry. MTT assay results showed clinical concentration of morphine had no effect on viability of A2780CP cells and toxicity of cisplatin. DAPI staining revealed no chromatin condensation in presence of morphine, and flowcytometry analysis showed that the expression of Bcl-2 in treated cells did not differ from control cells. In accordance with findings in other kinds of cancer, our results demonstrated that morphine did not interact with the function of cisplatin in ovarian cancer. This finding can be considered in clinical applications of morphine.

کلمات کلیدی:

morphine, ovarian cancer, apoptosis, cytotoxicity, cisplatin

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