

عنوان مقاله:

Cytotoxic effect of diferuloylmethane, a derivative of turmeric on different human glioblastoma cell lines

محل انتشار:

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خلاصه مقاله:

Glioblastoma is a fatal brain tumor, and the standard treatment for this cancer is the surgical removal of the tumor followed by chemotherapy with temozolomide and radiotherapy. Because chemotherapy has many side effects, the use of compounds extracted from natural herbs, due to fewer side effects, can be a good alternative or supplement to chemical drugs in cancer treatment. In this study, curcumin (diferuloylmethane), known as the main active ingredient of turmeric, was used to evaluate its cytotoxicity on four human glioblastoma cell lines (U373, U251, D54, and T98G). Among these cell lines, U373 was temozolomide resistance, and T98G was photodynamic treatment resistance. These cell lines were treated with increasing concentrations of diferuloylmethane. Survival percentage was assessed by MTT assay and the trypan blue staining method was used to evaluate the rate of cell death and confirm the results of the MTT assay. The results showed that diferuloylmethane has a cytotoxic effect on U251, D54, and T98G cell lines. This effect was higher in high concentrations of diferuloylmethane on U251 and D54 than on U373. Therefore, according to the results of the current study and further studies, curcumin (diferuloylmethane) can be considered an effective complementary treatment in the treatment of glioblastoma.

کلمات کلیدی:

Brain tumor, cancer, Curcuma longa, medicinal herbs, Supplement Medicine

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