

عنوان مقاله:

(An In vitro Study on Curcumin Delivery by Nano-Micelles for Esophageal Squamous Cell Carcinoma (KYSE-30

محل انتشار:

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خلاصه مقاله:

Background: The incidence of esophageal squamous cell carcinoma (ESCC) is increasing, causing catastrophic health burdens on communities. Curcumin has shown promise as a therapeutic agent in the treatment of colon, colorectal, pancreatic, and esophageal cancers but it has very poor bioavailability. The application of nano-carriers as drug delivery systems increases curcumin's bioavailability. Cyclin D1 is overexpressed in ESCC and curcumin may change its expression. **Methods:** In this study, the effect of SinaCurcumin®, a novel nano-micelle product containing 10 mg curcumin, on the growth of KYSE-30 cells and expression of cyclin D1, was investigated. Paclitaxel and Carboplatin served as reference drugs. **Results:** Nano-curcumin increased cell cytotoxicity, decreased IC50, and down-regulated of cyclin D1. However, treatment of cells with nano-curcumin might result in multidrug resistance. **Conclusions:** Nano-curcumin suppressed proliferation of KYSE-30 cells and expression of cyclin D1 although its use in combination with other chemotherapeutic agents requires further testing.

کلمات کلیدی:

Curcumin, Cyclin D1 gene, Drug resistance, KYSE-30 cells, Nano-Micelle

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