

عنوان مقاله:

Inhibitory and Apoptotic Effects of Mannan-Mitomycin C Conjugate Against Transitional Cell Carcinoma and Normal Mouse Fibroblasts

محل انتشار:

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خلاصه مقاله:

Background: Many studies have shown the anticancer effects of mannan and mitomycin C on tumor cells. In this regard, the aim of this study was to investigate the inhibitory and apoptotic effects of a mannan-mitomycin-C conjugate on transitional cell carcinoma (TCC) and normal mouse L929 fibroblast cells. Methods: The conjugate was synthesized according to previous studies. Both cell lines were cultured and the cytotoxic and apoptotic effects of the compounds in different concentrations were assessed using MTT and flow cytometry, respectively. The mannan-mitomycin C conjugate inhibited proliferation of both cell lines in time and concentration -dependent manners. Results: The conjugate inhibited TCC cell proliferation more than that of L929 cells. Mitomycin C alone inhibited proliferation of both cell lines in both time and concentration -dependent manners, and the effect was greater on L929 than on TCC cells. Mannan had a relatively low inhibitory effect on TCC and no significant effect on L929 cells. The percentage of apoptosis was greater in TCCs than in L929 cells at the highest concentration of conjugate. Mitomycin C induced apoptosis more extensively in L929 cells than in TCC cells at 25 and 400 $\mu\text{g/ml}$. The effect of mannan was similar on both cell lines. Conclusions: The mannan-mitomycin C conjugate has greater inhibitory and apoptotic effects on TCC .than on L929 cells and may inhibit TCC

کلمات کلیدی:

Apoptosis, Inhibitory Effect, Mannan-Mitomycin C Conjugate, MTT, TCC

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