

عنوان مقاله:

Digoxin Effectively Decreased Proliferation of LiverCancer Cell Line

محل انتشار:

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خلاصه مقاله:

Introduction: Cardiac glycosides such as digoxin have been considered recently as anticancer drugs based on some epidemiological evidences. However, controversial results have been obtained in several experimental and clinical researches following using them. Therefore, in the present study the antiproliferative properties of digoxin and its mechanisms on the liver cancer cell line have been studied. **Methods:** HepG2 cell line was cultured with different concentrations of digoxin for 6, 12, 24 and 48 hrs. The cell proliferation and viability were determined with MTT assay and trypan blue respectively. Also, hematoxylin staining was applied for nucleus morphology. **Results:** Cell proliferation and viability were decreased after treatment of the cells with digoxin in all groups compared to control. Colony formation decreased significantly in groups received digoxin. Also, nucleus morphology showed apoptotic changes in the cells after digoxin especially after 48 h. **Conclusions:** Digoxin decreases the cell proliferation and viability in liver cancer cell line. It is suggested that digoxin exerts its antitumor properties through antiproliferative properties and apoptosis. Since, digoxin is cytotoxic on the cells, finding the doses that have the minimum toxicity in the patients are necessary. In vivo studies in future help us to know more about the mechanisms involve in antitumoral effects of glycosides

کلمات کلیدی:

Apoptosis, Cancer, Digoxin, HepG2 cell line

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