

عنوان مقاله:

The Impact of Atorvastatin on Progress and Proliferation of MCFY Breast Cancer Cell Line

محل انتشار:

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خلاصه مقاله:

Background and Objective: Due to progressive increase in the number of cases of cancer, there is a need to develop anti-tumor compounds. Statins have a variety of different effects on proliferation, migration and survival of cells and have been suggested as proper candidates for the inhibition of this disease. The aim of this study was to determine cytotoxicity effects of Atorvastatin with variety of concentrations on the growth of MCFY cell line. Materials and Methods: MCFY cell lines were incubated in RPMI ۱۶۴۰ medium supplemented with ۱۰% FBS in a humidified incubator (۳۷ °C & ۵% CO₂). Different concentrations of Atorvastatin on quantitative proliferation of the cell line were determined by Dimethyl Thiazol Tetrazolium bromide (MTT) colorimetric assay and Trypan blue. The data were analyzed by SPSS version ۱۱.۵. The statistical analysis was performed by one-way ANOVA and Tukeychr('۳۹')s tests. Results: There was no statistical significance in cytotoxicity effect of ۱ μmol and ۰.۱ μmol of Atorvastatin on survival of MCFY cells after ۲۴, ۴۸ and ۷۲ hrs comparing to control cells. But in ۱۰ μmol concentration of Atorvastatin, a significant decrease was observed in survival of MCFY cells at the mentioned time points. Conclusion: Different concentrations of Atorvastatin have different effects on the growth of cultured cell lines. It seems that ۱۰μmol concentration decreases growth of cultured human breast cancer cells. Further animal studies on this subject are suggested.

کلمات کلیدی:

Keywords: Atorvastatin, MCFY, MTT assay, Tumor cell

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