Original Article

Cytotoxic Effect of Boswellia Serrata Hydroalcholic Extract on Human Cervical Carcinoma Epithelial Cell Line

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Abstract

Background and Objective: Cervical cancer is the second most common cancer in women. Boswellia serrata is a medicinal herb with anticancer, antibacterial, antiulcer, antifungal properties. Since the antitumor effect of this medicine has not been studied on cancer cell lines, we aimed to investigate the antitumor effect of Boswellia serrata on cervical cancer cell lines.

Material and Methods: To assess the anti-cancer effect of Boswellia serrata extract, HeLa cell lines were cultured , propagated and placed with different doses of Boswellia serrata (12.5,25, 50 and100 µg/ml) for 24,48and72 hours. After that, MTT test was used to determine the cellular toxicity of the extract.

Results: The results of the MTT test showed that this extract has dose-dependent and time-dependent anti cancer effect on Hela in that the highest effect was seen with 100 µg/ml of extract for 72 hrs. The half maximal inhibitory concentration (IC50) for 24 and 48 hrs were 12.5 and 50 µg/ml, respectively. In 72 hours, due to increase of incubation period in all concentrations, the number of killed cells was more than 50 percent. Consequently, IC_{50} was not observed for this period of time.

Conclusion: Considering dose-dependent and time-dependent anti cancer effect, Boswellia serrata extract can inhibit the growth of Hela cells.

Keywords: Hela Cell; MTT Test; Boswellia Serrata Extract**;** Cervical Cancer

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