

(구두-1)

제목: 홍삼추출액의 인간줄기세포의 성장 및 생존에 미치는 연구

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초록

The purpose of our study is to determine the proliferative and survival effect of ginseng on the human neuronal stem cell. We tested the proliferation and cytotoxic effect depending on the different dose and time point and analysed the cell cycle related to cell death. The human neuronal stem cell line (F3) was grown and ginseng extract was incubated with different dose (low dose: 0.1 volume %, high dose 1%) and time. The cell viability was measured by MTT assay. The high dose group showed decreased viability wheare as the low dose group increased cell survival over time. However, this phenomenon was modulated by serum containing or serum free media. In serum containing condition, ginseng incubation decreased cell viability but in serum free condition, the viability was increased as well as increased cellularly suggesting inducing cell proliferation. Cell cycle analysis in cytotoxic condition showed decreased S phase and increased G0-G1 phase. This finding is associated with DNA fragmentation by dose dependent manner.(control: 1.26%, low dose(0.625%): 19.46%, high dose(5%): 93.4%). Our results suggest that ginseng has dual effect on human neuronal stem cell the cell proliferative effect and cytotoxic effect in vitro, and dose, time, and serum can modulate this finding. The cytotoxic effect is associated with cell cycle disruption with DNA fragmentation. The future study on induction of stem cell proliferation in vivo will be needed.

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