

عنوان مقاله:

Evaluation of the fractions from Caspian cobra venom on apoptosis of infected BHK-۲۱ by Rabies Virus

محل انتشار:

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خلاصه مقاله:

Rabies is zoonotic acute encephalitis that continuously kills thousands of people annually with almost ۱۰۰ percent fatality. In the present study, apoptosis was investigated in BHK- ۲۱ cell lines infected by rabies virus. Apoptotic cells are identified by fragmented and dense chromatin masses and evaluated by microscopic and statistical methods. In vitro apoptosis was time and dose-dependent in ۲۴ to ۷۲ hours of incubation in BHK-۲۱ cell lines; however, a marked reduction in the number of apoptotic cells was observed, especially at the lowest concentrations of F۴ and F۵ fractions, obtained by FPLC of crude Naja naja oxiana venom. The number of infected apoptotic cells in the presence of different concentrations of two fractions F۴ (۴۰, ۳۰ and ۲۰ µg/ml) and F۵ (۴۰, ۲۵ and ۱۵ µg/ml) of Caspian cobra venom are obtained by Hoechst staining. According to the obtained results, by decreasing the concentrations of F۴ and F۵ fractions, the apoptotic indices were decreased in each incubation time. The F۵ fraction in comparison with F۴ at the same incubation times (۲۴, ۴۸ and ۷۲h) showed more effective on apoptosis of infected cells. The highest percentages (۶۶.۵۷% and ۶۵.۴۳%) of apoptotic cells which were recorded after ۴۸ and ۷۲ hours belong to ۴۰ µg/ml of F۵ fraction respectively. Our observations have shown that the use of a specific fraction (F۵) of cobra venom, in an efficient concentration and time can cause apoptosis of rabies-infected cells, so it can be hoped that this toxic fraction will be a candidate in treatment of Rabies virus proliferation.

کلمات کلیدی:

FPLC, Lyssavirus, Naja naja oxiana, cell death, CVS-۱۱

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