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"The Effect of Vitamin E on Splenocytes Apoptosis of Gamma-Irradiated BALB/c Mice"

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Abstract:

Apoptosis, a physiologic mechanism to eliminate unwanted cells, is also induced by ionizing irradiation, through production of free radicals. It has been demonstrated that antioxidants such as vitamin E are able to protect cells from damage caused by free radicals. Taken together we found it reasonable to make an attempt to evaluate the protective effect of vitamin E against apoptosis. The irradiated mice received 1 Gy/day gamma radiation for one day (low dose) or for three successive days (high dose, 3Gy). The splenocytes were then isolated at 6, 14 and 24 h after exposure. DNA gel electrophoresis and DNA fragmentation assay were done in addition to the evaluation of splenocytes cytology. Our results showed that Vitamin E can reduce apoptosis against low dose irradiation. However it is not able to completely block programmed cell death in high dose irradition.

Keywords:

Free Radicals . Gamma Radiation

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