

## عنوان مقاله:

Evaluation of Radio-Protective Effects of N-Acetylcysteine on Radiation-Induced Lethality in Mice

## محل انتشار:

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## خلاصه مقاله:

**Introduction** It has long been known that ionizing radiation can lead to detrimental effects in normal cells. In this light, Radioprotective chemicals have been used to decrease morbidity or mortality caused by ionizing irradiation. This study aimed to evaluate the radio-protective effect of N-acetylcysteine against radiation-induced mortality in male mice. **Materials and Methods** 52 healthy male mice were divided into four groups including NAC before irradiation (1), irradiation (2), NAC after irradiation (3) NAC before irradiation (4) and control. Three groups were treated orally with 100 mg/ kg of NAC. Gamma irradiation was performed at 8 Gy using a Co-60 machine. Kaplan-Meier method and the log-rank test were performed, using SPSS version 16. The significance level was considered to be 0.05. **Results** The statistical analysis revealed a significant difference between the test and control groups ( $P < 0.05$ ). The percentage of survival after 30 days was 46.2% for the irradiation group (1). In addition, the percentage of decreased lifespan was calculated at 5.90%, 23.60% and 17.93% for the first-third groups, respectively. **Conclusion** Results revealed lack of effectiveness of treatment with NAC after lethal dose. These results suggested that application of NAC for mice before irradiation protected them from the lethal effects of whole-body irradiation.

## کلمات کلیدی:

Gamma-Irradiation, Radioprotective, N-acetylcysteine, Radiation Sickness

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