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Radioprotective Effects of Cordyceps Sinensis Extracts on γ -Irradiated Mice

Author: Yoo BG, Lee JS, ¹Lee DK, ²Park HD, and ³Park IK

Institution: Dept. of Radiotechnology, Wonkwang Health Science College,

¹Dept. of Radiology, Wonkwang University Hospital, Iksan, Korea,

²Dept. of Therapeutic Radiology, Seoul National University Hospital,

³Dept. of Applied Biology, Dongguk University, Seoul, Korea

Since little or no informations are available regarding the effect of *Cordyceps sinensis* extract on mice exposed to γ -irradiation we attempted to look at the effect of *Cordyceps sinensis* extract on the survival ratio, body weight and organ weight change and serum metabolites after whole -body γ -irradiation.

Effect of single intraperitoneal administration of *Cordyceps sinensis* (Cs) extract at 24 hour before whole-body γ -irradiation on the survival ratio, body weight and organ weight changes and serum metabolites in the irradiated mice were investigated.

The single pre-administration of Cs extract increased the 40-days survival ratio of irradiated mice from 66.7% to 83.4%. The administration of Cs extract completely prevented weight reductions of spleen and thymus produced by γ -irradiation (P<0.05, P<0.01). Similar but somewhat less radioprotective effect was also found in the testis of the Cs treated mice. The administration of Cs inhibited the serum hyperglycemia produced by irradiation on the day 7th(P<0.01). However, it did not influence the serum cholesterol and protein levels on the days examined.

Since the spleen, thymus and testis have been well known as radiosensitive organs, the protective action of Cs extract on irradiated mice may be responsible for its enhancing recovery of these organs. Although the exact mechanism in protective effect of Cs extract on irradiated mice is not clear yet, the present study is the first report regarding the Cs which was tested and found to be a potential radioprotective agent.

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PRESENTING AUTHOR

Surname YOO Title ((Prof)/Dr/Mr/Mrs/Ms) Given Name BEONG GYU

Department Dept of Radiotechnology Institution Wonkwang Health Science College

Address 344-2 ShinYong-Dong

City Iksan State Chonbuk Post Code 570-750 Country Korea

Telephone* 82 - 653 - 840 - 1236 Facsimile* 82 - 653 - 840 - 1160

Email bkyou@sky.wkhc.ac.kr

*Country + Areas/City Codes required.

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