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# A Novel Superoxide Dismutase Mimic, HSJ-0017, Reduces Radiation-Induced and Chemotherapy-Induced Damage

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***SUMMARY*. Manganese(III)meso-tetra [3-(2-(2-methoxy)-ethoxy)ethoxy]phenyl porphyrin chloride, designated HSJ-0017, is a novel superoxide dismutase mimic. The aim of the present study was to investigate the protective effect of HSJ-0017 on radiation-induced and chemotherapy-induced damage. B16/F1 murine melanoma cells were injected into mice. HSJ-0017 was given to mice prior to 10Gy whole-body irradiation. The peripheral blood white blood cells (WBC) and bone marrow cellularity of mice were analyzed. Tumor-bearing mice were given 1.0 mg/kg HSJ-0017 and were then given cyclophosphamide 24 h later. LD50 of cyclophosphamide was calculated. The peripheral blood WBC and bone marrow cellularity of mice were significantly recovered by HSJ-0017. The intravenous LD50 of cyclophosphamide was significantly increased. Slower tumor growth was observed in mice pre-treated with HSJ-0017. Our study has led to the view that HSJ-0017 can protect normal tissues against radiation and chemotherapy toxicity. HSJ-0017 may improve the tumor killing activity of radiation and cyclophosphamide.**

*KEY WORDS:* Chemotherapy-induced damage, HSJ-0017, Manganse porphyri, $Mn^{III}$TE-3-PhPCl, Radiation-induced damage.

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