

IRPA9

1996 International Congress on
Radiation Protection
April 14-19, 1996
Vienna, Austria

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PAPER TITLE Effect of interleukin - 1 β on the state of hemopoiesis
in irradiated mice and dogs

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MAJOR SCIENTIFIC TOPIC NUMBER 4 OR 5 (see page 7)

ABSTRACT (See instructions overleaf) The paper is devoted to the study of the possibility of using interleukin - 1 β as a therapeutic drug in acute radiation sickness. Mice were irradiated at a dose of 6.0 Gy (LD_{70/30}) and dogs at a dose of 2.9 Gy (LD_{70/45}). The drug was administered to the mice intraperitoneally at a dose of 50 or 500 ug/kg 1 hour following exposure, whereas the dogs received an intravenous dose of 2 ug/kg 3, 24, 48 and 72 hours following exposure. The use of the drug has accelerated the recovery of hemopoiesis in mice. Even at day 7 after radiation exposure, the number of leukocytes in treated animals ($0.74 \pm 0.10 \cdot 10^9/l$) was higher than the critical level, whereas severe leukopenia ($0.30 \pm 0.09 \cdot 10^9/l$) was still noted in controls. The drug had a positive effect on the content of myelocaryocytes and granulocytes. The process of bone marrow cells maturation was more intense. A group of treated dogs differed from the controls by the slow development of leukopenia and the high content of granulocytes in the blood at 1-3 days after irradiation. This effect may be associated with the enhanced recruiting of mature cells from the medullary reserve. During the height of the disease, the intravascular aggregation of thrombocytes in treated dogs and the outer indications of hemorrhagic diathesis were significantly less pronounced as compared to the control. It is conceivable to use interleukin as a therapeutic agent in combination with other classes of drugs.