

POSTIRRADIATIONAL CHANGES IN HEMATOLOGIC PARAMETERS AND IN INTESTINAL MICROFLORA IN RATS

Katarína BEŇOVÁ¹ - Katarína STRIŠKOVÁ¹ - Petr DVOŘÁK²

¹University of Veterinary Medicine, Komenského 73, 041 81 Košice, Slovak Republic, e-mail:

benova@uvm.sk

²University of Veterinary and Pharmaceutical Sciences, Palackého 1-3, 612 42 Brno, Czech Republic,

e-mail: dvorakp@vfu.cz

ABSTRACT

A decrease in the defense capacity of the body, combined with penetration of intestinal microorganisms through the intestinal wall causes severe, often lethal complications of the acute radiation disease. We followed the clinical symptoms, the changes of hematological parameters and the changes of the composition of intestinal microflora in laboratory rats irradiated by a single, whole-body dose of 15 Gy gamma-rays. An increase of the common microflora in duodenum, liver and in oral cave and leucopenia in peripheral blood have been observed in all time intervals followed. The changes in red blood cells were characterized by anemia, manifesting clinically in hemorrhages and bloody diarrhea.

Key words: ionizing radiation, clinical symptoms, hematological changes, microflora, rats