

REACTION OF BONE MARROW CELLS UNDER GENERAL HYPERTHERMIA

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The reaction of blood leucocytes and bone marrow cells (BMC) of Wistar rats under the whole body hyperthermia (WBH) has been investigated. It has been established that the WBH leads to monodirectional alteration of quantitative and qualitative proportion of blood leucocytes and BMC of rats. The reduction of leucocytes and BMC numbers takes place at the early stages (1–3 days) after exposure to WBH as a result of decrease in number of juvenile and mature forms of myeloid and erythroid cells. The number of neutrophils, monocytes and lymphocytes in blood increased on the 7th and 14th days of investigation, while the intensive recovery of cells profile takes place in morrow. It has been shown that the increase in concentration of hemopoiesis regulatory mediators (granulocytic macrophage colony-stimulating factor and erythropoietin) in blood serum of rats under WBH precedes the restoration of quantitative and qualitative proportion of BMC. The mechanisms of hematopoiesis change under the influence of WBH have been discussed in the article.

Key words: whole body hyperthermia, hemopoiesis, bone marrow, GM-CSF, erythropoietin, blood leucocytes.

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