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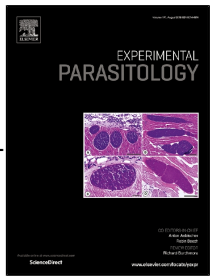

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Social Defeat Stress Exacerbates the Blood Abnormalities in *Opisthorchis felineus*-infected mice

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Abstract

A model of chronic opisthorchiasis combined with social stress is examined; this situation is more likely for humans and animals than a separate impact of the infectious factor. For this purpose, we evaluated the effects of *Opisthorchis felineus* ("OP" group) and 30-day social stress (confrontations between males, "SS" group) alone and in combination ("OP+SS" group) in inbred C57BL/6 male mice and compared these effects according to the parameters listed below. The animals exposed to neither factor formed the control group ("CON"). All animals were assayed for blood biochemical parameters, changes in blood cell composition, and pattern of bone marrow hematopoiesis. By the end of the experiment, we have observed crucial effects of the two factors on the blood and liver of "OP" and "OP+SS". Eosinophil and basophil counts increased and relative segmented neutrophil and monocyte counts decreased in "OP+SS" mice on the background of activated myelopoiesis, mainly determined by social stress. Despite depressed erythropoiesis, "OP" mice displayed no changes in the relative peripheral erythrocyte counts. On the contrary, social stress, which stimulated erythropoiesis in "SS" and "OP+SS" mice, was accompanied by a decrease in the relative erythrocyte counts and hematocrit. Hepatosplenomegaly was observed on the background of these two impacts. Changes in transaminase (ALT and AST) and alkaline phosphatase activities as well as an increase in cholesterol and product of lipid peroxidation suggest a pronounced