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Studies on Erythropoietic Action by the Administration of Pilose Antler Extract in SAM P6.

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In previous studies we reported that the levels of RBC, hemoglobulin and hematocrit in SAM R1 and SAM P6 were increased significantly from 7 day after oral administration of the pilose antler extract, 5g/kg/day, and were lasted during the study. Therefore, this study was performed to elucidate mechanism of erythropoietic action by the extract administration.

SAM R1 and SAM P6 were chosen as experimental animals. At age of 12 weeks, pilose antler extract were given 0.3 and 5 g/kg/day (p.o.) each for 0, 7 and 14 days in both animals. Complete blood cells (CBC) such as WBC, lymphocytes, monocytes, granulocytes, RBC, hemoglobulin, and hematocrit were counted. And plasma concentration of erythropoietin (EPO) which is the major regulator of erythropoiesis was measured using ^{125}I-antierythropoietin IgG. Ferritin concentration in plasma was also analyzed.

The levels of RBC and hematocrit were increased significantly on 14 day after administration at both doses of 0.3 and 5 g/kg/day in SAM P6, however, these were increased only at dose of 5 g/kg/day in SAM R1. The plasma EPO concentration was increased significantly on 7 day after administration in SAM P6, although the concentration on 14 day after administration was not significantly different from the control. There was no changes in SAM R1 by the administration of the extract. The plasma concentrations of ferritin were not changed significantly after administration of pilose antler extract in both SAM P6 and SAM R1. These results suggest that the changes in erythropoietic effects after the administration of pilose antler extract may be mediated, at least in part, through the change in the plasma level of erythropoietin.