relation between serum iron level and plasma iron disappearance (T 1/2) were lost and the percentage of bone sideroblasts showed marked increase in all cases.

The Zinc Matabolism in Rauscher Leukemic Mice

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It is widely recognized that the zinc is essential for the normal growth of plants and animals. Recently some reports, which evaluated relations between the zinc and malignant neoplasms, have been presented. We examined the zinc contents and ^{65}Zn kinetics in Rauscher leukemic mice and normal mice. For estimating the zinc contents we used the atomic absorption spectrophotometer and the ^{65}Zn-glycine complex as the tracer. The results were as follows: the zinc contents of the leukemic spleen ranged from 2.0 to 2.2 μg per 100 mg, those of the normal spleen from 3.6 to 5.5 μg per 100 mg. The zinc contents and of the leukemic liver were slightly lower than in normal mice. The spleen to liver ratios of zinc content were less than 1.0 in leukemic mice and more than 1.0 in normal ones. It might be suggested that in leukemic state the organ zinc distribution is different from the zinc distribution in normal state. The zinc content of the spleens was estimated at weekly intervals up to the leukemic phase after Rauscher virus inoculation. It decreased to one half of the normal level one week after inoculation and remained at the same level until the leukemic phase, in which it increased slightly in comparison with the preleukemic phase.

After subcutaneous injection of ^{65}Zn-glycine complex whole body radioactivities were counted on the 1st, 3rd and 7th day. The retention ratios of ^{65}Zn were higher in leukemic mice than in normal mice. The ^{65}Zn-radioactivities in spleens of leukemic mice were higher than in normal mice, but no remarkable differences were demonstrated in the livers of both groups.

The spleen to liver ratios of ^{65}Zn-radioactivities were higher in leukemic mice than in normal mice. And the increasing rate of the ratios for the first three days and the decreasing rate of the ratios for the next four days were higher in leukemic mice. These results would indicate an increased turn over of ^{65}Zn-kinetics in leukemic mice, particularly in leukemic spleens.

We have reported that Rauscher virus infects the spleen as the target organ about one week after virus inoculation. Our results in this paper would suggest that there are some relations between the role of the spleen as target organ in the leukemic virus-proliferation and the zinc metabolism in the leukemic spleens.