components. T1/2 of the first component was 0.63 hr and that of the second component was 48.5 hrs respectively. The organ distribution studies revealed that infused 51-chromium labelled lymphocytes circulated in and out of the spleen.

In patients with chronic lymphocytic leukemia, lymphocyte disappearance curve showed two exponential components as same as in the animal studies. T1/2 of the first component were 0.74 to 1 hr and that of the second component were 138.1 to 140 hrs. Blood lymphocyte pool and recirculating lymphocyte pool in the patients with CLL markedly larger than that of normal subjects. Infused ^{51}Cr labelled lymphocytes accumulated heavily in the spleen and liver in this case.

Scintiphotogram after the infusion of ^{99m}Tc labelled lymphocytes showed the accumulation of ^{99m}Tc radio activity in the spleen and the liver as same as the ^{51}Cr studies.

Quantitative Assessment of the Active Marrow Distribution by Scintigraphy —Deducation of a Hematopoietic Index in Hypoplastic Anemias by Multi-variate Analysis—

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The active marrow distribution was quantitatively assessed by measuring the activity in 26 local marrows in scintigraphy using technetium sulfur colloid. Each value was expressed in a ratio to the activity on the posterior pelvis area, of which two ratios, the one to the administration dose and the other to the liver activity, were taken in the consideration. With these 28 values multivariate analysis was carried out in hypoplastic anemias in order to elucidate the difference in the marrow distribution pattern from normal controls, the alteration associated with clinical exacerbation and remission and relationship to the ferrokinetics data.

In discrimination between normals and hypoplastic anemias by a linear function, misclassification of 18% was observed in the actual samples and the sternum and the distal humerus were the parts at first selected with 5% significance. A canonical discrimination analysis provided us with the first variate, which discriminates between hypoplastic anemias and normals with high loading of the sternum and distal humerus, and the second one, which discriminates between hypoplastic anemias in exacerbation and those in remission with high loading of the skull, the proximal radius and the posterior iliac crest. The result indicates that the marrow distribution pattern in remission does not necessarily tend to be normalized in quantitative aspect in hypoplastic anemias. Canonical correlation analysis revealed a significant relationship between an erythropoietic variate in ferrokinetics and the marrow distribution one with a coefficient of 0.62. Thus the quantitative representation and multivariate analysis brought about valuable informations in implication of the active marrow distribution oberved in hypoplastic anemias.