

value. This fact was considered to suggest the presence of subclinical hypothyroidism and occurrence of late developed hypothyroidism.

Serological test, using the tanned red-cell haemagglutination technique, in relation to hypothyroidism after ^{131}I treatment showed

no significant difference in euthyroid and hypothyroid patients, but the incidence of thyroid autoantibody was higher in the late developed hypothyroidism than in hypothyroidism appearing in a year after the ^{131}I treatment.

Studies on the distribution of ^{131}I in human body by whole body counting

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The study of the distribution of ^{131}I in the human body is of prime importance both for study of the whole body metabolism of iodine and nuclear health problems.

The original scintigrams were obtained with two collimated NaI (TI) crystals that were motor-driven along a long axis of the body inserting a subject between them, at the various intervals after oral administration of Na ^{131}I . The distortion in scintigrams due to a finite resolution of the collimeter was corrected using the iterative approximation method. Effects of antithyroid drugs such as NaI or mercapazole were also investigated on the distribution of ^{131}I in the body.

Total body retention curve of ^{131}I in a

adult male subject indicated two phases of exponential elimination. The curve of the thyroidal region decreased exponentially after a few days, and the rate of decline of radioactivity was slightly faster than the total body retention. The curve of legs in the second phase indicated increasing tendency and this is probably due to the accumulation of hormonal ^{131}I in the tissue.

Two phases of exponential elimination was also observed in the total body retention curve following administration of the drugs and this suggests the presence of the slowly exchanging inorganic iodine pools in the extra-thyroidal tissue.

^{131}I -Triiodothyronine Resin Sponge Uptake Test in Diagnosis of Thyroid Disorders (IV)

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The result of ^{131}I -T₃ RSU test on patients with various thyroid disorders treated at the thyroid clinic of Okubo Hospital in the past 4 years is reported.

1) The average and standard deviation of

^{131}I -T₃ RSU were $31.6 \pm 4.5\%$ in 245 normal subjects ($32.9 \pm 3.9\%$ in 57 men and $31.2 \pm 4.5\%$ in 188 women), $54.1 \pm 7.5\%$ in 224 thyrotoxic patients, $22.3 \pm 2.0\%$ in 22 hypothyroid patients, $30.9 \pm 4.0\%$ in 127 patients