

# A LONG TERM STUDY OF THE RADIOIODINE THERAPY OF HYPERTHYROIDISM

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Long term results of radioiodine therapy for hyperthyroidism were evaluated. Irradiation dose to the thyroid gland in hyperthyroid state has been settled at 6,000 rad since 1971. The radiation dose actually irradiated has been culculated for each patient by measuring the radioiodine uptake of therapeutic dose and the effective half life. The effects on 146 patients were studied by direct consultations or mailed questionnaires. Sixty three were directly examined by us and 83 responded to our questionnaires. The patients' ages ranged from 16 to 66, and 83% of them were among 20th to 50th. Females were 3 times more than males. Ninety patients (62%) were well controled to the euthyroid state, while 32 (22%) were hypothyroid and 24 (16%) were still hyperthyroid. Diagnosis of hyperthyroidism after the radioiodine therapy was made by referring clinical symptoms and blood tests of thyroid hormones. The influence of preceded antithyroid agents was not significant. The incidence of hypothyroidism increases in the group actually irradiated more than 8,000 rad. Close correlation was not found between the estimated thyroid weight and the occurrence of hypothyroidism. The participation of antithyroid antibody to the hypothyroidism was doubtful. Though 6,000 rad irradiation, instead of 9,000 rad so far settled, had been expected to give low incidence of hypothyroidism, the statistical study did not prove for it.

# THE METABOLISM OF THYROID HORMON IN THE LIVER DISEASES

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Thyroid hormon is converted from thyroxin to triiodothyronin mainly in the liver. In this process, revers T3 is produced. It is reported that revers T3 is increased in the liver diseases, especially in the liver cirrhosis. In this communication, we studied on the metabolism of thyroid hormon in the liver.

## Material and Method

53 subjects with liver diseases and without any thyroid diseases were carried.

Liver diseases was confirmed in each cases by laparoscopy and liver biopsy histologically.

In these patients, T3 uptake, T3RIA, T4RIA, rT3-RIA and TSH were measured. For this study, RIA kits made by DAINABOT and DAIICHI were used.

## Results and Discussion

The value of rT3/T3 ratio was increased in liver cirrhosis with decompensation and chronic active hepatitis. The value of (T3 + rT3)/T4 ratio was almost equall in the liver diseases.

This results suggested that abnomal conversion from thyroxin to rT3 correlates with metabolic condition of the liver, rather than histological damage of the liver.