

A Study on the Change of ^{131}I -T₃ Resin Sponge Uptake after Treatment of Hyperthyroidism with ^{131}I

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During the past 12 years, about 500 patients have been treated with radioiodine and I have been able to follow up the results from 1 to 13 years. There were admittedly some cases, in which hypothyroidism developed after treatment with radioiodine. It is to be noted, however, that in some cases, in which of post treatment of hypothyroidism, the symptoms of thyroidal deficiency developed only after several years had elapsed, during which period the patient remained in an apparent euthyroid state. The frequency of hypothyroidism had increased 2% after 1 year to 20% after 12 years.

The average of resin sponge uptake in cured hyperthyroidism after one year was 33% (140 cases) but thereafter it gradually decreased to 32.3% (120 cases) after 2 years, 29.7% (80 cases) after 3 years, 28.3% (72 cases) after 4~5 years, 28.0% (65 cases) after 6~7 years, 26.2% (60 cases) after 8~10 years and 25.2% (30 cases) after more than 10 years.

The number of cases which showed less than 25%, contrarily increased year by year from 6% after 1 year to 43% after more than ten years with or without hypothyroid state.

I am afraid that most of the cases which

showed less 25% without clinical hypothyroid symptoms, will become hypothyroid before long.

From these results we thought that the 7,000~8,000 rad dose treatment, was too large because it produced 20% incidence of hypothyroidism within twelve years. Presently we believe the optimum dose is about 6,000 rad which should give much less late effects and we sometimes used antithyroid drugs 1 month after radioiodine treatment expecting the late radiation effect.

Meanwhile we found the fact that 55 cases out of 175 cases showed above normal range of resin sponge uptake in 6~18 months after ^{131}I treatment with or without slight reappearance of symptoms of hyperthyroidism.

Formerly we used to treat them again when this resin sponge uptake continued for 6 months to one year taking into consideration clinical symptoms and other laboratory tests. But recently I have recognized the fact that as the period of observation becomes longer, these results become lower gradually after 2 to 3 years without second treatment. From these observations we made an effort to cure them at high level within normal range, so as to lessen the danger of hypothyroidism.

Reevaluation of Triosorb Test and Its Comparison with TBI

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Method:

By utilizing one and the same serum sample, our investigation was carried out in order to detect the degree of variability of the Triosorb

and TBI kit, while the purity of the Tiosorb solution was evaluated, after which the indicated value of the sponge-uptake and that of the standard serum were compared with