course of T₃ 100ug per day administration.

The suppressibility was determined on 3rd and 6th day in each 26 of these patients (16 nontoxic goitrous patients and 10 ¹³¹I treated hyperthyroid patients), and on 6th and 13th day in the other 9 patients (5 nontoxic goitrous patients and 4 ¹³¹I treated hyperthyroid patients) during T₃ 100ug per day treatment.

The following results were obtained;
1. In most all of nontoxic goitrous patients, the suppressibility increased gradually according as the prolongation of the period of T₃ administration.

The mean (±SE) of the suppressibility of 3rd day was 40.8 ± 6.1% and that of 6th day was 67.7 ± 5.6%. Suppressibilities of all nontoxic goitrous patients on 13th day were more than 93.6%.

2. In treated hyperthyroid patients, the suppressibility was not changed by prolongation of T₃ treatment until 13 days.

From these results, it was suggested that the suppressibility after T₃ 100 ug per day for 13 days would be more beneficial to evaluate the thyroid function precisely than for 3 or 6 days.

¹³¹I Triiodothyronine Resin Sponge Uptake (R.S.U.) Test in Diagnosis of Thyroid Diseases (III)—Usefulness of R.S.U. test in Evaluation of Therapeutic Effect of ¹³¹I and Mercaptoimidazole

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1) Of the hyperthyroid patients made euthyroid by ¹³¹I treatment, 89% shows R.S.U. values within normal range, whereas only 55% of the same patients shows ¹³¹I thyroidal uptake rate within normal range. The comparison of these figures attests to the usefulness of R.S.U. test in the evaluation of the therapeutic effect of ¹³¹I.

2) The pattern of changes of R.S.U. after ¹³¹I treatment can be divided into 5 groups: i) R.S.U. returns within normal range within 2 months after the treatment and remains normal thereafter. This pattern is seen most frequently. ii) R.S.U. becomes below normal for a short period of time 2 to 5 months after the treatment and then returns within normal range. iii) After once becoming normal, R.S.U. returns above the normal range several months later, with reappearance of symptoms of hyperthyroidism. iv) After 2 to 3 months following the treatment, R.S.U. remains at the border-line low levels without any signs of hypothyroidism and v) R.S.U. remains at border-line high levels without any signs of hyperthyroidism. 3) When R.S.U. remains high more than 3 months after ¹³¹I treatment, it is most likely that the dose of ¹³¹I is insufficient and the administration of the second dose is necessary.

4) Within 1 to 2 weeks after the administration of the therapeutic dose of ¹³¹I, the R.S.U. value is often higher than the pretreatment level. The R.S.U. value becomes lower than before the administration of ¹³¹I more than 4 weeks later in majority of cases.

5) R.S.U. is normal in the majority of cases of hyperthyroidism made euthyroid by Mercaptoimidazole treatment, whereas the thyroidal ¹³¹I uptake rate is normal only in about the half of these cases.