

Summary

The Outcome of Treatment with Adjusted Dose of ^{131}I to Thyroid Weight for Graves' Disease by Estimation of Effective Half Life Using a Single Radioiodine Uptake Measurement

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In the determination of therapeutic ^{131}I doses, it takes several days to measure effective half life (EHL) of radioiodine in thyroid glands (Ordinary method). We suggested the new method to estimate EHL by a single radioiodine uptake measurement (INDEX method). We evaluated the outcome of ^{131}I treatment with these two methods in outpatients with Graves' disease. Eighty outpatients were treated with INDEX method (Group I) and 108 outpatients with Ordinary method (Group O). At the 5-yr follow up, the incidence of hypothyroidism in Group I was 22.5%, subclinical hypothyroidism 8.8%, euthyroidism 30.0%,

subclinical hyperthyroidism 13.7% and hyperthyroidism 25.0%. In Group O, 17.6% of the patients were hypothyroid, 16.7% subclinical hypothyroid, 30.5% euthyroid, 9.3% subclinical hyperthyroid and 25.9% hyperthyroid. There were no significant differences between these two methods.

We conclude that INDEX method surpasses Ordinary method in timesaver and is equal in effectiveness.

Key words: Effective half life (EHL), EHL-index, Graves' disease, ^{131}I treatment, Adjusted dose of ^{131}I to thyroid weight.