

P809 Radioiodine Retreatment or Wait for a Limited Time in Patients with Differentiated Thyroid Carcinoma with Negative Thyroglobulin and Antithyroglobulin, but Remained Thyroid Residue after Post-Surgery Radioiodine Ablative Therapy?

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Thyroid cancer follow-up after total thyroidectomy and radioiodine ablation therapy is performed mainly by assessment of radioiodine whole body scan (^{131}I -WBS), thyroglobulin (Tg), anti-thyroglobulin antibody (Anti-TgAb) levels and sonography. Considering there are a number of patients with negative Tg, Anti-TgAb and sonography, but with a remained thyroid residue, and there is a concern about prolonged therapeutic effect of radioiodine, the best therapeutic approach as to give another therapeutic I-131 dose, or wait for a limited time to get more I-131 therapeutic effect from the first dose, is evaluated in this paper. Materials and Methods: In this study, we enrolled the DTC patients with only thyroid remnant in ^{131}I -WBS six months after first ablative therapy. Patients with detectable Tg, high Anti-TgAb, evidence of neck mass in sonography and evidence of local or distant metastasis were excluded. The patients were randomly placed in two groups: A group who received I-131 retreatment and those who did not (follow-up group). Then after six months, the clinical results of these two groups were compared by evaluating ^{131}I -WBS, Tg, Anti-TgAb and sonography. Results: From 94 enrolled patients, 36 patients were in retreatment group and 58 patients were in follow-up group without retreatment. Both groups matched by the variables including age, sex, pathology, tumor size, capsular, vascular and lymphatic invasion. In 47.2% of the retreatment group ^{131}I -WBS still showed thyroid remnant, while in 52.8% ^{131}I -WBS became negative. These values for the follow-up group without retreatment were 65.5% and 34.5%, respectively ($p=0.08$). In retreatment group, six months after retreatment, 97.2% of patients still had $\text{Tg}<1\text{ng/ml}$ and 2.8% showed Tg elevation ($\text{Tg}>1\text{ng/ml}$). In the follow-up group, after six months 96.6% of patients still had $\text{Tg}<1\text{ng/ml}$ and 3.4% showed Tg elevation ($\text{Tg}>1\text{ng/ml}$) ($p=0.857$). In 94.4% of retreatment and 98.3% of follow-up group Anti-TgAb six months after retreatment was $<100\text{mIU/ml}$ ($p=0.304$). Sonography results were also insignificant ($p=0.403$). Conclusion: In patients with undetectable Tg/Anti-TgAb and only thyroid remnant in the six-month post-ablation ^{131}I -WBS, delay in prompt radioiodine retreatment may be considered, as due to continued ablative effect of radioiodine, about one-third of these patients may have a negative ^{131}I -WBS in the next six-month study, consequently less patient and society radiation burden and less economical loss, with same clinical results will be achieved.