Letter to the Editor

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Twelve-Month Volume Reduction Ratio Predicts Regrowth and Time to Regrowth in Thyroid Nodules Submitted to Laser Ablation: A 5-Year Follow-Up Retrospective Study

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Dear Editor,

I read with great interest the report by Negro et al. (1) titled "Twelve-Month Volume Reduction Ratio Predicts Regrowth and Time to Regrowth in Thyroid Nodules Submitted to Laser Ablation: A 5-Year Follow-Up Retrospective Study." This study presented long-term follow-up results of single session laser ablation (LA) for symptomatic benign thyroid nodules. The authors suggested that: 1) approximately one-third of the laser-treated nodules exhibited technical failure at the 12-month follow-up and that the risk to regrowth correlated with the 12-month volume reduction ratio (VRR); 2) a 12-month VRR < 50.0% suggests the timely performance of a second session to prevent nodule regrowth. Their conclusions were especially valuable for clinicians pursuing image-guided thyroid ablation (I-GTA) as an alternative to surgery (2).

Regarding the predictor for future regrowth after I-GTA, the authors suggested using the value of VRR at 12 months after LA. However, a previous study by Sim et al. (3) suggested initial ablation ratio (IAR) for the prediction of regrowth. We advised that an IAR < 70%, calculated one month after the radiofrequency ablation (RFA) predicts a VRR < 50% at 12-month follow-up (3). Thus, we can expect technical failure and initiate an additional treatment plan earlier by applying IAR. For example, five cases showed negative values of VRR at 12-month in Figure 3 (1). These nodules must have started to regrow before 12 months. If IAR were applied to those nodules, a re-treatment plan could have been initiated earlier leading to better results for the patients.

Regarding the measurement of nodule volume, the authors measured the entire nodule. A previous investigation of Sim et al. (4) introduced the concept of viable volume regrowth. We divided nodules after RFA into two parts- the ablated area and the viable area. By following-up the change of viable area volume, we suggested that regrowth could be noted before total nodule volume change is noted. Operators can predict regrowth as soon as possible by combining 12-month VRR and viable volume regrowth and accordingly plan a re-treatment option.

Lastly, I want to address the ultimate goal of the I-GTA. Although many authors consider VRR > 50% as therapeutic success (5, 6), regrowth from the incompletely ablated area is commonly reported three years after I-GTA (7, 8). Therefore the guidline from Korean Society of Thyroid Radiology suggested that the ultimate goal of I-GTA may be a more complete ablation of the benign thyroid nodule rather than VRR > 50% (2). We propose that long-term stable VRR should be the goal of I-GTA as an alternative to surgery (9). I hope the authors, as experts in this field, would share this opinion on the ultimate goal of the I-GTA.

In conclusion, the authors provided valuable data as a result of a 5-year follow-up after a single session LA and presented useful information to predict regrowth and the time to regrow through a 12-month VRR. Experts should conduct a thorough exchange of opinions to establish the ultimate goal of the I-GTA.

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