



Letter to the Editor Regarding “Minimally Invasive Treatment for Benign Parathyroid Lesions: Treatment Efficacy and Safety Based on Nodule Characteristics”

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Dear Editor,

I recently read the article titled “Minimally invasive treatment for benign parathyroid lesions: treatment efficacy and safety based on nodule characteristics” with great interest [1]. The authors performed radiofrequency ablation (RFA) for primary hyperparathyroidism (PHPT) and secondary hyperparathyroidism (SHPT), which are solid lesions of the parathyroid glands. They also performed ethanol ablation (EA) for symptomatic nonfunctioning parathyroid cysts (SNPCs), which are cystic lesions. In the paper, they reported that RFA for PHPT and EA for SNPCs were effective, and RFA for SHPT had a limited effect. These findings are useful and valuable. These diseases are rare, and ultrasonography-guided intervention cases are even rarer. Therefore, I am deeply grateful to the authors who collected the cases in the three institutions and reported

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them. Ultrasonography-guided intervention cases for parathyroid diseases are rarely reported; thus, I would like to request more detailed data from the authors.

RFA for PHPT

Ultrasonography-guided intervention for PHPT is expected to be largely similar to that for autonomic-functioning thyroid nodules [2]. The results of the treatment of 11 patients by the authors were similar. In 7 patients (63.6%), near-complete disappearance and resolution of endocrinological problems were achieved. However, 1 in 4 cases did not completely resolve because an adenoma was overlooked, and this eventually led to surgery. As shown in Figure 2, the adenoma found later is much smaller than what was treated initially. Therefore, it will be of great help to readers if you can provide the reason for performing the surgery instead of repeating RFA. In the case of the two women who did not undergo additional RFA because of lack of cooperation, it would also be helpful to clarify the initial volumes and technical reasons why complete ablation was not possible.

RFA for SHPT

In the case of SHPT, since the cause of hyperparathyroidism is outside the parathyroid glands, there is a considerable risk of recurrence due to the remaining parathyroid glands even if ablation for the enlarged SHPT gland is successful. Therefore, the effectiveness of RFA is limited, and the effect of treatment may not have lasted long. Multiple treatment sessions would have been required, as in RFA for large symptomatic benign thyroid tumors [3]. There are three questions I would like to ask the authors. Were the patients informed and did they agree that multiple treatment sessions would be required before RFA? Why did they not choose surgery nonetheless? After encountering these eight cases, have the authors gained knowledge for predicting cases with high and low probabilities of success?

Once again, I want to praise the authors for their efforts. It may be difficult to provide information related to my inquiry. However, if provided, it will further enhance the value of this paper.

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Response

Letter to the Editor Regarding “Minimally Invasive Treatment for Benign Parathyroid Lesions: Treatment Efficacy and Safety Based on Nodule Characteristics”- Authors’ Reply

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To the Editor,

We appreciate the comments from Sim [1] about our article [2]. Sim [1] detailed several clinical issues related to performing radiofrequency ablation (RFA) for benign parathyroid lesions. Regarding the RFA in patients with primary hyperparathyroidism, one underwent surgery owing to an overlooked contralateral double parathyroid adenoma, which had increased in size on follow-up ultrasonography after RFA. We agree with Sim [1] that additional RFA may have cured the patient. However, this patient was treated early when we began RFA for parathyroid lesions, and the surgeon did not have a discussion with us before performing the surgery. Since the serum parathyroid hormone level did not completely normalize after RFA, the surgeon wanted to remove the remaining adenoma and check the treated adenoma surgically at that time. Later, he agreed with the usefulness of additional RFA after the surgical confirmation of complete necrosis of

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the treated adenoma. In the case of the two women with partial response, the initial volumes were 0.69 mL and 0.40 mL, respectively. Since all the procedures were performed under local anesthesia, the two old women (92 and 87 years of age) could not be fully treated because of limited cooperation and the risk of recurrent laryngeal nerve injury [3,4]. In this respect, we consider that it may be helpful to perform RFA under sedation in patients with limited cooperation.

Regarding the RFA and secondary hyperparathyroidism, we informed all the patients about the possibility of multiple treatment sessions and they all agreed to undergo RFA. Nevertheless, these patients were unable to undergo surgery owing to the underlying disease or they were waiting for a kidney transplant or they strongly refused to undergo surgery. It is difficult to identify patients with a high success rate at this point. However, we consider that the patients with an initial serum parathyroid hormone level of over 1000 mostly had all 4-gland lesions, which often required more than one treatment session to reach the target range for a certain period. A follow-up study with a larger number of patients is required to answer the question, and we plan to report our conclusions at a later date.

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