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Radiofrequency Ablation (RFA): A Modern Solution for Thyroid Nodule in Bangladesh

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Abstract

Thyroid nodules are common and often require intervention when symptomatic, cosmetically concerning, or hormonally active. Surgery remains the standard treatment but carries risks of hypothyroidism, nerve injury, scarring, and prolonged recovery. Radiofrequency ablation (RFA) has emerged as a minimally invasive alternative with demonstrated safety and efficacy.

RFA achieves substantial nodule volume reduction (50–80% within 6 months; sustained in >85% after 3 years) and provides symptom relief in over 80% of patients, with high cosmetic satisfaction. Thyroid function is largely preserved, minimizing the need for lifelong hormone therapy. Complications are uncommon (<1% major; 2–3% minor), most frequently transient pain or voice changes. Compared with surgery, RFA offers shorter recovery, reduced costs, and fewer long-term sequelae. International guidelines from the Korean Society of Thyroid Radiology, European Thyroid Association, and AACE/ACE/AME endorse RFA as a first-line treatment for benign symptomatic nodules. In Bangladesh, where thyroid disease is highly prevalent and surgical access limited, RFA provides a cost-effective, outpatient-based alternative that may reduce surgical burden and expand treatment options.

RFA represents a paradigm shift in thyroid nodule management, offering a safe, effective, and affordable alternative to surgery. Its integration in Bangladesh could improve outcomes, preserve thyroid function, and enhance patient quality of life.

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