

PRIMARY HYPERPARATHYROIDISM: TREATMENT WITH PERCUTANEOUS LASER ABLATION (PLA)

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Background/Purpose: Percutaneous Laser Ablation (PLA) has been described as an effective option for ablation in the neck, and may be useful in patients with primary hyperparathyroidism at high surgical risk. Purpose of the study was to assess feasibility, safety, and effectiveness of percutaneous US-guided laser ablation for the treatment of primary hyperparathyroidism

Methods: 8 patients with primary hyperparathyroidism unsuitable for surgery and biopsy proven parathyroid tumor (maximum diameter 1.5 ± 0.6 cm) were treated with PLA. Under local anesthesia and with ultrasound guidance a 300 mm quartz fiberoptic guide was placed into the gland to be treated through a 21G needle. Ablation was performed by means of a continuous-wave Nd-YAG laser operating at 1.064 μ m and a maximum power output of 7W.

Patients were followed at 2, 6 and 12 months with serum levels of PTH and CEUS.

Complications were noted

Results: PLA was technically feasible and well tolerated in all cases.

Clinical success (normalization of serum levels of PTH) was achieved in 3/8 (37.5%) patients at 2 months. Of the remaining five patients, three patients had a progressive reduction of PTH serum levels, that were normalized at 6 and 12 months control, while two patients had persistently elevated serum levels of PTH. Thus at 6 and 12 months clinical success was achieved in 6/8 (75%) patients.

CEUS showed no enhancement in all the clinically successful cases.

One patient experienced a transient dysphonia, that resolved spontaneously in three months. Non other complications occurred.

Discussion & Conclusion: PLA seems to be a feasible, safe and effective treatment for patients with primary hyperparathyroidism.

This procedure may offer an effective alternative to surgery in patients suitable for resection.