

THYROID LUNG METASTASES TREATED WITH PERCUTANEOUS THERMAL ABLATION: RESULTS FROM 25 PATIENTS.

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Background/Purpose: To determine safety and efficacy of thermal ablation by radiofrequency(RFA) or microwaves(MW) in the treatment of lung metastases arising from thyroid cancer.

Methods: Between september 2004 and february 2013, 25 patients (mean age 62 years) treated for metastatic thyroid cancer(14 papillary,7 follicular, 1 medullary, 3 anaplastic) had thermal ablation for lung metastases by RFA or MW and were followed prospectively. The median delay between initial treatment of the thyroid cancer and the first interventional radiology session was 6 years(range 0.7-30.5y).The end points were local efficacy (assessed by computed tomography +/- PET/CT during the follow-up period), complications, and overall survival after thermal ablation.

Results: A total of 58 lung metastases(1-16/patient, mean 1.5;1-4/session) were treated with RFA(33) or MW(6) during 39 sessions(1-7 sessions/patient, mean 1.6). Median follow-up time was 32 months. The median duration of hospital stay was short(2.3 days). Moderate pneumothorax occurred in 39% of the procedures. Infection occurred 4 times. The 1- and 2-year survival rates were 90.5% (95% confidence interval [CI] 78-100) and 85.7% ([CI]70-100), respectively. Only 2 local recurrences were noted during follow-up: one anaplastic and one follicular carcinoma.

Discussion & Conclusion: RFA is safe and efficient in the treatment of lung metastasis originating from thyroid cancer. RFA or MW may provide a low-morbidity alternative to surgery, being less invasive and preserving the patient's ability to undergo possible repeated operations. It could be a useful option when lung metastases are slowly progressive.