Patients with thyroid carcinoma distant metastasis are identified at the phase of initial treatment

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Background

Follow up of patients treated for well differentiated thyroid carcinoma (WDTC) includes search for distant metastases (DM). Although uncommon, DM worsen prognosis and most of them can be treated with radioactive iodine. DM may occur in the initial staging or in the follow up. To identify the profile of patients who will develop DM and them moment they appear can reduce the intensity of follow up.

Objectives

To evaluate clinical profile, outcome, and the time between diagnosis of the primary thyroid tumor and distant metastases of WDTC.

Casuistic and methods

Retrospective chart review of 66 patients with WDTC and distant metastasis treated with radioactive iodine at our institution from January 1988 to December 2009. There were 54 women and 12 men; 48 (72%) white and 18 black. Age ranged from 7 to 74 years old (mean=48); h from January 1988 to December 2009. 27 patients were under 45y/o. Follow up ranged from 13 to 213 months (mean=77). Three patients died of disease. Eight other patients lost follow up and only one of them was found, who is alive.

Results

Lung metastases were found in 56 patients (85%), 48 (73%) only in the lung and 8 (12%) associated to bone metastases. Metastasis only to bones was found in 9 patients (14%); one patient had liver metastases. Bone metastases occurred in hip (11), femur (8), skull (3), vertebrae (3), scapulae (2), clavicle (2); sternum (1) and rib (1).

Tumor diameter: 0.1 to 10cm; Smaller than 4cm in 76% of the patients (13% ≤1cm and 24% >4cm); 9 multicentric (13.8%);

Papillary thyroid cancer (PTC): 49 patients (74%), classic in 31 (47%), follicular carcinoma or follicular variant of PTC in 41% and Hurthle cell carcinoma in 3%; poorly differentiated carcinoma in 9%.

Twenty patients (30%) underwent only total thyroidectomy. It was associated to central neck dissection in 3%, and to lateral neck dissection in 67% of the patients (unilateral 21%; bilateral 46%), due to lymph node metastases, in 46 patients (70%).

Initial dose of radioactive iodine varied from 100 to 410mCi. A second dose of radioactive iodine was given to 12 patients.

DM were present in the first postoperative whole body scan in 63% of the patients, and identified after 5 years in 25% of the patients. Fifty five patients (83%) were alive 5 years after treatment. In the most recent evaluation, serum thyroglobulin (Tg) was under the limit of detection in 32 patients (48%), 11 without radiological evidence of disease. Mean age of these patients was 42y/o. Elevated Tg was present in 23 patients with mean age of 55 y/o. Tg was higher in the patients who lost follow up (mean age=62y/o).

Conclusions

Profile of our patients with WDTC distant metastases:

White women, 50y/o, with classic variant of papillary thyroid carcinoma, ≤4cm, with initial locorregional disease (N1b).

Metastases were more common to lung and bones (hip).

Outcome was good: 5 years overall survival >80%.

Distant metastases were diagnosed in the initial evaluation in 63% of the patients; only in 25% after 5 years of follow up.

Tg was under the detection limit in 50% of the patients after radioactive iodine, even with radiological metastasis.

Progressive disease occurred in 15% of the patients.

References:

1. Ito Y, et al. Patient age is significantly related to the progression of papillary microcarcinoma of the thyroid under observation. Thyroid. 2013.


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