

Skeletal-Related Events due to Bone Metastases from Differentiated Thyroid Cancer.

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Abstract

BACKGROUND:

In oncology, the clinical impact of metastatic bone disease is conveyed via a composite end point termed skeletal-related events (SRE), which encompasses spinal cord compression, pathological fracture, a need for external beam radiation or surgery to bone, and hypercalcemia of malignancy. An appreciation for the high incidence of SRE in other advanced cancers involving the bone has led to the approval of potent antiresorptive agents because they delay the time to the first SRE and decrease the incidence of SRE. The risk and rate of SRE after diagnosis of bone metastasis have not been described in thyroid cancer; antiresorptive agents are not routinely used.

METHODS:

This was a retrospective review of 245 differentiated thyroid cancer patients with bone metastases identified as part of routine clinical care at Memorial Sloan-Kettering Cancer Center between 1960 and 2011. The occurrence of SRE was recorded from the initial diagnosis of bone metastasis until final follow-up or death.

RESULTS:

Seventy-eight percent of patients (192 of 245) either presented with or developed at least one SRE after the diagnosis of metastatic bone disease. The median time from identification of bone metastasis to first SRE was 5 months (excluding the 97 patients in whom first SRE occurred at the time of the bone metastasis diagnosis). Of the patients who sustained an initial SRE, 65% (120 of 192) went on to sustain a second SRE at a median of 10.7 months after the first event. SRE were frequently multiple; 39% (74 of 192) sustained three or more discrete SRE.

CONCLUSION:

Thyroid cancer bone metastases identified as part of routine clinical follow-up frequently cause significant and recurrent morbidity. The incidence of SRE and median time to first SRE in metastatic thyroid cancer to bone are similar to those reported in other solid tumors. Prospective clinical trials to assess the efficacy of antiresorptive agents in this population are needed.