

Malignant mesenchymoma of the thyroid: case report and literature review

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ABSTRACT

Malignant mesenchymoma of the thyroid is extremely rare. We report such a tumor involving the bilateral lobes of the thyroid which showed simultaneous chondrosarcomatous, osteosarcomatous, fibrosarcomatous and rhabdomyosarcomatous differentiation. The patient was a 52-year-old woman admitted with a history of facial swelling, neck thickness and swallowing discomfort of one month's duration. Sonographic examination indicated a thyroid mass involving the bilateral lobes. Macroscopically, the tumors of both lobes were well demarcated, solid, greyish-white, and multinodular on the cut surface. Some nodules were translucent in appearance and hard in texture. Microscopically, the tumor was composed of small primitive mesenchymal cells with osteoid formation resembling the small cell variant of osteosarcoma interspersed with multiple cartilaginous nodules that indicated chondrosarcomatous differentiation. Some tumor cells showed prominent rhabdomyoblastic differentiation with eosinophilic cytoplasm and eccentric nuclei. Fibrosarcomatous areas were also observed. Immunohistochemically, the small primitive mesenchymal cells were positive for vimentin and CD99 and negative for CD56, Syn, CgA, CK, TG, TTF-1, calcitonin, and S-100. The tumor cells in the rhabdomyosarcomatous area were MyoD1 and muscle-specific actin positive. Molecular analysis for *BRAF* and *RAS* gene alterations showed no point mutation. The tumor recurred four months after surgery and tumor thrombi were suspected in the bilateral internal carotid arteries on ultrasonography. Primary malignant mesenchymoma of the thyroid is a high-grade malignant tumor with a poor prognosis. Its differential diagnosis includes anaplastic carcinoma and other rare sarcomas with chondroid, osteoid, and other mesenchymal metaplasia. **Free full text available at www.tumorionline.it**

Key words: malignant mesenchymoma, pathology, thyroid.

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