Carcinoma Showing Thymus-like Differentiation (CASTLE) of Thyroid: A Case Report and Literature Review

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Carcinoma showing thymus-like differentiation (CASTLE) is a rare malignant neoplasm that occurs in the thyroid gland, or head and neck. This tumor arises from either ectopic thymus tissue or remnants of branchial pouches, which retain the potential to differentiate along the thymus line. Clinical presentation and imaging can be consistent with a malignant lesion such as thyroid cancer or thymic carcinoma. Immunohistochemical staining with CD5 can differentiate CASTLE from other malignant thyroid neoplasms. A 54-year-old male had initially presented with a painless, left neck mass for 3 months. He underwent left thyroid lobectomy via a median sternotomy approach. Carcinoma showing thymus-like differentiation was the final histopathologic diagnosis. After 36 months of follow-up, no evidence of recurrence was observed. A median sternotomy is an excellent approach for CASTLE with anterior mediastinum involvement. Complete resection is important to improve the long-term survival rate and the locoregional recurrence rate.

Key Words: CASTLE, sternotomy, thymus, thyroid gland