GRANULAR CELL TUMOR OF THE THYROID

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Background/Purpose: Granular cell tumor (GCT) is a neoplasm of Schwann cell origin rarely found in the thyroid gland. Both benign and malignant cases have been described. We report a case of GCT and detail the imaging, cytology, pathology and natural history of this rare tumor.
Methods: We reviewed the literature on GCT using OVID (search terms: granular cell tumor, thyroid gland, thyroid diseases). Ten cases have been reported and most have a benign course. Four additional cases described a paratracheal or tracheal GCT presenting as a thyroid mass and one case reported Hurthle cells on cytology.
Results: Our case is a 25 year old woman who presented with euthyroid, compressive multinodular goiter (largest nodule 6.2 cm right lobe on ultrasound). FNA showed follicular neoplasm. She had total thyroidectomy and pathology revealed a 2 cm right lobe GCT with nests of epithelioid and spindle cells which demonstrated abundant granular eosinophilic cytoplasm. The tumor cells were positive for both S100 and PAS with diastase stains, supporting the diagnosis. An incidental micropapillary carcinoma (< 1 mm) was also noted. The patient has been followed for 4 years without recurrence.
Discussion & Conclusion: GCT, although rare, should be considered in the evaluation of thyroid nodules . GCT does not have a specific sonographic appearance. It may resemble a Hurthle cell neoplasm on cytology, and immunohistochemistry can help make the diagnosis. Due to an infiltrative pattern of growth, GCT may be mistaken for more aggressive thyroid neoplasms. Clinicians should be aware of this rare thyroid tumor