of these patients have a familial cause of which MEN and the hyperparathyroid-jaw tumor syndrome (HJTs) are most common. Familial hypocalciuric hypercalcemia (FHH) due to loss of function mutations of the calcium sensing receptor (CASR) gene is an important familial mimic of this that needs to be distinguished. Beyond this are still a group of patients with familial isolated primary hyperparathyroidism (FIpHT). Recognition of this entity is important because of the different prognostic and surgical treatment strategy for their management compared to regular sporadic pHT. **Clinical Case:** A 58 yr old postmenopausal lady on topical HRT was referred for thyroid nodular disease. Her initial lab tests showed primary hyperparathyroidism with mild hypercalcemia. Her initial neck sonogram showed multiple benign appearing nodules that did not warrant biopsy. There was a history of hypothyroidism in her mother and thyroid cancer in a maternal cousin. In addition, her father and two sons have history of hypercalcemia that required repeated hospital admissions for treatment. Her two daughters to date have had no hypercalcemia, nephrolithiasis nor thyroid problems. There was no family history of jaw, renal nor brain or pituitary tumors and no history of severe dyspeptic disease nor familial cancers. She had hypercalciuria, normal bone density and non-obstructive nephrolithiasis. MEN-1 gene testing was normal. Parathyroid scan suggested a possible right sided parathyroid lesion and she had elective parathyroidectomy of an ectopic right parathyroid that was hypercellular on histology. The intra-operative PTH dropped following the lesion extraction by ~ 51%. Post operatively the patient's mild pHT and hypercalcemia persists but imaging studies have been unrevealing. Further genetic testing for other possible etiologies of familial pHT were -ve for HJTs but revealed a novel somatic mutation of the CASR gene; c.1868G>A (p.Gly623Asp) whose present significance is unclear. This variant has been described in one family with FHH but In silico predictive analyses of the mutation suggests a possible deleterious effect. Given her known family history of symptomatic hypercalcemia this novel mutation appears to be a hitherto unrecognized cause for FIpHT. The patient is presently being conservatively managed and monitored. **Conclusion:** While familial pHT is relatively uncommon its recognition is important as it can inform planned surgical intervention and expected prognosis for anticipated cure. While MEN and HJTs are the most common etiologies for familial pHT other possibilities need to considered when the history suggests possible FIpHT and our case highlights a novel CASR mutation as diagnostic consideration.

Thyroid

THYROID NEOPLASIA AND CANCER

Physician-Reported Misuse of Thyroid Ultrasound

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Background: Over the past four decades, there has been a substantial increase in the incidence of thyroid cancer with studies suggesting that greater use of thyroid ultrasound contributes to the rise in incidence. However, little is known about physician reported practice patterns on ultrasound use.
Methods: Patients diagnosed with differentiated thyroid cancer in 2014–15 from the Surveillance, Epidemiology and End Results registries of Georgia and Los Angeles were surveyed and asked to identify the surgeon who performed their thyroid surgery, and the endocrinologist and other doctors most involved in their thyroid cancer treatment decision making. We surveyed all physicians identified by more than one patient, and a random sample of physicians identified by one surveyed patient (N=610; 65% response rate). Surveyed physicians were asked to identify the clinical scenarios in which they would schedule a thyroid or neck ultrasound. We generated descriptive statistics for all categorical variables and used multivariable logistic regression to identify factors associated with thyroid ultrasound misuse.
Results: The cohort consisted of primary care physicians (PCPs; N=162), endocrinologists (N=176), otolaryngologists (N=130), and general surgeons (N=134). In addition to physicians reporting ultrasound use for accepted reasons such as palpable nodule on exam (98%), large goiter (92%), and nodule seen on other imaging test (88%), a substantial number of physicians endorsed ultrasound use for clinically unsupported reasons: patient request (33%); abnormal thyroid function tests (28%); and positive thyroid antibodies (22%). In multivariable analysis, compared to PCPs, endocrinologists, otolaryngologists, and general surgeons were significantly more likely to schedule an ultrasound in response to patient request (odds ratio (OR) 2.52, 95% confidence interval (CI) 1.27–5.11; OR 2.98, 95% CI 1.57–5.79; OR 2.14, 95% CI 1.17–3.97, respectively). Physicians in private practice were more likely to schedule an ultrasound for abnormal thyroid function tests (OR 2.44, 95% CI 1.33–4.73) and positive thyroid antibodies (OR 2.47, 95% CI 1.27–5.21) compared to those in academic medical centers. Physicians who managed ten patients or less, compared to more than 50 patients, with thyroid nodules in the past 12 months were less likely to schedule an ultrasound for positive thyroid antibodies (OR 0.43, 95% CI 0.19–0.95).
Conclusion: Physicians report scheduling thyroid ultrasound for reasons not supported by clinical guidelines and in conflict with the Choosing Wisely recommendations. Understanding why physicians use thyroid ultrasound and factors that correlate with clinically unsupported reasons is essential to creating targeted educational interventions to improve physician adherence to guidelines, reduce unnecessary imaging, and curb the overdiagnosis of low-risk thyroid cancer.

Thyroid

BENIGN THYROID DISEASE AND HEALTH DISPARITIES IN THYROID I

Quality of Life After Thyroidectomy for Patients with Hashimoto's Disease and Persistent Symptoms

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