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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MON-501

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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SAT-430

Objective: To determine whether thyroidectomy improves quality of life in patients with Hashimoto's thyroiditis with persistent symptoms despite biochemical euthyroidism.
Study Design: A retrospective cohort study of patients undergoing thyroidectomy for Hashimoto's thyroiditis.
Setting: Tertiary referral center.
Subjects and Methods: Included patients underwent thyroidectomy for Hashimoto's thyroiditis at our institution between 2014 and 2018. The following variables were collected: age, race, body mass index (BMI), pre-operative symptoms, pre-operative thyroid peroxidase antibody (TPO Ab), thyroglobulin antibody (Tg Ab) thyroid stimulating hormone (TSH), free T4, specimen weight, and presence of thyroiditis or malignancy on the pathology report. The primary outcome was general health score on the Short Form-36 Health Survey (SF-36) ranging from 3–35 months postoperatively. Secondary outcomes included an additional questionnaire specifically addressing disease management after surgery as well as any adverse outcomes.
Results: 19 patients were included in the study. 18 of the 19 patients were female with a mean age of 48 years (SD 13.6 years). The majority of patients were Caucasian. There was no significant difference between the general health score of the Hashimoto's thyroiditis patients postoperatively compared to a healthy control population. (66.9 vs. 74.1; 95% CI [-16.9 + 2.5], p = 0.16). There were also no significant differences between groups within the 7 SF-36 subscores. Elevation in pre-operative TPO Ab correlated with lower reported post-operative energy levels (r = -0.63, p = 0.016) and emotional well-being (r = -.55, p = 0.041). 87.5% (14/16) of respondents reported to be moderately or extremely happy with their decision to proceed with surgery.
Conclusions: Quality of life in patients with Hashimoto's thyroiditis who undergo thyroidectomy is equivalent to the general population, and the majority of patients are satisfied with the decision to have undergone surgery. Thyroidectomy is a consideration for patients with Hashimoto's disease and persistent symptoms despite optimization on medical therapy.

Neuroendocrinology and Pituitary

NEUROENDOCRINOLOGY AND PITUITARY

Analysis of Perioperative Prophylactic Steroid for Pituitary Surgery Using a National Inpatient Database in Japan

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MON-274

Abstract: <Background> There is not enough evidence regarding the need for perioperative prophylactic steroid at the time of transsphenoidal pituitary surgery [1], and it is currently administered empirically. In patients with normal preoperative adrenal function, the meta-analysis of nonrandomized studies [2] and only two randomized controlled studies [3,4] suggested no necessity to routine steroid administration, but the number of the studies subjects was small. Analysis using big data has not been performed. Therefore, this study examined the relationship between perioperative steroid administration and complications using a nationwide Diagnosis Procedure Combination database in Japan.
<Method> We performed a retrospective study on patients who had undergone pituitary surgery (excluding meningiomas, Cushing's disease, and preoperative steroid administration) between July 2010 and March 2016. To this end, a nationwide inpatient database in Japan was used, and the patients were divided into a prophylactic steroid-administered group and a nonadministered group. Patients' complications, including hypopituitarism, diabetes insipidus, meningitis, hyponatremia, and hypokalemia, and discharge status were examined by inverse probability of treatment weighting using propensity score.
<Result> A total of 7,725 inpatients received prophylactic steroids, whereas 864 did not. The inverse probability of treatment weighting using propensity score revealed that the incidence of hypopituitarism and diabetes insipidus was significantly higher in the prophylactic steroid group than in the nonsteroid group (3.5% vs. 0.5%, $P < 0.001$ and 9.6% vs. 6.0%, $P = 0.001$, respectively). There were no significant differences in the incidences of meningitis, electrolyte abnormalities, and length of hospital stay.
This study using big data suggests that prophylactic steroid administration may not be necessary in patients with an intact adrenocortical function undergoing transsphenoidal pituitary surgery.

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Diabetes Mellitus and Glucose Metabolism

DIABETES COMPLICATIONS II

Ziprasidone Induced Diabetic Ketoacidosis

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MON-675

Introduction: Atypical antipsychotics are known to cause increased risk of type 2 Diabetes Mellitus (DM2), dyslipidemia, and weight gain (metabolic syndrome). Clozapine, a commonly used anti-psychotic, is known to cause Diabetic Ketoacidosis (DKA), but literature has rarely shown an association of DKA with Ziprasidone.
Case: A 42-year-old African American female presented with two weeks of polyuria, polydipsia, 23-pound weight loss, blurriness of vision, and dry mouth. Before the