surgery. On the 5th day after the surgery, TSH was undetectable, FT4 was 3.3(range 0.71 - 1.48), while FT3 was normal 2.66 (range 1.71 - 3.7). Thyroglobulin were high (range 2.8 - 40.9) while Thyroglobulin antibodies, anti TPO and TRAB were all normal. Thyroid US was not done because of technical difficulties given the patient neck surgery. The patient had Burch-Wartofsky Point Scale of 35 at that time. He was started on a beta-blocker and heart rate improved to 110-120. Over the next 5 days his FT4 Improved and was normal by day 10 after the surgery. His TSH and Ft4 showed hypothyroidism 6 weeks after the surgery and levothyroxine was started. He was seen 4 months after the surgery with high TSH concerning for medication noncompliance.

Conclusion:

On our review of literature this would be the second case report of a thyrotoxicosis after total laryngectomy and hemithyroidectomy. Unique to our case is the devolvement of hypothyroidism after the initial phase of thyrotoxicosis resolved while in the other case reported in literature the patient did not develop hypothyroidism. Subsequent hypothyroidism in our case could be from underlying subacute lymphocytic thyroiditis or secondary to hemithyroidectomy.

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Tumor Biology

ENDOCRINE NEOPLASIA CASE REPORTS I

Mediastinal Paraganglioma: A Rare Presentation of a Rare Tumor

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SUN-908

MEDIASTINAL PARAGANGLIOMA: A RARE PRESENTATION OF A RARE TUMOR

BACKGROUND

Paragangliomas (PPGL's) are extra-adrenal chromaffin-cell originating tumors that arise from the para-aortic ganglia and are exceptionally rare making up only 1% of the mediastinal tumors. They are slowly growing and highly vascular tumors associated with high morbidity and mortality due to proximity and invasion into the heart, great vessels. The majority of them are asymptomatic and hence discovered incidentally. Surgical resection remains the standard of care with good long term survival. We describe a case of a young male with middle mediastinal PPGL who remained asymptomatic despite large functional tumor.

CLINICAL CASE

A 38-year old Arab male with no previous smoking history was referred to our hospital for evaluation of mediastinal mass that was incidentally noted on an echocardiogram done 1 year ago in his home country when he presented with intermittent exertional shortness of breath for 10 years. The workup done there with CT chest revealed a large mediastinal mass measuring 10.4×8.8×8.6 cm extending into ascending aorta, right pulmonary artery, right superior pulmonary vein, right and left atria as well as the main bronchi bilaterally invading the superior vena cava. However, he had no further treatment until he was seen 1 year later in the US at another institution where biochemical testing showed elevated plasma norepinephrine of 2697 (70-750 pg/ml, supine), dopamine 7667 (<30 pg/ml). 24hr-urine studies showed elevated normetanephrine of 3418 (111-419 mcg/24hr), metanephrine 3488 (200-614 mcg/24hr), and Homovanillic acid (HVA) 51.5 (<0.8 mg/24hr). He underwent endobronchial ultrasound with mediastinal tissue biopsy of the mass that revealed pheochromocytoma. The patient was subsequently referred for cardiovascular intervention at our hospital and endocrinology was consulted for pre-operative preparation. One week before surgery, he was started on doxazosin 2mg daily followed 3 days later by propranolol 10 mg twice daily and recommend high salt and fluid intake. The patient underwent surgical resection of the mass and pathology showed mediastinal PPGL. The postoperative course was complicated by bradycardia with the placement of a permanent pacemaker. He recovered well after surgery with the resolution of symptoms and a significant decline in catecholamines to urine normetanephrine of 385 mcg/24hr and metanephrine 497 mcg/24hrs. There was no evidence of metastatic or residual disease on follow-up CT chest 5 months later.

CONCLUSION

There are limited case reports of PPGL in the middle mediastinum. This case highlights that mediastinal PPGL's can remain clinically silent for many years prior to the presentation which can lead to delayed diagnosis, yet a strong collaborative team approach between oncology, cardiovascular surgery and endocrinology can confer favorable clinical outcome.

Neuroendocrinology and Pituitary

NEUROENDOCRINOLOGY AND PITUITARY

Prolactin to Testosterone Ratio Predicts Pituitary Pathology in Hypogonadal Men with Mild Hyperprolactinemia

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MON-275

Background: Serum prolactin (PRL) and testosterone (T) levels are routinely evaluated in men presenting with clinical symptoms of hypogonadism. Persistent mild elevations in PRL are often benign, but may reflect structural pathology. Though pituitary magnetic resonance imaging (pitMRI) is often obtained to assess for anatomic lesions, it remains unclear how to optimize screening in hypogonadal men with mild hyperprolactinemia.

Objective: We sought to identify risk factors associated with detection of pituitary pathology among hypogonadal men with mild hyperprolactinemia and aimed to improve selection of those indicated for pitMRI.
Methods: A retrospective, case-control study was performed. Men under 75 presenting with clinical hypogonadism and mild hyperprolactinemia (15-50 ng/dL) who underwent pitMRI at a single tertiary care center were included. Individuals presenting with clinical symptoms strongly suggestive of a pituitary mass (e.g. visual change, headache, panhypopituitarism) were excluded, as were patients who had been previously evaluated for hyperprolactinemia. Age, body mass index (BMI), presenting symptoms, prescription history, and pitMRI findings were abstracted from the electronic medical record.
Results: 141 men met inclusion criteria. A minority exhibited pituitary pathology (n=40, 28%) with adenoma being the most common finding (n=35, 88%). Empty sella variants and non-neoplastic cysts comprised the remainder of pathologies (n=5, 12%). Mean PRL was higher in men with pituitary pathology than in controls (27.2 vs. 23.3 ng/mL; p=0.0106), while mean T levels were lower (190 vs 287 ng/dL; p=0.0001). Mean PRL/T ratio values were greater in cases (0.34 vs. 0.08; p<0.0001), as were median values (0.15 vs. 0.09). PRL/T outperformed PRL or T in predicting positive pitMRI findings (AUC: 0.75 vs. 0.64 vs. 0.71, respectively). A PRL/T ratio >0.08 was 90% sensitive, detecting 36/40 lesions, and 42% specific, excluding 42/101 patients with normal anatomy (p=0.0003). If applied to the study cohort, this cutoff would have reduced pitMRI burden by 30%. Ordering pitMRI when the PRL/T ratio >0.08 or when PRL >25 increases sensitivity (98%, 39/40 lesions detected) at the cost of decreased specificity (32%, 32/101 controls excluded). Presenting symptoms including fatigue, decreased libido, erectile dysfunction, and gynecomastia did not vary between cases and controls. Though patients with pituitary lesions were more likely to receive dopamine agonists than controls (40% vs. 23%; p=0.0392), they were not more likely to be prescribed testosterone, antipsychotics, or antidepressants.
Conclusions: The PRL/T ratio is superior to PRL or T alone in identifying pituitary pathology in hypogonadal men with mild hyperprolactinemia. Ordering pitMRI when the PRL/T >0.08 is sensitive for detecting pituitary lesions and may reduce pitMRI burden in this population by 30%.

Pediatric Endocrinology

PEDIATRIC ENDOCRINE CASE REPORTS I

Pulmonary Hypertension in a Patient with Neonatal Graves Disease

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SAT-075

INTRODUCTION
Neonatal hyperthyroidism is a transient disorder seen in neonates born to mothers with current or past history of Graves' disease. We present a rare case of a Neonatal Graves' disease with pulmonary hypertension (PH) which completely resolved with treatment of hyperthyroidism.

CLINICAL CASE
Baby B was a 3200 g term male born to a 40-year-old hypothyroid mother. He was prenatally diagnosed with Trisomy 21 and coarctation of the aorta (CoA). He developed respiratory distress soon after birth and was admitted to the NICU. His echocardiogram (echo) showed a large patent ductus arteriosus (PDA) and increased tortuosity of juxtaductal aorta with no significant gradient. Near-systemic pulmonary artery pressure was noted in the absence of any evidence of left heart failure. Cardiology determined his CoA to be hemodynamically insignificant and not the cause of his PH. Successive trials of 100% FiO2, Nitric Oxide (NO), and Sildenafil resulted in only minimal improvement of his PH. Thyroid function tests (TFT) obtained on day of life (DOL) 8 showed serum TSH of 0.01 uIU/ml [0.87 - 6.43] and FT4 of 3.5 ng/dl [0.9 - 1.5]. Further interaction with the mother revealed that she had a history of Graves' disease treated with radioactive iodine (RAI) and resultant hypothyroidism. Baby B's TSH receptor antibody (TRAb) and thyroid stimulating immunoglobulin levels were elevated at 7.38 IU/l [0-1.75] and 3.38 IU/l [0-0.55], respectively.
He was thus diagnosed with Neonatal Graves' disease and was started on Methimazole (MTZ) 1 mg/kg/day on DOL 8. Subsequently, potassium iodide was added. FT4 showed gradual normalization by DOL 15. Beta blockers were not added due to absence of hypertension or significant tachycardia. Serial echo showed improvement of PH, consistent with the decline in FT4 levels. Sildenafil and FiO2 were slowly weaned and discontinued by DOL 30. MTZ was then tapered and discontinued. A final echo showed complete resolution of PH, unobstructed aortic arch and persistent PDA.

DISCUSSION
Neonatal hyperthyroidism occurs due to transplacental transfer of TRAb from mother to fetus, stimulating the fetal thyroid to make excessive thyroid hormones. Risk correlates with TRAb titers in the mother. Our patient had pulmonary hypertension which did not resolve with FiO2, NO and Sildenafil. However, it showed complete resolution with normalization of FT4 levels by antithyroid drugs. Hyperthyroidism commonly presents with systemic HTN, but we found 3 neonatal cases in the literature presenting with PH that resolved with treatment of hyperthyroidism. The mechanism is unclear, but hypotheses include increased clearance of pulmonary vasodilators and decreased clearance of pulmonary vasoconstrictor and decreased surfactant production/function(1).

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Thyroid

BENIGN THYROID DISEASE AND HEALTH DISPARITIES IN THYROID II

Thyroid Stimulating Hormone Levels Amongst Reproductive Age Latinas: Findings from the ELLAS Study

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