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**Introduction:** Hashimoto's thyroiditis (HT) is an autoimmune disease that presents with musculoskeletal symptoms like proximal muscle weakness, stiffness, pain or cramps in the majority of patients. Rhabdomyolysis which is a breakdown of the skeletal muscles, is a rare but serious manifestation of hypothyroidism and if occurs, it is usually related to trauma, strenuous exercise or use of statins. We report a patient with unrecognized Hashimoto's thyroiditis who presented with severe rhabdomyolysis without reported history of strenuous exercise, seizures or statin use and surprisingly, He did not have any complications from rhabdomyolysis like electrolytes abnormalities or acute kidney injury. **Case Report:** A 56-year-old man with no reported past medical history who presented with severe generalized weakness, bilateral leg pain, and recurrent falls for three months. He also reported constipation, fatigue and dry skin. Denied any prior personal or family history of thyroid disease, seizure disorder, statin use, trauma or tick bite. He was afebrile with a heart rate of 80 beats/minute, a blood pressure of 126/71mmHg. Initial laboratory testing showed normal metabolic panel, elevated thyroid stimulating hormone 30.6 uIU/mL (Range 0.27-4.2 uIU/mL), FT4 0.1 ng/dL (Range 0.93-1.7ng/dL), TPO Ab 300IU/mL (N<43IU/mL), Creatine Kinase (CK) level 10,000U/L (N<200U/L), ESR 27 mm/Hr (N<20mm/Hr) and Lactate Dehydrogenase 621U/L (N <225U/L). A muscle biopsy was done to rule out polymyositis as a cause of his severe muscle pain, weakness and tenderness and it was negative. Patient was diagnosed with HT with associated rhabdomyolysis after excluding other causes of rhabdomyolysis. Supportive treatment with intravenous fluids and Levothyroxine were initiated and resulted in dramatic clinical improvement. **Conclusion:** Rhabdomyolysis is a rare but potentially a serious complication of hypothyroidism. Screening for hypothyroidism in patients with elevated muscle enzymes should be considered, as early diagnosis and prompt treatment of hypothyroidism is essential to prevent rhabdomyolysis and its consequences like acute kidney disease and electrolytes abnormalities. Appropriate fluid resuscitation is the mainstay therapy for AKI prevention and should be initiated in a timely manner. **Key Words:** HT: Hashimoto's Thyroiditis, ESR: Erythrocyte Sedimentation Rate, TPO Ab: Thyroid Peroxidase Antibody, TSH: Thyroid Stimulating Hormone, FT4: Free Thyroxine level, AKI: Acute Kidney Injury.

## Thyroid

### THYROID DISORDERS CASE REPORT

#### *A Case of Thyroid Eye Disease Revealed During Secondary Adrenal Insufficiency*

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**Introduction:** Thyroid eye disease (TED) or Graves' orbitopathy (GO) is an autoimmune disease of the retro-orbital tissues. GO is mostly associated with hyperthyroidism in 90% of patients; however, it may coexist with

hypothyroid conditions in 5% of cases. **Clinical Case:** A 56-year-old male with a past medical history of autoimmune diseases including hypothyroidism and Ulcerative Colitis on chronic steroid therapy presented to the emergency department with nausea, fatigue, weight loss, and muscle weakness. The patient stated that his glucocorticoids were abruptly discontinued a month prior to his current presentation. On examination, vitals were stable. The patient was somnolent with a depressed mood. He had bilateral periorbital edema and bilateral eyeball protrusion, left more pronounced than right. Extraocular muscle movement revealed a delay in the lateral movement of the left eye causing double vision on exam. He had no staring look or lid lag. The thyroid gland was normal in size and contour. Initial Laboratories revealed a white blood cell count of 6.7 K/mcL (4-10 K/mcL) with 18% eosinophil count (0-5%). Cortisol at 8 AM was 2.9 mcg/dL (4.3 -22.4 mcg/dl). The patient was managed for secondary adrenal insufficiency and restarted immediately on Prednisone. A review of a recent CT scan of the head revealed bilateral proptosis with no signs of compressing lesions. Further thyroid studies revealed TSH of 2.9 mcIU/mL (0.3-3.7 mcIU/mL), free T4 of 0.8 ng/dL (0.75-2.0 ng/dL), free T3 of 1.6 ng/dL (2.4-4.2 ng/dL), TPO antibodies <0.3 IU/mL (0.0-9.0 IU/mL) and TSH receptor antibodies 0.90 IU/L (reference range <1.75 IU/L). The patient was then diagnosed with Hypothyroid Grave's ophthalmopathy with negative antibodies given the evidence of proptosis on CT and exam revealing extraocular muscle movement restriction causing diplopia. The patient had a unique presentation of TED with hypothyroidism and asymmetric ophthalmic signs that were only manifested after the patient discontinued the prednisone and therefore unmasking the underlying disorder. Fortunately, in June of 2020, the US Food and Drug Administration (FDA) approved Teprotumumab (an insulin-like growth factor 1 [IGF-1] receptor inhibitor) for the treatment of Graves' orbitopathy based on the findings from two 24-week trials comparing teprotumumab with placebo in 171 patients with active, moderate-to-severe orbitopathy. (1) Our patient was started on Levothyroxine along with Prednisone and referred for ophthalmology evaluation for possible qualification for Teprotumumab treatment. **Conclusion:** Clinician awareness of the unusual presentations of TED would allow for early recognition and prevention of progression, especially with the recently approved treatment modality. **References:** (1) Teprotumumab for Thyroid-Associated Ophthalmopathy. Smith TJ Et al. N Engl J Med. 2017;376(18):1748.

## Thyroid

### THYROID DISORDERS CASE REPORT

#### *A Case of Thyroid Storm With Takotsubo Cardiomyopathy and Multi-Organ Failure: What Is the Primary Cause of Hemodynamic Instability and How Do We Treat it?*

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**Introduction:** Thyroid storm is a rare but life-threatening emergency. Multi-organ failure has been recognized as the