Physical exam positive for exophthalmos, grade III goiter, crackles in both lung bases, pretibial myxedema and fulfilling criteria for a thyroid storm (65 points in Burch-Wartofsky Point Scale).

**First Lab Results:** TSH<0.005µU/mL, free T4>7.7ng/dl and TRAB 37.8UI/L. Chest ray: Global cardiomegaly and pulmonary edema. EKG: Narrow complex supraventricular tachycardia. Thyroid ultrasound: Intrathoracic goiter. Transesophageal echocardiogram: Severe mitral insufficiency (Carpentier Type I and IIIB), right cavities and left ventricular enlargement, preserved right ventricular function and severe pulmonary hypertension (PSAP 71-76 mmHg).

First treated with thiamazole, hydrocortisone IV, cholestyramine and sedation, falling time after into ventilatory failure and developing delirium, requiring invasive mechanical ventilation. Tested positive for COVID-19.

Starts preparation with Lugol and undergoes Total Thyroidectomy. After surgery develops severe hypocalcemia secondary to transitory hypoparathyroidism.

During hospitalization presents multiple infections including pneumonia (Pseudomonas Aeruginosa), lung aspergillosis, bacteriuria (Enteroccocus Faecium) and candiduria (Candida Albicans and Glabrata), each one treated with multiple antibiotics and vasoactive drugs. Once stable, mitral valve replacement is realized, after which, the patient progresses favorably being discharged with programmed ambulatory controls.

**Conclusion:** We report a case of a patient who was presented with positive thyroid storm criteria associated with heart failure and severe mitral valve insufficiency. The case gets complicated as multiple infections take place, including COVID-19. Fortunately, because of the early and aggressive multidisciplinary management, the patient evolved favorably, overcoming the life-threatening conditions she went through.

**Key Words:** Thyroid storm, mitral valve insufficiency, heart failure.

**Bibliography:** Klein I, Danzi S. Thyroid disease and the heart. Circulation. 2007 Oct 9;116(15):1725-35. doi: 10.1161/CIRCULATIONAHA.106.678326. Erratum in: Circulation. 2008 Jun 22;117(3):e18. PMID: 17923583.

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**Thyroid**

**THYROID DISORDERS CASE REPORT**

**Monitoring Foetus and Neonatal Outcomes in Patients With Current or Previous History of Hyperthyroidism**

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**Aim:** Graves’ hyperthyroidism can be associated with persistent TSH-receptor antibody (TRAB) and need for antithyroid drugs (ATD) during pregnancy warranting careful monitoring during pregnancy and the neonatal period. The aim of this retrospective observational study was to assess the outcomes of babies born of women with current or previous history of hyperthyroidism.

**Method:** All women with previous or current hyperthyroidism were reviewed in the joint antenatal-endocrine clinic. Neonatal alert was instituted for all patients with positive TRAB at 20 weeks and/or requiring ATD into third trimester and included serial growth scans in third trimester, fetal medicine(FM) scan, review of neonate by paediatrician, thyroid function test(TFT) for the neonate on day 2(D2) and further tests as needed.

**Results:** Of the 56 patients treated over a 2 year period, 31 qualified for this study. Thyroid statuses of patients were: active hyperthyroidism at conception=20; Post radioactive iodine (RAI)=4; post thyroidectomy =2; hyperthyroidism in remission prenatally=5. 24 patients were TRAB positive at 20 weeks (Strongly positive(>3xnormal) =10) & 7 were TRAB negative. 16 patients required ATD into 3rd trimester, of whom 11 required until delivery. Presence of any TRAB positivity did not statistically predict continuation or withdrawal of treatment. FM scan was normal in all patients (one patient had hydronephrosis which was deemed not related to thyroid status and resolved spontaneously after birth). Growth Scans were normal in 26 patients. One patient had a large for gestational age fetus which was not related to thyroid status (patient in Graves’ remission, TRAB weakly positive, normal FM scan, normal D2 and D14 TSH in the neonate). 4 patients had small for gestational age fetuses -2 had weakly positive and 1 strongly positive TRAB; all had normal FM scans; 1 neonate had high TSH at D2 and others normal; all neonates had normal TFT at D14. None of the neonates had clinical or biochemical hyperthyroidism on D2. 12 had high TSH on D2 - 10 normalized at D14; the other 2 were discussed with tertiary referral centre, no further medical treatment was advised and normalized spontaneously. 22 had high T4 at D2; at D14, 14 normalized, 4 had persistent high T4 but normal TSH (T4 data not available on 4 but all had normal TSH). Neonates born to mothers who were using ATD at time of delivery had higher probability of having high TSH at D2 compared to those who were not (8/11 vs 4/20, p<0.005). This difference was not statistically significant based on use of ATD at onset of pregnancy (10/20 vs 2/11, p=0.08).

**Conclusion:** Our study showed that no neonates developed overt hyperthyroidism. Use of ATD, especially in third trimester, could be associated with risk of transient biochemical hypothyroidism in neonate. A coordinated multidisciplinary care pathway is required to monitor and manage this complex cohort of patients and neonates.

**Thyroid**

**THYROID DISORDERS CASE REPORT**

**Myxedema Coma Disguised as Alcohol Withdrawal**

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**Introduction:** Myxedema coma is a medical emergency whose symptoms may sometimes mimic other diseases such as alcohol withdrawal.

**Case:** A 64-year-old male with a history of alcohol abuse and bipolar disorder (on no medications) presented to
the emergency department after being found on the floor surrounded by multiple open alcohol bottles. He was a poor historian but reported a previous fall. Vitals on presentation were BP 109/70, HR 110, RR 22, SpO2 of 90% on room air, and rectal temperature of 97.6 F. The remainder of the exam revealed he was alert and oriented to self and place but not time; his neck was supple and no thyroid masses were palpated; he had tremors, head swelling and abdominal tenderness. Labs demonstrated CPK 1300 U/L, Creatinine 1.0 mg/dl, glucose 120 mg/dl, and sodium 142 mmol; urine toxicology was negative and alcohol level was not elevated. He was admitted and treated for suspected alcohol withdrawal and rhabdomyolysis with intravenous fluids and benzodiazepines. However, his mental status continued to decline; he became obtunded and was hypothermic and bradycardic. Thyroid function tests (TFT) revealed TSH 98.9 uIU/mL with free T4 0.27 ng/dl. He was subsequently managed for myxedema coma and given IV levothyroxine and hydrocortisone. He improved clinically after initiation of therapy and was transitioned to oral thyroid replacement. The patient was pending discharge to sub-acute rehab however his hospital course was later complicated by aspiration pneumonia.

**Discussion:** Myxedema coma is a medical emergency as severe hypothyroidism leads to slowed functioning of multiple organs. Risk factors include female gender and age above 60 years; it is seen more commonly in colder months. Symptoms include decreased mental status, feelings of cold and tongue swelling while physical exam may reveal hypothermia, hypoventilation, bradycardia, an enlarged goiter, thinning hair and non-pitting edema. Lab studies usually reveal an elevated TSH with low T4; there may also be hyponatremia and hypoglycemia. Myxedema coma is a clinical and laboratory diagnosis; if there is clinical suspicion for myxedema coma, IV thyroid replacement should be administered promptly without waiting for lab results. Stress-dose steroids should also be administered and TFTs should be monitored every 48 hours. Clinical symptoms usually improve once a week of treatment. Mortality of myxedema coma is reported to be up to 40% in hospitalized patients. Our patient's presentation of suspected alcohol withdrawal masked his diagnosis of myxedema coma.

**Conclusion:** Physicians should keep myxedema coma in the differential for patients who present with suspected alcohol withdrawal and develop worsening mental status and hypothyromia.

**Reference:** DynaMed. (2020, October 22). Myxedema Coma. Retrieved October 23, 2020, from https://www-dynamnedcom.arktos.nyit.edu/topics/dmp-A~AN~T1584563697784.

**Thyroid DISORDERS CASE REPORT**

**Myxedema Coma: Improving Outcomes With Prompt Recognition and Therapy**

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**Background:** Myxedema coma, a misnomer for severe hypothyroidism, is a rare endocrine emergency with an incidence of 1.08 cases per million people per year and a high mortality rate ranging from 30-50%. A delay in diagnosis and treatment worsens the prognosis and increases morbidity and mortality. Delayed management often leads to decompensation, presenting as uncontrolled persistent hypothermia, severe electrolyte derangements, and a potential for ventilator requirement needing ICU care. We present a patient in hypothyroid crisis who was promptly managed in a non-ICU setting who demonstrated a relatively early improvement in vital signs, thyroid lab values, and return to baseline mental status.

**Clinical Case:** A 75 year old female with past medical history of hypothyroidism, atrial fibrillation, hypertension, coronary artery disease, depression, tardive dyskinesia, and dementia presented to the hospital in the month of December due to confusion after a mechanical fall that resulted in a head laceration requiring multiple stitches. Trauma work up included a CT scan of the head that was negative. On presentation, patient was also hypothermic, bradycardiac, hypotensive, and lethargic with an altered mental status. Sepsis work up was negative. TSH was checked on day of admission and found to be significantly elevated to > 100 mcIU/mL, consistent with severe hypothyroidism. Free T4 and total T3 levels were low. Patient was immediately given intravenous levothyroxine 300 mcg followed by oral levothyroxine 125 mcg daily. In addition, intravenous hydrocortisone 100 mg every 8 hours was started until adrenal insufficiency was ruled out with a normal cortisol level. Upon discussion with family, it was learned that patient had not been taking her home medications indicating non-compliance to thyroid replacement therapy as the etiology for her hypothyroid crisis. Within a day of initiating therapy, TSH levels drastically improved with a reduction by 50%. Bradycardia, hypotension, and hypothermia resolved as well. In three days, patient’s mentation improved back to baseline and TSH, free T4, and total T3 continued to normalize.

**Conclusion:** This case demonstrates how prompt recognition of hypothyroid crisis and immediate therapy can lead to early improvement in outcomes such as reversibility of mental status, normalization of vital signs and lab values, prevention of escalation of care to an ICU setting, and overall morbidity and mortality.

**Thyroid DISORDERS CASE REPORT**

**New Onset Recurrent Acute Infectious Thyroiditis in an Adult Patient**

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**Introduction:** Acute infectious thyroditis can be seen in patients with congenital abnormalities of the piriform sinus, underlying autoimmune disease, or the immunocompromised. In most patients, an upper respiratory tract infection precedes the development of the neck abscess. Case description: The patient is a 39-year-old Caucasian woman with history of Hidradenitis suppurativa (HS) and thrombocytopenia who presented to the hospital with sore throat, dysphagia and left-sided neck swelling. She was recently started on Humira for HS. Review of systems was significant for heat intolerance, weight loss, palpitations and