**Identifying Data:**

Full Name: B.S.

Sex: Female

DOB: XX/XX/1962

Race/Nationality: Indian

Primary Language: Hindi

Address: Queens, NY

Date & Time: 01:00PM 02/24/22

Location: NYPQ

Source of Information: Medical records, Daughter & Son – pt not able to give detailed history

Reliability: reliable

Source of Referral: N/A

**Chief Complaint:** AMS, weakness, visual hallucinations, multiple falls, worsening over past 2 weeks

**HPI:**

BS, 60 y/o F, PMHx HTN, HLD, CAD, HFrEF, DM2, multiple myeloma (?), hypothyroidism on levothyroxine 25mcg, BIBEMS 2/18 w/ cc of AMS, weakness w/ multiple falls (on this incidence), & visual hallucinations worsening x2 weeks. Daughter & son primary historians…. (pertinent negatives)...

… In ED pt noted to be lethargic but oriented x3, hypoglycemic (BS 40 – given amp D50), hypothermic (95.8F), bradycardic (HR 57), BP 162/76. TSH 165 being treated by PMD, not following with endocrinology, BUN/Cr 29.9/1.73. Admitted to MICU for myxedema coma.

(this can be in hospital summary)

MICU course: Started on Levothyroxine 100mcg IV daily & hydrocortisone 100mg q8h then q12h (AM cortisol 16.29). Mental status and respiratory status improving – downgraded from BiPAP to sating well on RA. BP elevated 182-162/87-78 – resumed home BP meds except Bisoprolol. Hypothermia & Asx bradycardia (HR 50-60s) remained. Developed prerenal AKI – Tx w/ Lokelma for hyperkalemia. Transferred to internal med at this point but pt readmitted to MICU next day for development of refractory myxedema coma w/ AHHRF & worsening renal fxn. CXR showed Pulm Edema – Tx w/ Furosemide 80mg then resumed home dose of 40mg. Restarted on BiPAP for next 24h. Increased Levothyroxine from 100mcg to 125mcg then to 150mcg IV daily. Hypothermia improved but bradycardia persisted. Readmitted to internal med yesterday 2/23.

Today, 2/24, pt appears lethargic and weak. ABG continues to show respiratory acidosis. Able to eat and drink. Sating 98% on BiPAP. Able to follow commands but slowed movements. Renal fxn worsening (1.73 🡪 2.82). Afebrile, infectious workup negative. Admits to fatigue. Denies SOB, CP, N/V/, cold intolerance (always feels hot), constipation, recent weight gain, hair loss, or dry skin.

**Past Medical History:**

* Hypothyroidism
* Anxiety
* Hypertension
* Hyperlipidemia
* Coronary Artery Disease
* Diastolic Heart Failure (preserved EF) - last echo
* Diabetes Mellitus Type 2
* Open-angle glaucoma
* Anemia 2/2 Multiple Myeloma?? – Per son pt referred to hematology for anemia, underwent BM Bx showing myeloma cells, full body xray negative for lytic lesions, currently scheduled for PET scan. Never received Tx for working diagnosis MM vs MGUS.

**Past Surgical History:**

* Bone marrow biopsy - 2021

*Immunizations*

* Herpes Zoster (Shingrix 2 doses)
* Tdap
* Influenza (annually)
* SARS-CoV-2 (3 doses) - last dose time

preventative medicine

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**Current Medications:**

*Hospital Medications*

* Levothyroxine 150mcg IV daily
* Hydrocortisone 100mg IV q8h
* Amlodipine 10mg PO tablet daily
* Sacubitril-Valsartan 97-103mg PO daily (held b/c of AKI)
* Furosemide 40mg PO tablet daily
	+ Additional Furosemide 80mg PO tablet 1x/dose given 2/21
* ASA 81mg PO tablet daily
* Atorvastatin 80mg PO tablet daily
* Isosorbide Dinitrate 20mg PO TID
* Insulin Glargine 20 units 0.2 U/Kg SC qhs
* Insulin Lispro 1-5 Units SC TID with meals
* Simbrinza 1-0.2% ophthalmic solution 1 drop both eyes q12h
* Latanoprost 0.005% ophthalmic solution 1 drop both eyes qhs
* Paroxetine 10mg PO tablet daily
* Ergocalciferol (Vit D2) 50,000 units PO tablet daily
* Heparin injection 5000 units Subq q8h DVT PPx
* Pantoprazole 40mg IV daily GI PPx
* Miralax 1 packet PO daily GI PPx
* Dextrose 40% oral gel 15g PO q15mins PRN
* Dextrose 50% injection 25g q15mins PRN
* Glucagon injection 1mg q15min PRN

*Outpatient Medications*

* Levothyroxine 25mcg PO tablet daily
* Felodipine ER PO tablet daily
* Sacubitril-Valsartan 97-103mg PO tablet 2x/daily
* Furosemide 40mg PO tablet daily
* ASA 81mg PO tablet daily
* Atorvastatin 80mg PO tablet daily
* Isosorbide Dinitrate 20mg PO tablet TID
* Bisoprolol Furate 10mg PO tablet daily
* Insulin Glargine 20 units (Basaglar Kwikpen) SC qhs
* Ozempic injection 0.2mg 1x/weekly
* Glyburide-Metformin 2.5-500mg PO tablet 2x/daily
* Simbrinza 1-0.2% ophthalmic solution 1 drop both eyes q12h
* Latanoprost 0.005% ophthalmic solution 1 drop both eyes qhs
* Paroxetine 10mg PO tablet daily
* Ergocalciferol (Vit D2) 50,000 units PO tablet daily

**Family History:**

* Daughter – hypothyroidism, living (30 y/o)
* Son – living & healthy (26 y/o)
* Mother – Hx unknown deceased?
* Father – Hx unknown

**Social History:**

* Habits – No alcohol use. Never smoker. No reported illicit drug use
* Travel – Denies recent travel
* Occupation – retired
* Marital History – Single, divorced
* Diet – Indian Cuisine
* Sleep – Snoring causing pt to awaken several times throughout the night gasping for air
* Exercise – independent or partially depending ….with all ADL: At baseline can ambulate short distances with cane. Family notes pt normally able to walk to bathroom with cane without assistance from them but has not been able to last two weeks since weakness started. Now becomes SOB with any ambulation.
* Sexual History – Not currently sexually active. Previous Hx w/ men.

**Review of Systems:**

* General
	+ **Admits to generalized weakness/fatigue**
	+ Denies weight loss, loss of appetite**,** fever/chills/night sweats
* Skin, hair, nails
	+ Denies rash, pruritis, excessive sweating, pigmentations, moles, change in hair distribution.
* Head
	+ Denies headache, vertigo, or new head trauma
* Eyes
	+ Admits to wearing glasses – last eye exam 1 year prior
	+ Denies visual disturbances or photophobia.
* Ears
	+ Denies, pain, discharge, tinnitus, hearing loss, hearing aids, or feeling of fullness
* Nose/Sinuses
	+ Denies epistaxis, congestion, or discharge
* Mouth and Throat
	+ Denies bleeding gums, sore tongue/throat, mouth ulcers, voice changes, or dentures. Last dental exam unknown
* Neck
	+ Denies swelling/lumps, stiffness, or decreased ROM
* Pulmonary System
	+ **Admits to Dyspnea on exertion - sleeps on any pillows - is this baseline? -**
	+ Denies cough, wheezing, hemoptysis, cyanosis, orthopnea, or PND
* Cardiovascular System
	+ Denies chest pain, known murmur, palpitations, irregular heartbeat, or syncope
* Gastrointestinal System
	+ Denies decreased appetite, intolerance to specific foods, N/V/Constipation, mild abdominal pain,diarrhea, dysphagia, pyrosis, flatulence, jaundice, changes in bowel habits, hemorrhoids, rectal bleeding/blood in stool.
* Genitourinary System
	+ Denies incontinence, changes in frequency, nocturia, oliguria, polyuria, abnormal color of urine, flank plain, or dysuria
	+ Sexual History – refer to Social Hx
* Nervous System
	+ **Admits to generalized weakness, loss of strength, changes in cognition/mental status**
	+ Denies changes in memory, seizures, headache, loss of consciousness, & ataxia
* Musculoskeletal System
	+ Denies deformity, swelling, redness, pain
* Peripheral Vascular System
	+ Denies intermittent claudication, coldness/trophic changes, varicose, or color change
* Hematologic System
	+ No Hx of DVT/PE, anemia, or lymph node enlargement
* Endocrine System
	+ **Admits to heat intolerance**
	+ Denies polyuria/polydipsia/polyphagia, cold intolerance, excessive sweating, or hirsutism
* Psychiatric
	+ **Admits to Hx of anxiety – treated by PMD**
	+ Denies Hx of depression, obsessive/compulsive disorder, or other psychiatric illnesses

**PHYSICAL EXAM**

Vital Signs:

BP: 183/64mmHg – lying supine, L arm RR: 16 breaths/min Pulse: 58 bpm

T: 97.7F(oral) O2 SAT: 98% on BiPAP (settings?)

Height: 5’5 inches Weight: 220 lbs BMI: 36.61 kg/m2

General Appearance: Lethargic. Oriented to person & place. No acute distress. Not diaphoretic. Appears reported age and well groomed. Obese body habitus. General weakness.

Head: normocephalic, atraumatic.

Eyes: **Ptosis b/l. No periorbital edema.** PERRLA. No strabismus/exophthalmos. Sclera white, cornea clear, conjunctiva pink. No erythema of lacrimal sack. EOM intact with no nystagmus. Wearing prescription glasses.

Ear: Appropriate in size. No lesions/masses/trauma visualized on external ear.

Nose: Symmetrical, no external masses/lesions/deformities/trauma/discharge.

Mouth & Throat:

Lips: Pink and moist. No cyanosis, lesions, or ulcerations

Oral Mucosa: Pink &Moist. No masses/lesions noted. No leukoplakia.

Palate: Pink. No visible lesions/masses/scars.

Teeth: Teeth mostly intact with multiple visible dental carries. All teeth have appropriate shape.

Gingivae: No hypertrophy or recession. Unremarkable

Tongue: **Macroglossia.** pink, well papillated. Frenulum intact. No masses/lesions/deviation.

Oropharynx: Hydrated, no exudate/masses/lesions/erythema/postnasal drip/foreign bodies noted. Grade 1 tonsils. Uvula pink, midline with no lesions or edema.

Neck: **Palpable Goiter (mass - descriptive).** Trachea midline. No lesions/pulsations noted. No stridor noted. No cervical adenopathy. No carotid pulses/thrills/bruits heard on auscultation.

Cardiovascular: PMI located at the 5th ICS in midclavicular line. Carotid pulses are 2+ bilaterally without bruits. **Bradycardic**, regular rhythm. No murmurs. Normal S1 & S2. No splitting of S2 or friction rubs appreciated.

Pulmonary: Chest symmetrical with no deformities or trauma. Lat/AP diameter 2:1. Normal chest expansion and diaphragmatic excursion. **Decreased breath sounds with wet crackles over the b/l lower lobe.** No rhonchi/wheezing present. **Pt not using BiPAP during physical exam – temporarily removed by daughter for feeding. Percussion deferred.**

Abdomen: Abdomen symmetric and protuberant**. Striae present.** No scars or pulsations noted. **Bowel sounds are normoactive in all 4 quadrants**. No aortic/renal/iliac/femoral bruits heard.

Skin: Warm and moist. **No generalized myxedema.** Non-icteric. No tattoos noted. No visible moles.

Hair: **Brittle and sparse in quantity.** Average distribution. No seborrhea/lice/dandruff noted

Nails: Capillary refill <2 seconds in bilateral upper and left lower extremities. Appropriate color, shape, and thickness.

Musculoskeletal: No erythema / ecchymosis / atrophy or deformities in bilateral upper and lower extremities.

Peripheral Vascular: Warm to touch bilaterally. 2+ pulses throughout. **No edema** or ulcerations. Calves equal in circumference. No palpable cords bilaterally. No palpable epitrochlear adenopathy.

Neurological: Peripheral sensations intact on feet bilaterally. **A&O x person & place but not time.** Able to follow commands. **DTR 2+ throughout.**

**BiPAP Settings:**

Airway: noninvasive ventilation

Mode: spontaneous/timed

EPAP 4cmH2O

IPAP 12cmH2O

FiO2 30%

**Lines/Drains/Airway Status**

-Peripheral IV 2/18/22 Left antecubital

-Peripheral IV 2/23/22 R anterior forearm

-Peripheral IV 2/23/22 R anterior hand

-Urethral Catheter Silver Allow 16 Fr 2/22/22

**Labs:**

*Completed 2/23/22*











-Blood cultures negative x4 days

-SARS-CoV-2 negative x4 days

*Thyroid Panel:*

-TSH 165 (admission) 🡪 68.02 mIU/mL (today)

-Free T4 0.54 🡪 O.65 ng/dL

-Total T3 0.40 🡪 59.9 ng/dL

-Free T3 1.3 pg/mL (no comparison)

*Cortisol AM:* 16.29mg/dL

**ABG:**

|  |  |
| --- | --- |
| *2/21*pH 7.266 ↓PCO2 60.6 ↑PO2 44.4 ↓O2 Sat 75.5%Base excess -.05 | *2/23*pH 7.287 ↓PCO2 55.1 ↑PO2 115 ↑O2 Sat 97.5Base excess -1/1 |

**Imaging Findings:**

Completed 2/23/22

*CXR:*

Lungs/pleura: worsening pulmonary edema

Cardiomediastinal silhouette: Enlargement of cardiac silhouette which can reflect pleural effusion or cardiomegaly

Other: degenerative changes in spine

*TTE:*

Severe concentric LVH. Abnormal E/e ratio 32.8 suggestive of elevated filling pressures. EF 60-65%.

*CT Head*

No mass effect or ICH. Chronic microvascular ischemic changes. Small frontal meningioma unchanged from prior imaging

*CT Spine*

No evidence for acute traumatic injury of cervical spine

*US Renal*

Echogenic b/l kidneys suggestive of underlying medical renal disorder. No hydronephrosis.

**EKG Findings:** NSR with bradycardia, ventricular rate 52 bpm

**Differential Diagnosis:**

1. Hypoglycemia
	1. Secondary to myxedema coma vs concomitant adrenal insufficiency vs home glyburide + insulin vs decreased renal fxn
2. AMS
	1. Secondary to myxedema coma vs hypoglycemia vs infection vs electrolyte abnormality
3. Bradycardia
	1. Secondary to myxedema coma vs CHF exacerbation vs Bisoprolol use
4. Hypercapnia
	1. PCO2 increased (212) on ABG likely from chronic CO2 retention. Likely 2/2 OSA given Hx of snoring/awakening at night gasping for air and body habitus but never formally Dx w/ sleep study.
5. Decreased renal function
	1. AKI vs AKI on CKD. Baseline unknown but records show Cr of 0.83 Feb 2020. Cr 1.73 on admission trending up 🡪 2.82 today
	2. RTA 2/2 multiple myeloma vs monoclonal gammopathy of renal significance (MGRS) vs diabetic nephropathy

**Assessment:**

60 y/o F PMHx Hypothyroidism on Synthroid 25mcg, HFpEF, DM2, & Multiple myeloma(?) admitted to MICU for Myxedema coma, transitioned to internal med then readmitted to MICU for refractory myxedema w/ AHHRF and AKI now readmitted to internal med.

**Plan:**

* Endocrine
	+ #Myxedema Coma
		- Trend FT4 & TSH daily
		- C/w IV Levothyroxine 100mcg daily
		- D/C hydrocortisone based on endo rec (AM cortisol levels all WNL)
		- Continue with blankets for improved hypothermia
	+ #Diabetes Mellitus T2
		- Monitor morning FS & before meals, adjust insulin dosage based on glucose level
		- Administer Insulin Glargine 20 units SC at bedtime
		- Administer Insulin Lispro 1-5 Units SC TID with meals
			* BS 150-200 before meal 🡪 +1 unit
			* BS 201-250 before meal 🡪 +2 units
			* BS 251-300 before meal 🡪 +3 units
			* BS 301-350 before meal 🡪 +4 units
			* BS >350 before meal 🡪 +5 units
* Neuro
	+ #AMS
		- 2/2 myxedema coma – see endocrine plan
		- Aspiration precautions
			* Sit upright for feedings
			* Alternate between solid & liquid boluses
			* Slow feedings
			* Avoid medications that may impair cough reflex/swallowing
		- Fall precautions
			* Bed rest
			* C/w foley catheter for voiding
* Cardiovascular
	+ #Bradycardia
		- 2/2 to myxedema coma – see endocrine plan
		- Telemonitoring
		- Hold at home Bisoprolol / Avoid AV nodal blocking agents (BB & nonDHP CCB)
	+ #HTN & #HFpEF
		- Furosemide 80mg given 2/21 for pulm edema on CXR
		- c/w home Lasix 40mg PO 1x/daily
		- f/u ambulatory cardiology referral
* Pulmonary
	+ #AHHRF
		- C/w BiPAP for next 24h except during feedings, reassess O2 sat in AM for step down to 4-6L nasal cannula. Plan to continue BiPAP at night
	+ #OSA
		- C/w BiPAP while sleeping at night
		- F/u ambulatory sleep study referral
* Renal
	+ #AKI on CKD
		- Monitor Creatinine & electrolytes daily
		- Strict I&O
		- C/w Nephrologist recommendations
		- F/u ambulatory nephrologist for renal Bx to determine RTA 2/2 MM vs MGRS vs Diabetic Nephropathy
* Heme/Onc
	+ #Multiple Myeloma(?)
		- Anemia (Hb 9.9) – monitor H&H
		- C/w ambulatory PET scan
		- F/u ambulatory hematologist
* Eye
	+ #Open-angle glaucoma
		- C/w home Latanoprost & Simbrinza
* Psych
	+ #Anxiety
		- C/w Paroxetine 10mg PO daily
* Other
	+ DVT PPx: Hep SQ
	+ GI PPx: Protonix IV (oral diet)
	+ Diet: oral
	+ Code: Full
	+ Disposition: Home with homecare upon improvement and stabilization of condition. D/C date to be determined.