HPI Assignment #2 [Internal Medicine]

Chief Complaint: “I had swelling on my left leg and felt short of breath that got worse” around 10 AM on October 19th.

HPI

Ms. C.S. is a 57-year-old female with a past medical history of type 1 diabetes mellitus, coronary artery disease, chronic kidney disease, hyperlipidemia, and hypertension who presents to the emergency department with progressive left lower leg swelling and shortness of breath over the past week, which acutely worsened around 10 AM on October 19th. She had been receiving outpatient parenteral antibiotic therapy (OPAT) with daptomycin for left lower extremity cellulitis that began one week prior, followed by gradual swelling of the left leg that worsened leading up to her most recent OPAT visit. While at the clinic, providers noted the swelling and new-onset shortness of breath that led to her being transferred to the emergency department. She describes the swelling localized to the left lower leg with associated pain of a 4-5/10. The pain and swelling improve with leg elevation, and she denies any aggravating factors. She reports shortness of breath at rest with orthopnea. Today, she reports generalized weakness, recent diarrhea, and notes a ~20-pound weight gain attributed to the edema, but notes that her pain, swelling, and breathing have improved since receiving treatment with IV Lasix and supportive care, including 2L oxygen on nasal cannula.

Denies fever, chills, cough, palpitations, chest pain, chest tightness, abdominal pain, vomiting, joint pain, headaches, urinary changes, recent trauma, history of DVT, or recent travel.

PMHx

- Diabetes Mellitus 1 → diagnosed 28 years ago, controlled with Glargine & Humalog
- Hypothyroidism → diagnosed in the 2000s, controlled with Levothyroxine
- Hyperlipidemia → diagnosed in the 2000s, controlled with Atorvastatin
- Hypertension→ diagnosed in the 2000s”, controlled with Lisinopril & Amlodipine
- Chronic Kidney Disease → diagnosed 1 year ago, on Lisinopril
- Depression → diagnosed in the 2000s, does not take medications for Depression
- Immunizations: Up to Date, including influenza, COVID-19
    - Has not been vaccinated with Shingrix

PSHx

- Right Lower Leg (Below the Knee) Amputation x 8 years ago, no known complications
- Hospitalized for Osteomyelitis x 8 years ago at NYP/Q, no known complications
- Hospitalized for Cellulitis x 1 week ago at NYP/Q, possible edema and fluid overload due to Daptomycin
- Blood Transfusion x 1 week ago due to low H/H counts at NYP/Q, no known complications

Medications

- Long-Acting Insulin (Glargine) QD AM for DM 1
- Rapid-Acting Insulin (Humalog) QD before meals for DM 1
- Levothyroxine [unknown dose], QD for Hypothyroidism
- Atorvastatin [unknown dose], QD for Hyperlipidemia
- Lisinopril [unknown dose], QD for HTN & CKD
- Amlodipine [unknown dose], QD for HTN
- IV Furosemide [unknown dose], initiated in the hospital for fluid overload
- Daily Supplements/Vitamins: Daily Multivitamin, Probiotics, Vitamin B Complex, Vitamin D
- Patient is compliant with daily medications & supplements/vitamins
- Takes no other medications, vitamins, or supplements

Allergies

- No known drug, food, or environmental allergies.

FHx:

- Paternal/Maternal Grandparents → unknown medical history.
- Mother → history of Diabetes Mellitus 1 and "Heart Problems", passed away due to old age
- Father → history of Diabetes Mellitus 2, HTN, HLD, passed away due to a heart attack at around 60 years old.
- Sister → 52 years old, has Diabetes Mellitus 2 and HTN
- Has No Other Siblings or Children

SHx

- Ms. C.S. is a textile designer who works from home and currently lives with her sister and niece. She feels safe at home and lives with 2 cats. She admits to depression without suicidal ideation and has been feeling more tired recently, which she attributes to her conditions and hospital stay.
- Habits → denies tobacco smoking, alcohol consumption, and illicit drug use.
- Travel → no recent travel
- Diet → describes her typical diet as bad
    - Breakfast: eggs, bacon, cereal; Lunch: burger/sandwich/wrap, or a salad; Dinner: pasta, veggies, meat, potatoes
- Exercise → minimal to no physical activity, walks around at home
- Sleep → before admission was good (roughly 6-8 hours), states that she has been having deep sleeps during her hospital stay, which she says is "good"
- Sexual → used to be sexually active with males, with barrier protection. No longer sexually active. Denies any STIs in the past.

ROS

General – Admits to generalized weakness throughout the whole body, occasional nausea, and gained roughly around 20 pounds with the edema. Denies fever, chills, vomiting, and night sweats

Skin, Hair, Nails – Admits to hair thinning and pressure ulcers. Denies skin color changes, itchiness, and rashes.

Head – Denies trauma, loss of consciousness, headache, confusion, lightheadedness

Eyes – Denies recent changes in vision, conjunctivitis, eye pain, or pruritus. Last eye exam Oct 2024 (no abnormalities)

Ears – Denies ear pain or hearing loss.

Nose/Sinuses – Denies epistaxis, congestion, or discharge.

Mouth/Throat – Denies sore throat, dysphagia. Last dental exam Feb 2024 (no abnormalities)

Neck – Denies neck pain, stiffness, or swelling

Breasts – Denies lumps, discharge, pain, and swelling. Last mammography was in 2012.

Pulmonary – Admits to shortness of breath and orthopnea. Denies cough, wheezing, hemoptysis, or history of DVT/PE

Cardiovascular – Denies chest pain, palpitations, chest tightness

Gastrointestinal – Admits to recent diarrhea. Denies abdominal pain, constipation, blood in the stool, or bloating. Last colonoscopy was done 3 years ago.

Genitourinary – Denies changes in urination, dysuria, or blood in the urine. LMP was about 5 years ago. G0P0.

Nervous – Admits to numbness of the lower extremities. Denies headaches, memory changes, or loss of consciousness.

Musculoskeletal – Admits to weakness of the lower extremities and redness & swelling to the left lower extremity. Denies any joint pain or decreased range of motion. Last podiatrist visit/complete foot exam Dec 2024

Peripheral Vascular – Denies extremity coldness or pain when walking

Hematological – Denies abnormal bleeding & bruising

Endocrine – Denies temperature sensitivity, changes in appetite, and thirst

Psychiatric – Admits to a history of depression and feels more tired recently. Denies anxiety or memory changes/deficits.

Vital Signs [Blue → Done on Classmate]
BP (R/L): Seated 132/58mmHg / 110/66 mmHg

Standing 110/60 mmHg / 108/60 mmHg

P (radial): 78 bpm, regular, 2+ bilaterally

RR: 16 breaths/min, unlabored breathing with no accessory muscle use

T (oral): 97.9 °F

O2 Sat: 97% on 2L via Nasal Cannula

Height: 5 feet 6 in | Weight: 280 lbs | BMI: 45.2

Physical Exam [Blue → Done on Classmate/Would Have Done]

General: AxO3 (person, place, time). Dressed appropriately in a hospital gown with a nasal cannula. Sitting upright without distress and appears adequately nourished with no signs of malnutrition, such as wasting of the temporals. Appears stated age of 57 years old.

Skin: warm and dry, unable to assess skin turgor due to edema of the feet and hands. A pressure ulcer with a bandage is noted in the lower back/hip region. Hands look puffy bilaterally. The left lower extremity presents with a grade 3 pitting edema, erythema, and a demarcated region of cellulitis, marked with a Sharpie margin. There is no cyanosis/erythema/jaundice, other lesions, rashes, or contusions elsewhere. Peripheral pulses (radial) are brisk and 2+.

Hair: normal aging hair loss & shedding seen on the bed. No abnormal hair loss/patches, nits, lice, lesions

Nails: capillary refill <2 seconds in upper & lower extremities. No signs of clubbing.

Head: normocephalic, atraumatic. No masses, lesions, lymphadenopathy, or tenderness to palpation.

Eyes: Symmetrical and appropriate in size OU. No strabismus, exophthalmos, or ptosis. Sclera white, cornea clear, conjunctiva pink. PERRLA & pupils 2mm. EOMs are intact & able to converge with no nystagmus or lid lag. Visual acuity → 20/20 OS, 20/20 OD, 20/20 OU [corrected]. Visual fields are full OU.

Fundoscopy – red reflex is intact OU on fundoscopy. Cup to Disk Ratio is < 0.5 OU. No AV nicking, copper/silver wiring, cotton wool spots, hemorrhages, exudates, or neovascularization seen OU

Ears: Symmetrical and appropriate in size. No lesions, masses, or trauma on external ears. Cerumen was noted in both external auditory canals. No discharge or foreign bodies in external auditory canals AU. TMs are pearly grey, intact with cone of light AU with no signs of perforation or inflammation/bulging. Auditory acuity is intact to finger rub test AU. Weber Test is midline. Rinne Test is AC > BC AU.

Nose: External nose symmetrical with no masses, lesions, deformities, trauma, or discharge. Nares are patent bilaterally. Nasal mucosa is pink. No septum deviation, deformities, lesions, perforations, discharge, or foreign bodies seen on rhinoscopy.

Sinuses: Nontender to palpation over bilateral frontal and maxillary sinuses.

Lips: Pink & moist. No cyanosis, cracks, ulcers, or lesions.

Mucosa: Pink, well hydrated. No masses or lesions seen. No leukoplakia, erythroplakia, or thrush.

Palate: Pink, well hydrated. Hard and soft palates are continuously intact with no lesions, masses, or scars.

Teeth: Poor dentition with dental caries, yellowing of the teeth, and multiple cracked teeth.

Gingivae: Pink & moist. No hyperplasia of the interdental papillae, masses, lesions, erythema, or discharge.

Tongue: Pink & well papillated. No masses, lesions, or deviation.

Oropharynx: No exudates, masses, lesions, or foreign bodies. Tonsils are present without injection or exudate. Uvula is pink with no deviation.

Neck: Trachea is midline. No masses, lesions, or scars seen. Neck is supple & nontender to palpation posteriorly & anteriorly. No lymphadenopathy. No axillary adenopathy

Thyroid: Nontender, soft, and mobile; no palpable masses; no thyromegaly

Cardiac: JVP is 2 cm above the sternal angle with the head of the bed at 30°. PMI in 5th ICS in mid-clavicular line. Chest has a symmetrical rise without deformities or trauma. Chest is non-tender to palpation. Carotid pulses are 2+ bilaterally without bruits. Regular rate and rhythm (RRR). S1 and S2 are distinct with no murmurs, S3 or S4. No splitting of S2 or friction rubs appreciated.

Lungs: Respirations are unlabored, with no use of accessory muscles or paradoxical movements. Clear to auscultation and percussion bilaterally. Vesicular breath sounds are present bilaterally with crackles noted on both lower lobes. No increased or decreased tactile fremitus.

Abdomen: Soft, protuberant, and symmetric with no scars, bruising, or pulsations noted. Bowel sounds are normoactive in all four quadrants without aortic/renal/iliac or femoral bruits. Non-tender to light and deep palpation throughout. Tympanic throughout, no hepatosplenomegaly to palpation, no CVA tenderness appreciated.

Genitourinary & Rectal: No inguinal adenopathy. External genitalia without erythema, lesions, or masses. Vaginal mucosa pink. Cervix parous, pink, and without discharge. Uterus anterior, midline, smooth, and not enlarged. No adnexal tenderness. Pap smear obtained. Rectovaginal wall intact. Rectal vault without masses. Stool brown and hemoccult negative. Stool is brown, and no fecal blood is noted on the gloves.

Nervous: AxO3 (person, place, time). CN II-XII intact:

- CN II: visual fields full by confrontation, visual acuity 20/20 OD, OS, OU corrected, red reflex present, fundoscopy shows no hemorrhages, exudates, cotton wool spots, AV-nicking, copper or silver wiring
- CN III, IV, VI: PERRLA, EOMs intact without pain, pupils 3mm OU, no ptosis or nystagmus
- CN V: Face sensation intact bilaterally, corneal reflex intact, jaw muscles strong without atrophy
- CN VII: Facial expressions intact and clearly enunciate words
- CN VIII: finger rub test intact, Weber midline, Rinne AC > BC bilaterally
- CN IX & X: No hoarseness, uvula midline with elevation of soft palate, gag reflex intact, no difficulty swallowing
- CN XI: Full range of motion of the neck with ⅗ strength and strong shoulder shrug
- CN XII: tongue midline without fasciculation or deviations, good tongue strength

No facial drooping, pronator drift, or slurred speech. Decreased vibration sensation of the lower extremities bilaterally.. Vibration sensation of the upper extremities is intact bilaterally. Recent and remote memory is intact, attention, abstract thinking, and new learning ability are intact. Has good muscle bulk and tone with strength 5/5, no fasciculations. Cerebellar: Rapid alternative movements, finger to nose intact. Gait intact with normal stride, on toes, on heels, and tandem walking intact. Negative Romberg. Sensory- Pinprick, light touch, graphesthesia, stereognosis, and position intact bilaterally

Reflexes	Biceps	Triceps	Brachioradialis	Patellar	Ankle/Achilles	Babinski
Right	2+	2+	2+	2+	2+	Absent
Left	2+	2+	2+	2+	2+	Absent

Peripheral Vascular: (-) Homan's Sign

Assessment

Ms. C.S. is a 57-year-old female with a past medical history of DM 1, CAD, CKD, HTN, HLD, and hypothyroidism presenting with progressive left lower leg swelling and acute shortness of breath at rest and worse lying down. Physical exam shows a grade 3 pitting edema of the left lower extremity, bilateral lower lobe crackles on auscultation, and a ~20-pound weight gain over the past week. Her symptoms developed after recent outpatient treatment with daptomycin for her cellulitis, diagnosed a week ago, concerning for fluid overload due to acute decompensated heart failure, chronic kidney disease exacerbation, or medication-induced fluid retention.

D/Dx [5] – Ranked from Most Important to Least

1. Acute Decompensated Heart Failure
    a. Rationale: Most likely and important given her history of HTN, CAD, CKD, and DM 1 that predisposes her to heart failure. She presents with progressive left lower extremity edema, orthopnea, crackles on auscultation, and 20-pound weight gain, which are signs of fluid overload.
    b. Plan: IV Lasix, Daily Weight & Intake/Output Monitoring, Monitor Electrolytes and Renal Function Closely, Order Echo to assess EF, Continue O2 Therapy, Low-Salt Diet & Fluid Restriction. Consult cardiology for further management and follow-up.
2. DVT
    a. Rationale: Patient presents with unilateral leg swelling, obesity, diabetes, and lack of mobility that raises concern for DVT. Her history of Diabetes and CKD may contribute to hypercoagulability, too. Though the patient lacks tenderness and has a negative Homan's sign, this can be an atypical presentation. DVT can lead to a life-threatening condition that can worsen her condition even more.
    b. Plan: Venous Doppler US of the left lower extremity, D-Dimer, Initiate Anticoagulants if confirmed, monitor for any signs of worsening condition, encourage early ambulation, and involve physical therapy.
3. Chronic Kidney Disease Exacerbation/Acute Kidney Injury
    a. Rationale: The patient has a history of CKD, which predisposes her to fluid retention and edema. AKI or an acute exacerbation can be caused secondary to medications such as daptomycin, leading to fluid overload, making diuresis harder.
    b. Plan: Hold or Discontinue Nephrotoxic Medications, Renal US if there is a post-renal obstruction suspected, Monitor kidney function, electrolytes, weight, and urine output (input/output) daily. Consult Nephrology for further management.
4. Daptomycin-Induced Renal Toxicity
    a. Rationale: Daptomycin can cause rare adverse effects of nephrotoxicity and rhabdomyolysis, especially in those with preexisting CKD. She also takes atorvastatin, which can increase the risk when these 2 medications are used concurrently. Also, her history states that the swelling started and got worse after being treated with daptomycin.
    b. Plan: Monitor renal function and electrolytes. D/C Daptomycin and adjust to another antibiotic for her cellulitis. Monitor for any dark urine and/or muscle pain. Supportive care and monitor urine outputs (input/output). Consult infectious disease for daptomycin alternatives for cellulitis and/or nephrology if renal function declines.
5. Venous Stasis Dermatitis
    a. Rationale: The patient's history of CKD, obesity, and immobility can increase the risk of developing venous stasis dermatitis, leading to skin changes such as erythema, hyperpigmentation, and pruritus. This can cause leg swelling and edema of the lower extremities; however, less likely due to her other predisposing conditions that are suggestive of fluid overload due to cardiac or renal causes.
    b. Plan: Leg elevation and compression socks. Topical emollients & creams to protect the skin barrier. Monitor for any secondary infections and ulcers. Patient education on mobility, hygiene, and recognizing early signs of infection.

Plan for Primary/Most Likely Differential – Acute Decompensated Heart Failure

1. Assess Airway
2. Supplemental O2 PRN (NC vs. NRB)
3. Continuous Cardiac & Pulsoximetry & Vital Signs & Daily Weights Monitoring
4. Medications:
    a. IV Furosemide (Diuretic Therapy) → reduce volume overload & promotes diuresis
    b. Rapid-Acting Insulin (Humalog) → for DM 1 control

5. Labs:
    a. BGL → monitor if she is hypoglycemic or hyperglycemic, given her diabetes history
    b. CBC → check for possible infections, anemia, other hematologic abnormalities
    c. CMP → check for any electrolyte imbalances and trend her kidney function
    d. UA → check for infection, hematuria, glucosuria, or albuminuria since she is a diabetic
    e. BNP → assess response & severity of HF
6. Imaging:
    a. Echo → assess LV EF
7. Lifestyle & Diet:
    a. Sodium & Fluid Restriction to prevent further fluid overload
    b. Encourage early mobilization & elevate legs to reduce peripheral edema
8. Monitor Urine Output (I/Os) → track fluid balance
9. Consult Cardiology for further management of HF & consult Nephrology if kidney function declines
10. Patient Education → discuss medication adherence, diet, and lifestyle modifications to prevent future exacerbations. Educate on daily weight monitoring and recognizing symptoms of fluid overload. Encourage light, regular aerobic physical activity and avoid prolonged immobility to reduce the risk of DVT and fluid accumulation. Inspect feet and legs daily, as she is a diabetic. Follow up with a cardiologist or PCP and continue routine monitoring and screenings.