Fredrique Green **Surgery: H&P 2**

Chief Complaint: non-palpable R foot pedal pulses, non-healing R foot wound

History of Present Illness: F.K. is a 62-year-old F with PMHx poorly controlled T2DM and PSHx R foot 1st, 2nd, 3rd digit amputation in 12/2023 in Guyana who is scheduled for RLE AKA on 5/30/24. She presented to the ED on 5/26/24 for an unwitnessed syncopal episode that occurred earlier that day; patient presented in a hyperglycemic state (glucose: 523) with normal anion gap and WBC 17. On exam, patient noted to have: R foot 1st, 2nd, 3rd toe amputation sites with open wound, non-palpable DP and PT pulses, open ulceration over lateral and dorsal aspects of R foot with exposed bone, seropurulent discharge from lateral aspect of dorsal ulceration, dry gangrene at dorsal aspect of ankle and at 4th and 5th digits, and tenderness of surrounding skin. CT R foot without contrast showed extensive soft tissue loss with exposed bone and active osteomyelitis involving multiple tarsal bones, metatarsals, and phalanges. Podiatry debrided wound on 5/26/24, and signed off with recommendation for vascular surgery intervention since the wound/infection and ischemic changes are above the ankle. Vascular studies were done on 5/29/24 and AKA recommended. Endocrine following for DM management. Internal Medicine signed patient off as medically optimized to proceed with AKA. Currently on cefepime, heparin, insulin, amlodipine, sodium chloride continuous infusion, and DVT and GI prophylaxis.

Allergies: NKDA
Medications:

- Amlodipine PO 10 mg qd
- Cefepime 1,000 mg IV infusion q12h SCH
- Heparin 5,000 units SQ q12h SCH
- Insulin glargine 20 units SQ nightly
- Insulin lispro 0-10 units SQ TID with meals
- Insulin lispro 5 units SQ TID AC
- Juven PO 1 packet BID
- Pantoprazole 40 mg IV qd
- D50W 25g q15min prn
- Morphine IV push 2mg q4hs prn
- Continuous infusions:
  - Sodium chloride 50mL/hr, last rate: 50mL/hr (5/28/24, 20:15)

PMHx: T2DM
PSHx: R foot 1st, 2nd, 3rd digit amputation: 12/2023, Guyana
Social Hx:

- Tobacco: denies
- Drugs: never
- Alcohol: denies
- Sexual: not currently sexually active

FHx: non-contributory

Review of Systems:
General: denies fever, chills, headache, fatigue

Skin/hair/nails: admits RLE discolorations, RLE change in texture. Denies excessive dryness or sweating, moles, rashes, pruritus
Respiratory: denies cough, shortness of breath, sputum production, wheezing, hemoptysis, paroxysmal nocturnal dyspnea
Cardiovascular: denies chest pain, palpitations, irregular heartbeat, edema, syncope, known heart murmur
Peripheral vascular: admits b/l LE edema, denies intermittent claudication, varicose veins

Physical Exam:
BP: 152/75
T: 97.9 °F
HR: 92
RR: 18
SpO2: 97%
Height: 5' 5"
Weight: 146 lb

General Survey: AO3, NAD
Cardiovascular: regular rate and rhythm, normal S1 and S2, no S3 or S4, no murmurs, no friction rubs, no gallops
Lungs: clear to auscultation b/l, no labored breathing, no accessory muscle use
Extremities: non-palpable RLE DP and PT pulses, R foot 1, 2, 3 digit amputation site with open wound and exposed bone, (+) ulceration over lateral and dorsal aspects of R foot with exposed bone, (+) dry gangrene at dorsal aspect of R ankle and at R 4th and 5th digits, (+) 1+ LE edema b/l, (+) tenderness of RLE skin surrounding ulcerations

Differential Diagnosis:
1. RLE osteomyelitis
   a. Rationale: presence of exposed bone, CT findings of active osteomyelitis involving multiple tarsal bones, metatarsals, and phalanges support this diagnosis
2. RLE diabetic foot ulcer
   a. Rationale: poorly controlled PMHx of DM and PSHx of foot amputations, presence of non-healing foot wound
3. Peripheral arterial disease (PAD)
   a. Rationale: non-palpable pedal pulses and PMHx poorly controlled T2DM (strong risk factor), but lack of ischemic rest pain make it unlikely to be primary diagnosis
4. RLE critical limb ischemia 2/2 PAD:
   a. Rationale: presence of tissue loss as ulcerations and dry gangrene, but lack of ischemic rest pain make it unlikely to be primary diagnosis
5. RLE cellulitis 2/2 osteomyelitis and diabetic foot ulcer
   a. Rationale: surrounding skin tenderness secondary to the existing ulcer and osteomyelitis, but does not explain non-palpable pedal pulses or dry gangrene, making it unlikely to be primary diagnosis

Labs:

- CBC:
    - WBC: 13.68 (H)
    - HGB: 7.6 (L)
    - Hemoglobin A1C: 9.2 (H)
    - HCT: 24.5 (L)
- BMP:
    - Sodium: 134 (L)
    - Potassium: 4.6
    - Chloride: 98
    - CO_2: 24
    - BUN: 40 (H)
    - Creatinine: 1.20
    - Glucose: 128 (H)
- Intake/Output 05/28 0701 - 05/29 0700:
    - In: 650 [P.O.:200]
    - Out: 400 [Urine:400]
- Surgical swab culture:
    - Numerous Acinetobacter baumannii/nosocom group (Carbapenem Resistant)
    - Numerous Pseudomonas aeruginosa
    - Few Methicillin Resistant Staphylococcus aureus

Imaging:

- 5/26/24
    - CT head without contrast: No acute intracranial abnormality.
    - DX Tibia Fibula 2 View Right: No evidence of acute bony changes. MRI may be performed for further evaluation.
    - DX Ankle Comp Right: No evidence of acute bony changes. MRI may be performed for further evaluation.
    - DX Foot Comp Right: No evidence of acute bony changes. MRI may be performed for further evaluation.
    - CT foot without contrast Right: Extensive soft tissue loss with exposed bone, previous distal digit amputations and extensive bone destruction indicating active osteomyelitis involving multiple tarsal bones, metatarsals and phalanges
- 5/28/24: lower extremity arterial duplex bilateral:
    - Right profunda artery: Demonstrates <50% (mild) stenosis.
    - Left dist. CFA demonstrates >50% (moderate) stenosis.
    - Left profunda artery demonstrates >50% (moderate) stenosis
    - Left dist SFA demonstrates >50% (moderate) stenosis
    - Left post tibial artery is occluded
    - Right prox SFA is occluded
    - Right ant tibial artery is occluded
    - Right post tibial artery is occluded
    - Right distal popliteal: Demonstrates <50% (mild) stenosis.

Assessment:
F.K. is a 62-year-old F with PMHx poorly controlled T2DM and PSHx R foot 1st, 2nd, 3rd digit amputation in 12/2023 in Guyana who is scheduled for RLE AKA on 5/30/24. CT R foot results confirm diagnosis of active R foot osteomyelitis, and surgical swab culture confirms multidrug resistant infection. PMHx, PSHx, non-palpable RLE pedal pulses, ulcerations, dry gangrene, and b/l arterial duplex results also suggest non-healing diabetic foot ulcer or PAD with secondary critical limb ischemia, but these are not primary diagnosis. Endocrine continues to follow for T2DM control, and patient has been medically optimized by Internal Medicine to proceed with planned RLE AKA.

Plan:

- **RLE osteomyelitis in the setting PAD:**
    - Continue IV cefepime
    - Vascular surgery recommending AKA
    - Plan for AKA tomorrow (5/30/24)
    - NPO from 00:00 5/30/24
    - F/u endocrine and medicine recommendations for medical optimization
    - Contact isolation due to MDRO and MRSA
    - F/u repeat labs
    - Monitor WBC
- T2DM with hyperglycemia: continue insulin glargine, insulin lispro, Juven
- HTN: continue amlodipine
- DVT prophylaxis:
    - Continue with SCDx
    - Continue SQ heparin
- GI prophylaxis: continue pantoprazole
- Diet: regular
    - increase nightly lantus insulin to 20 units
    - continue 5 units of lispro insulin before meals
    - continue current lispro insulin supplemental/correctional scale before meals
    - to be discussed with Surgical team