Andres Hernandez
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4/3/2024

H&P #2 – Internal Medicine

Identifying Data:
Full Name: C.R.
Address: Queens, NY
Date of Birth: 7/28/1965
Age: 58
Date: 3/28/2024, 2:00 am
Location: New York Presbyterian Queens
Religion: Unspecified
Marital Status: Single
Source of Information: Self
Reliability: Reliable
Source of Referral: Self
Mode of Transport: Self

CC: "Left Foot Ulcer" x 3 days

HPI:
58-year-old male with PMHx of DM, HTN, Hepatitis C, and mitral stenosis valve replacement, is admitted into internal medicine with left foot second digit ulcer x 3 days. The patient reports that his daughter noticed the ulcer 3 days ago, and that same day pt. went to NYPQ emergency department. The patient has never had ulcers of the foot before and reports his diabetes has been well controlled on insulin. Patient denies any pain, oozing from the site, or malodor. Currently he denies any fever, chills, chest pain, dyspnea, SOB, abdominal pain, or N/V/D.

Pt was evaluated by podiatry, and discussed with the patient the need for admission but the patient insisted on attending an outpatient pulmonology appointment the following day and therefore declined admission but said he would return. Before discharge pt. agreed to receive broad-spectrum antibiotics cefepime 2 g IV and vancomycin 1000 mg IV. Prescription for Augmentin x 7 days was sent to the pharmacy.

Two days after, the patient returns to hospital for treatment and denies starting any outpatient antibiotic treatment. Denies any changes or worsening symptoms from last encounter. BP 144/88, HR 79, RR 16, Temp 36.7 C. Labs show leukocytosis WBC 13.27, ESR 24. Wound culture positive for MRSA. X-ray of left foot negative for fractures or dislocation.

Past Medical History:
CKD (chronic kidney disease), Diabetes mellitus, and HTN.

Denies any childhood illnesses.

Past Surgical History:
Replacement of mitral valve (N/A, 2016) and knee arthrocentesis (Right, 2016).
No history of transfusions.

Medications:
amLODIPine-valsartan- 5-160 MG Tablet 1 tablet, Oral, Daily
aspirin- 81 mg, Oral, Daily
empagliflozin (JARDIANCE)-10 mg, Oral, Daily
insulin glargine (LANTUS)- 32 Units, Subcutaneous, Daily
NovoLOG FlexPen (Insulin Aspart) - 10 Units, Subcutaneous, 3 Times a Day Before Meals
Supplements: Denies

Allergies:
Shellfish
Denies environmental allergies.

Family History:
Father- passed at 65, MI
Mother -passed at 87, diabetic, blood transfusion.

Social History:
Job- unemployed.
Smoking – Pt. admits smoking cigarettes; 0.5 packs/day for 40.0 years. Admits to marijuana.
Alcohol – Admits; Social drinking, 1.0-2.0 standard drinks of alcohol per week.
Diet – Denies a specific diet.
Exercise – Pt. denies exercise.
Caffeine – Does take coffee at least two cups per day.
Sleep – Pt. admits sleeping varies.
Sexual Hx – No history of STIs.

Immunizations
Up to date on vaccinations including COVID-19 vaccine and the flu vaccine.

ROS:
General– Denies and fatigue, weight loss or gain, loss of appetite, fevers, chills, night sweats.
Skin, Hair, Nails – Denies skin or hair changes. Denies pruritus, or moles. Admits to discoloration of the left 2nd toe.
Head – Denies trauma or vertigo. Denies headache.
Eyes –Denies blurriness, photophobia, eye dryness. Does not recall last eye exam.
Ears – Denies ear pain or discharge.

Nose/sinuses – Denies pain, discharge, epitaxies, or difficulty nasal breathing.
Mouth/Throat – Denies sores, sore throat, or voice changes. Pt. does not recall last dentist visit.
Neck – Denies swellings, pain, or neck stiffness.
Respiratory– Denies dyspnea or respiratory changes.
CVS – Denies chest pain, palpitations, irregular HR, or lower extremity swelling.
GI –Denies abdominal pain, diarrhea, constipation, flatulence, bloating, or change in appetite.
GU –Denies burning, urinary frequency, incontinence, and pelvic pain. Patient denies any flank plain.
Peripheral Vascular System – Denies intermittent claudication, edema, skin changes, or varicose veins.
Musculoskeletal – Denies weakness or muscle pain.
Extremities- Admits to left second toe ulcer at the base of the left 2nd toe. Denies deformity, edema, tenderness.
Nervous – Denies loss of strength or any seizures. Denies numbness, ringing, or sensory disturbances. Denies change in mental status. Denies any changes in cognition, mental status, or memory.
Hematologic system – Denies easy bruising. Denies bleeding or anemia. Denies lymph node enlargement. Denies blood transfusions.
Endocrine – Pt. denies cold intolerance, excess sweating, or abnormal hair growth in any region. Denies polydipsia.
Psychiatric – Denies any loss of interest in things patient enjoys. Denies any constant worrying. Denies feeling hopelessness and anxiety. Denies any suicidal thoughts or OCD. Doesn't have a history of taking psychiatric medications. Denies seeing a therapist.

Physical:
General: Appears of age, neatly groomed, alert & oriented x 3, in no acute distress, responding to all questions thoroughly without trouble or discomfort.

Vitals:
BP: 144/88
RR: 16 breaths/min, unlabored, regular rhythm breathing
Pulse: 79 beats/min, regular rate & rhythm
Temp: 36.7C, oral
SspO2: 99%
Height: 5'6"
Weight: 180 lbs.
BMI: 29.0 kg/m2

Skin: Skin is warm & moist. Good turgor. Non-icteric. It is a fluctuant pustule with no surrounding cellulitis. No lesions, bruising, or scars on the chest, upper and low extremity (other than ulcer to the left foot 2nd toe). No tattoos noted.

Hair: Normal texture, areas of male patterned baldness. No lice. No seborrheic dermatitis.

Nails: No clubbing, cap refill <2 seconds in both upper extremities. No splinter hemorrhages noted. No signs of trauma or swelling. No Beau's lines.

Head: Normocephalic, atraumatic. No lesions or discoloration seen on scalp. Non tender to palpation throughout the head. Face symmetrical, no lesions, or unvoluntary movements.

Eyes: Symmetrical OU. PERRLA. EOMs intact with no strabismus, no nystagmus, no lid lag. Normal convergence. No exophthalmos, or ptosis. Sclera white, cornea clear, conjunctiva pink and clear w/o exudates. Visual fields full OU.
Visual acuity uncorrected - 20/20 OS, 20/20 OD, 20/20 OU.
Fundoscopy - Red reflex intact OU. Cup to disk ratio < 0.5 OU. No AV nicking, papilledema, hemorrhages, exudates, cotton wool spots, or neovascularization OU.

Ears: Symmetrical and appropriate in size. No lesions or trauma on external ears. No discharge or foreign bodies in external auditory canals AU. TM's pearly gray, intact, cone of light in normal position AU. Auditory acuity intact to whispered voice AU. Weber midline, Rinne AC>BC AU.

Nose: Symmetrical nares; no masses, lesions, trauma, discharge, or deviated septum. Nasal mucosa pink & well hydrated. No discharge noted on anterior rhinoscopy. No foreign bodies or polyps noticed B/L. Septum is midline without lesions, deviation, perforation, or inflammation.

Sinuses - Non tender to palpation and percussion over bilateral frontal, ethmoid and maxillary sinuses.

Mouth/Throat: Lips- Pink and dry; no lesions.
Oral Mucosa - Pink, moist mucosa. No masses, lesions, erythema.
Palate - Pink; well hydrated. Palate intact with no lesions; masses; scars. Non-tender to palpation; continuity intact.
Teeth- Presence of cavities. Otherwise, good dentition for age, no loose teeth.
Gingivae and Tongue -Pink; moist. No hyperplasia, masses, lesions, erythema, or discharge.
Oropharynx- Well hydrated; no exudate; masses; lesions; foreign bodies. Uvula pink and midline, no deviations, no edema, lesions. Tonsils present, grade 1, with no erythema or exudate.

Neck: Trachea midline. No masses, lesions, scars; pulsations noted. Supple; non-tender to palpation. No carotid artery bruit. No cervical adenopathy noted.
Thyroid- Non-tender, no palpable masses, no thyromegaly.

Chest and Lungs: Symmetrical, no deformities, no trauma. Respirations unlabored / no paradoxic respirations or use of accessory muscles noted. Lat to AP diameter 2:1. Non-tender to palpation throughout. Lungs- CTAP bilaterally. Chest expansion and diaphragmatic excursion symmetrical. Tactile fremitus symmetric throughout. No adventitious sounds.

Heart: JVP is 2.5 cm above the sternal angle with the head of the bed at 30°. PMI in 5th ICS in mid-clavicular line. Carotid pulses are 2+ bilaterally without bruits. Regular rate and rhythm (RRR). S1 and S2 are distinct with no murmurs, no S3 or S4. No splitting of S2 or friction rubs appreciated.

Abdomen: Abdomen flat and symmetric with no scars, striae or pulsations noted. Bowel sounds normoactive in all four quadrants with no aortic/renal/iliac or femoral bruits. Non-tender to palpation and tympanic throughout, no guarding or rebound noted. Tympanic throughout, no hepatosplenomegaly to palpation, no CVA tenderness appreciated

Rectal: No external hemorrhoids, skin tags, ulcers, sinus tracts, anal fissures, inflammation or excoriations. Good anal sphincter tone. No masses or tenderness. Trace brown stool present in vault. FOB negative.

Male Genitalia: Circumcised male. No penile discharge or lesion. No scrotal swelling or discoloration. Testes descended bilaterally, smooth and without masses. Epididymis nontender. No inguinal or femoral hernias noted.

Mental status exam: Patient is well appearing, good hygiene and neatly groomed. Patient is alert and oriented to name, date, time and location. Speech and language ability intact, with normal quantity, fluency, and articulation. Patient denies changes to mood. Conversation progresses logically. Insight, judgement, cognition, memory and attention intact.

Cranial Nerve: CNI correctly identifies coffee and mint odors bilaterally.

CNII visual fields full by confrontation, visual acuity 20/20 OD, OS, OU, uncorrected, red reflex present, cream color discs with sharp borders, no hemorrhages, no exudates or crossing phenomena.

CN III, IV, VI extraocular movements intact, pupil size and shape equal, and reactive to direct and consensual light and accommodation, no ptosis.

CN V face sensation intact bilaterally, corneal reflex intact, jaw muscles are string without any atrophy.

CN VII facial expressions intact, clearly enunciates words, strong eye muscles that hold against resistance.

CN VIII patients can hear hair rubbing between fingers, Weber – no lateralization, Rinne – AC>BC.

CN IX and X uvula midline with elevation of soft palate, gag reflect intake, no difficulty swallowing.

CN XI full range of motion at the neck with 5/5 strength and strong shoulder shrug.

Cn XII tongue midline without fasciculation, good tongue strength.

Motor/Cerebellar: Full active/passive ROM of all extremities without rigidity or spasticity. Symmetric muscle bulk with good tone. No atrophy, tics, tremors, or fasciculation. Strength 5/5 throughout. Rhomberg negative, no pronator drift noted. Gait steady with no ataxia. Tandem walking and hopping show balance intact. Coordination by rapid alternating movement and point to point intact bilaterally, no asterixis

Sensory: Intact to light touch, sharp/dull, and vibratory sense throughout. Proprioception, point localization, extinction, stereognosis, and graphesthesia intact bilaterally

Reflexes: 2+ throughout, negative Babinski, no clonus appreciated

Meningeal Signs: No nuchal rigidity noted. Brudzinski's and Kernig's signs negative

Extremities: Right lower extremity is unremarkable. No soft tissue swelling, erythema, ecchymosis, atrophy, or deformities. Non-tender to palpation, no crepitus noted throughout. Left lower extremity has an ulcer noted on the plantar aspect of the second digit that probes to bone. No purulent discharge present. No fluctuance or soft tissue crepitus. No malodor noted. Full range of motion of all upper and lower extremities bilaterally.

Peripheral Vascular: The extremities are normal in color, size and temperature (except for the 2nd toe LF noted for dusky changes). DP/PT nonpalpable on the left foot, dorsal pedis palpable on the right foot. No edema noted bilaterally. Apart from the 2nd toes on the left foot no other ulcerations noted. No calf tenderness bilaterally, equal in circumference. Homan's sign not present bilaterally. No palpable cords or varicose veins bilaterally. No palpable inguinal or epitrochlear adenopathy.

Assessment:
58-year-old male with PMHx of DM returns to hospital for treatment of left foot second digit ulcer. Patient denies any pain, oozing from the site, or malodor. Currently he denies any fever, chills, chest pain, dyspnea, or SOB. Physical Exam of the left lower extremity has an ulcer noted on the plantar aspect of the second digit that probes to bone. No purulent discharge present. No fluctuance or soft tissue crepitus. DP/PT nonpalpable on the left

foot. No pain associated in the region of ulceration likely due to diabetic neuropathy. Labs show leukocytosis WBC 13.27, ESR 24. Wound culture positive for MRSA. X-ray of left foot negative for fractures or dislocation.

Differential Diagnosis:
Nonhematogenous Osteomyelitis: Osteomyelitis can arise from adjacent soft tissues due to infection spread. In older adults, infection should be suspected in patients in diabetic foot wounds. Notably, if a diabetic foot ulcer that probes to bone, osteomyelitis is highly probable.

Soft Tissue Infection: Soft tissue infection may occur independently or concurrently with osteomyelitis. In cases of chronic soft tissue infection unresponsive to antibiotics, particularly in diabetic patients, imaging for potential bone involvement is advisable.

Charcot Arthropathy: Acute Charcot neuroarthropathy can mimic osteomyelitis, especially when presenting with localized erythema and warmth. Patients with Charcot arthropathy often develop skin ulcerations, that can turn to secondary osteomyelitis. Contrast-enhanced MRI may aid diagnosis by revealing specific indicators such as sinus tracts or extensive marrow abnormalities, sometimes necessitating bone biopsy for confirmation.

Osteonecrosis: Osteonecrosis, typically caused by factors like steroids or radiation, is distinguishable from osteomyelitis due to identifiable precipitating causes.

Bone Tumor: Bone pain can be a shared symptom of osteomyelitis and bone tumors. Radiographic imaging and bone biopsy are crucial for distinguishing between the two conditions.

Plan:
Ideally before starting empiric antibiotics:

Blood cultures- if positive for pathogen treat bacteremia.

LF MRI forefoot with and without IV contrast to assess extent of OM - findings of on imaging should prompt bone biopsy for culture and histology to confirm the diagnosis and to guide antimicrobial therapy,

Surgical Debridement – removal of necrotic material and culture of involved tissue and bone.

Recommend ABI/PVR studies for nonpalpable pulses & wound healing potential. Antibiotic penetration into bone may be unreliable in patients with arterial insufficiency. If abnormal vascular consult.

Empiric treatment: Antimicrobial therapy with activity against methiciliin-resistent S.aureus and gram-negative organisms. Reasonable regimes include vancomycin in combo with a 3rd or 4th generation cephalosporins (Vanco +Cefepime). An alternative to vancomycin for treatment of osteomyelitis due to MRSA includes daptomycin.

Switch over to Directed therapy – Once a pathogen has been identified from culture, antibiotic therapy should be tailored to the specific organism. Minimum of 8 weeks of antibiotic therapy for treatment of MRSA osteomyelitis. Six-week course of therapy if adequate debridement has been performed.

Discuss conservative vs surgical intervention for osteomyelitis. Prolonged antibiotic course vs. partial vs total digit amputation: Discuss risk associated with conservative treatment which may lead to worsening infection, chronic non-wound healing, necessity for more amputation.

If discharged on conservative treatment. Advise the patient to keep dressing clean, dry, and intact, until follow-up appointment with podiatry.

Patient Education:
Explain to the patient what osteomyelitis is an infection of the bone. The bone can get infected from germs in the blood or nearby tissues. In order to test for osteomyelitis, a bone biopsy will most likely be needed, where a small sample of the bone can be taken and sent to the lab. Knowing the kind of germ causing the infection can help doctors choose the right treatment. The treatment for osteomyelitis is surgery to remove the dead tissue and bone followed by antibiotics. Antibiotics will start in the hospital and will continue after the person in released. To lower your chances of osteomyelitis it is important to keep wounds clean and dry. If they don't heal do not delay getting medical attention. Especially with diabetes, it is important to regularly check feet for cuts and signs of infection; and to keep blood sugar under control. It is important to quit smoking as smokers have a greater chance of getting osteomyelitis.