



07/08/24 Morning Report with @CPSolvers



“One life, so many dreams” Case Presenter: Milee Nelson (@MileeNelson) Case Discussants: John Huang and Varun Phadke (@VarunPhadke2)

CC: 62 year old male with 1 week history of productive cough

HPI: Had SOB and productive cough as well as a lesion on the forehead that looked like a blister, never hurt or itch.

One week prior he was in urgent care for right ear pain and congestion/cough. Temp was 100.9 at that time. He was given azithromycin for 5 days and neomycin-polymyxin ear drops. He later visited his PCP who gave him CAP antibiotics. His symptoms all continued to worsen and he became progressively more fatigued over the week prompting an ED visit. ROS also positive for pleuritic chest pain. Denied nausea, vomiting, abdominal pain

PMH:
CAD s/p CABG
Hypertensive nephropathy
Renal transplant oct 2023
Recent admission for citrobacter koteri bacteremia

Meds:
ARB
BB
CCB
Tacrolimus
Sirolimus
Prednisone
Oral diabetic meds

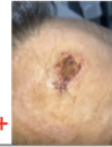
Fam Hx:
Dad had stroke
Mom had diabetes

Soc Hx:
Former teacher
No recent travel or hiking. No high risk sexual behavior
Mostly atlanta bound

Allergies:
No known allergies

Vitals: T: 37.2 HR: 104 BP: 136/67 RR: 23 SpO2 87% RA (96% on 4L)

Exam:
Gen: ill appearing
HEENT: forehead lesion with no associated swelling, drainage
CV: RRR, no murmurs, 2+ radial pulses
Pulm: bilaterally diminished lung sounds
Abd: soft, nontender, nondistended
Neuro: fatigued. NI otherwise
Extremities/skin: Ulcerative facial plaques, bilateral LEE 1+



Notable Labs & Imaging:

Hematology:
WBC: 9.4 Hgb: 9.2 (MCV 79) Plt: 209

Chemistry:
Na: 123 K: 4.2 Cl:94 HCO3: 15 BUN: 87 Cr: 4.4 glucose: 427 Ca: 9 TP 6.3, bili 1.2, alk phos 243 AST: 22 ALT: 13 AG: 14

Imaging
CXR: significant interval worsening of interstitial pulmonary airways with hazy patchy and nodular pulmonary opacities
CT chest: innumerable pulm nodules and diffuse mediastinal and hilar LA. Stable R pleural effusion. Trace left pleural effusion
CT abdomen/pelvis: stable rectal thickening, non-obstructing stones in transplanted kidney
Pneumonia panel -ve
UA: 3 wbc, trace ketones, no bacteria
Blood cultures: no growth
PJP, CMV, BK, EBV -ve, urine histo -ve, cryptococcus -ve
Bronchoscopy: negative
Karius PCR: Citrobacter Koteri, blastomycosis
Skin biopsy: blastomycosis

Dx: Disseminated Blastomycosis

Problem Representation:

62 year old male with 1 week history of productive cough and shortness of breath who was found to have disseminated blastomycosis

Teaching Points (Parisa):

Syndrome (Timeline) ; Identify based on Sx localization (skin/lung)
We need to think which infx IC patients developing with this regimen; pathogens compatible with pattern → Organ transplant T cells suppression → Intracellular organism (virus; intracellular fungi/bac)
Pulmonary sx + skin lesions → subacute nature in IC host → bac (typical strep; H inf; moraxella/ atypical legionella mycoplasma; TB, skin (nocardia, actino)); viral(sick and acute HSV; CMV; VZV Ulcerative skin lesions + PNA); fungal (PNA+ skin crypto; aspergillus; mucor)
Approach to immunosuppression in organ transplant → Timeline transplant (Donor derived infection); Pre Transplant factor (underlying dx) ; post transplant complications (episodes of rejection)
Reasons why patients are not on standard immunosuppression regimen like MM: Side effects (GI toxicity); opportunistic infx
Imaging threshold in IC patients with pulmonary sx → CT chest w/o contrast → localizing → GGO vs consolidative vs nodular vs cavitary lesions
Other tests: Respiratory Viral Panel Sputum; legionella Ag; Tissue Bx ; galactomannan (aspergillus) Beta D glucan; Serum cryptococcal Ag (quick) Cell free DNA assay
Characteristic of each organism → legionella : hyponatremia; hypophosphatemia / Acinetobacter: endovascular bacterial infection / Fungal + TB : LN involvement in chest CT/ Endemic fungi histo blasto : skin plus pulmonary / Rectal thickening histo: mycobacterium avium / Blasto; Mucor; Crypto will have normal/low Beta D glucan. Blasto skin manifestation could mimic SCC/ Skin+lung: nocardia; endemic fungi (histo, cocci, blasto), actinomycosis, candida, crypto, Tb, mucor
Blood culture (candida can grow in regular BC) vs fungal blood culture (blood undergone centrifugation, endemic mycoses can grow)