5/29/20 Morning Report with @CPSolvers

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CC: 30F transferred for sudden onset R sided weakness

HPI: 30F hx DM transferred for sudden onset R sided weakness.
1 wk prior, p/w dyspnea, myalgias, and diarrhea
Flu B on RPP, on tamiflu
c/b hyperglycemia in ICU
Day of transfer, R hand weakness, progressed to RUE and RLE
Upon arrival, RUE>RLE weakness and blurred vision.
No sensory deficit, HA, facial droop.
BGs 290 at home
ROS: dyspnea, chest pain, thigh bruise, L ankle pain

PMH:
T1DM-dx. 3 y ago

Meds:
Oseltamivir (in hospital)
Humalog

Fam Hx: T2DM

Soc Hx: Lives in S California

Health-Related Behaviors:
No alcohol, tobacco, drugs
Monogamous w/ male partner
DMV clerk

Allergies:
None

Vitals: **T**: *37.9C (100.3F)* **HR**: 109 **BP**: 126/71 **RR**: 21 **SpO_2**: 95% RA **BMI**: 26

Exam:
Gen: Fatigued
HEENT: wnl
CV: tachycardia, otherwise regular rhythm, no murmurs
Pulm: tachypnea, o/w wnl
Abd: wnl
Neuro: CN II-XII: L homonymous hemianopia, RUE ⅗, RLE ⅘, LUE and LLE 5/5, L hemineglect
Extremities/Skin: 2x3 cm erythematous, indurated lesion on thigh, L ankle tender to movement

Notable Labs & Imaging:
Hematology:
WBC: 12.1 (65% PMNs, 12% Lymphs) Hgb: 11.7 Plt: 390
Chemistry:
Na: 131 K: 3.9 Cl: 91 CO2: 24 AG: 15 BUN: 3 Cr: 0.47 Glucose: 135
AST: 31 ALT: 17 Alk-P: 242 T. Bili: 0.3 Albumin: 2.8
A1c: 12.7%
Lipids wnl
CRP: 35.6, ESR 100.4, ANA: 1:160, (+)Gad65
Autoimmune & hypercoag o/w unremarkable, HIV Syphilis, BCx (-)
CSF: 266 WBC (44% Neu 51% Lymph), 1 RBC , GLC 127, Prot. ???, viral meningitis panel neg.
Imaging:
TTE Bubble: unremarkable
MRI Brain: Large diff. restriction in PCA dist. w/extension into corpus callosum
CT Chest: LLL cav. lesion and GGO assoc. w/mediastinal inflammatory changes
BAL: Path-broad angle non-septate hyphae, c/w Mucormycosis

Problem Representation: 30F hx T1DM w/acute dyspnea, diarrhea and inflammatory signs w/hyperacute RUE>RLE weakness. PE notable for tachycardia, tachypnea, L homonymous hemianopia, R>L weakness, L hemineglect, thigh lesion. Labs and imaging notable for PCA involvement on MRI, CT chest w/LLL cavitary lesion, BAL revealing mucormycosis.

Teaching Points (Priyanka):

Sudden onset weakness: While tempo is a key clue, can also lead us down the wrong path. Sudden onset vs sudden recognition of Sx onset. Assume more morbid condition until further info received.
What can develop suddenly? Rupture (AD), blocks (biliary colic, ACS), sudden discharge of electrical activity (seizure, arrhythmia) ; Less intuitive- gram neg sepsis, anaphylaxis, ingestion of high dose toxin
Approach to Neuro Sx: Weakness → sequence of events is critical

1. Recognizing neuro syndrome- ie: weakness (sensation or true weakness - decrease in power of muscle?)
2. Localize lesion - consider motor (brain, spinal cord, peripheral nerve, junction), sensory, and autonomic aspects of nervous system
3. What is causing lesion - seizure? Stroke? Bleed? Consider pt age
4. Can you reverse the lesion?

Diarrhea and Neuro Sx- think immune activation (ie- GBS from Campylobacter) ; HUS ? (in situ thrombosis, bleeding)
Ankle pain in hospital: infectious syndrome (septic involvement of joint, assuming pain is intra-articular); risk for gout (Hx- DM)
Multifocal Exam: Asymmetric presentation should prioritize lesion to brain, but does not have to be. → most processes localized to the brain are isolated, non-inflam. However, fever + inflammation + inflamm markers- increases our concern for systemic/inflammatory process.
Vision- Retina→ optic n. → optic chiasm → optic radiation->LGN→ visual cortex; L homonymous hemianopia would localize to R visual cortex
Before invoking a systemic disease, think about a common denominator that ties the Sx together.

- **Rash-** inflammatory/autoimmune vascular phenomenon (PAN, Bechets); infectious vascular (ie: endocarditis, neurosyphilis)
- **DM-** angioinvasive disease (ie: mucor)

CSF: Neutrophilic pleocytosis→ non infectious causes very unlikely; Infectious (a/typical bacterial infxn); Early viral; Molds; Amoeba. Mixed - TB, Brucella
Cavitary Lung Lesion: Necrotizing PNA (think tempo); Atypical Infxn (mycobacteria, dimorphic fungi, molds, parasites- entamoeba histolytica), noninfectious (squamous cell cancer, lymphoma), non cancer/non infxn- GPA
Mucormycosis- any infx caused by Mucoralis; MC- rhizopus; RF- DM, Stem cell transplant, immunocompromised host; exposure to iron. 5 presentations- Rhinocerebral, pulm, GI, cutaneous, disseminated (MC to the brain)