8/30/24 Morning Report with @CPSolvers

***"One life, so many dreams" Case Presenter**: Vinicius (@) **Case Discussants**: Reza (@DxRxEdu) and Rabih(@rabihmgeha)*

CC: 38yo female, 1 week of **right flank pain** and decreased urine output

HPI:
8/10 intensity flank pain with fevers & nausea + vomiting. 2 months ago: insect bite on right gluteal region with erythema and edema.
Took Abx - developed cramps and paresthesias in hands and feet afterwards, w/ right facial deviation & diplopia. LP & EMG done: HSV-1/2 IgG positive, for which she received acyclovir for 6 days (ended 15 days ago)..

Further history
Started on Doxycycline for query Lyme disease.
In hospital: had episode of Vaginal bleeding requiring transfusion: subsequently complicated transfusion related circulatory overload - Worsened and admitted to ICU after being intubated due to low GCS worsening hypoxemia and dialysis started 2 more units blood given and meropenem given and Extubated but remained drowsy after 17 days in ICU.
Patient returned to ward:. New enteroccoccus bacteremia. Started on Amikacin

Soc Hx: From Brazil. No recent travel

Health-Related Behaviors: none

Allergies:

Vitals: RR:16. O2 95% on RA**. HR** 84**. BP** 150/70.
Exam: CVS, Pulmonary and Abdomen: Normal
Neuro: Alert & Oriented x3 . Right facial hemiparesis. Power grade 4 bilaterally in lower limbs. Fluctuating weakness & paresthesias. Impaired right eye abduction

Notable Labs & Imaging:
Initial labs: Normal CBC &, liver enzymes. Urea 246. Creatinine 14 (baseline 1.5). GFR 3. Na 136. K 5 PO4 7.4. CRP 7, Lactate 0.4. Bicarb 20. Iron 59. Ferritin normal.
Micro: Normal Urinalysis. Negative Hepatitis, HIV, syphilis. Negative cultures (urine and blood) Lime serology negative. HSV-1-2 IgG positive.
CSF: Initial LP: 80 cells (96% lymphocytes, 4% monocytes). Protein 26. Glucose 49. No bacteria, fungi, negative india ink. VDRL + oligoclonal bands negative
MRI: Extra-axial cystic formation consistent w/arachnoid cyst in left temporal region. Compressive myelopathy C4-C6.
Renal ultrasound: slight dilation of collecting system.
EMG: LMN impairment. **SPEP** normal**.**
ICU labs: Hb 5.2. Plat 167. WCC 18, 80% segmented. Urea normal. Creatinine improved to 5.2. Na 129, K 4.6. ANA positive (anti-dsDNA and Anti-smith negative). C4, C3, C50 normal.
CT pelvis: posterior retroperitoneal hematoma. Cervical mass: query cancer?. Ureteropelvic dilation. Thickening in rectum.
Rectal sigmoidoscopy: infiltrative fixed lesion in mid-rectum
Further history Patient re-intubated after septic shock. PEA, ROSC achieved. UTI: pseudomonas. Transferred back to ICU. Acinobacter on blood culture. 95 days in: Pupils non-reactive to light, hypoxic ischemic encephalopathy on MRI. **Rectal biopsy**: malignancy confirmed. Non-small cell (non-differentiated)
Final Dx: Query paraneoplastic disease?

Problem Representation: 38yo female, w/ 6&7 CN palsies and oliguric renal failure found to have metastatic rectal cancer causing obstrucive uropathy and infiltrative disease. She unfortunately demised following a multiple ICU admissions secondary to septic shock.

Teaching Points::
Finding the relevance of different events in a case with lots of data points -> not just at the beginning, but as the case goes on
Primary site of pathology vs consequence of disease -> Localized process with systemic consequences vs systemic condition -> Importance of sequence of events

Decreased urine alone is enough for AKI diagnosis -> Prerenal vs renal vs postrenal -> *how does the Flank pain factor in?*
Easiest one to reverse -> post renal -> Bladder scan -> we can't see behind the bladder
Most common in men: BPH , Common causes in women: Constipation, Iron, Opiates , Anticholinergics , etc.
Urine output monitoring and quantifying -> gives us info about severity -> Indications for dialysis -> AEIOU(Acidosis, Elevated potassium, , Intoxication, Volume overload, Urea elevation)

HSV IgG only points to presence of HSV infection we can't identify the active disease

Causation vs longitudinal connection -> relationship of neuro dysfunction and AKI
How symptoms develop in response to medication both in contrast with her history and her current presentation can guide us whether the underlying cause was what we treated for
Invasive Rectal carcinoma -> obstructive uropathy -> how do we explain the neuro?
Presence of invasive/ infiltrative malignancy we can speculate about altered immune status -> can explain the extra-vulnerability to HSV and connect us to neuro , susceptibility to bacteremia
Leptomeningial carcinomatosis -> metastatic infiltration of the meninges

Localizing the neuro symptoms
Lower motor neuron dysfunction + inflammation in the CSF -> location of neuron exiting from the brainstem -> subarachnoid space vs advanced multifocal radicular disease
Explain the inflammation: infiltrative process (lymphocytes + inflammatory profile make it more likely), demyelinating (CNS localized not likely), infectious (BBB can hide from the immune system, the lymphocytosis guides towards more specific diagnosis)

Extreme Elevation of Cr + normal UA
Kidney as bystander of systemic events -> extreme sensitivity to Volume status -> this extreme elevation points to pathology at the site of kidney either followed by pathology at external site or direct kidney damage
Repeat UA, check albumin/cr ratio -> check out how you're losing the protein
Specific gravity -> 1.010 -> tubular injury

Tissue is the Issue