03/26/21 Morning Report with @CPSolvers

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CC: disorientation and hyponatremia

HPI: 54 yo male is sent to the ED by his primary care physician because of a Na 118. His wife reports that he has progressive fatigue since 1 week ago, and in the morning of presentation he was disoriented and went to the physician.
He had a spinal disk herniation treated with intraluminal fenestration and discectomy 8 days ago. He had a postoperative constipation treated with intestinal lavage, with a Na 123 (presumed dilutional hyponatremia).
He denies fever, cough, night sweats, weight loss, diarrhea, chest pain, dysuria or other episodes of urinary abnormalities.

PMH:
Chronic back pain due to spinal disk herniation L4/L5
Chronic constipation
Presumed UTI 6 mo ago with macroscopic hematuria and lower abdominal pain (treated with ATB)
Meds: tylenol and pantoprazole

Fam Hx: non contributory

Soc Hx: musician

Health-Related Behaviors: doesn't drink alcohol (headaches and abdominal pain afterwards)

No cigarette smoke or illicit substance use

Allergies: none

Vitals: **T**: afebrile **HR**: 75 bpm **BP**: 151x81 **RR**: 19 **SpO_2**: 98% r.a.
Exam:
Gen: normal appearance, no acute distress
HEENT: moist mucous membranes, no icterus and lymphadenopathy or pupillary abnormalities
CV: normal
Pulm: normal
Abd: nontender, nondistended, liver and spleen not palpable
Neuro: normal, except for sensory-motor deficit at the left L4 level
After examination: acute psychosis with hallucinations, transferred to ICU and received sodium chloride tablets.

Notable Labs & Imaging:
Hematology:
WBC: 8.3 (nl differential) Hgb: 14 Plt: 155 k MCV 77
Chemistry:
Na: 114 K: 3,5 Cl: 73 BUN: 17 Cr: 0,8 glucose: 103 Ca: 8,9 AST: 33 ALT: 35 Alk-P: 74 T. Bili: 1,1 Albumin: GGT 75
LDH 330 INR 1,0 APTT 27 Total protein 7,0 Albumin 4,3 Uric acid 3,6 (lower limit of normal) Serum osm 241 Urine osmolarity 471 Urine Na 128 Urine K 24 Urine Cl 112 TSH 3,4 Morning cortisol 23 HIV negative Heavy metal screen negative Urine porphobilinogen markedly elevated and DLAL elevated. Stool porphyrins negative

Imaging:
EKG: normal sinus rhythm
CHest CT: small atelectasis at the left lower lobe, lung parenchyma normal
Brain MRI: small microangiopathic changes, no signs of ischemia or structural changes.
Abdomen XR: large stool in intestines
MRI lumbar spine: post-operative fibrotic changes, otherwise unremarkable
Psychiatric consult started risperidone and pregabalin.
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Final diagnosis: Acute Intermittent Porphyria leading to SIADH

Problem Representation: 54 yo male with chronic constipation, history of macroscopic hematuria, and recent surgical procedure for disk herniation presents with hyponatremia and altered mental status with labs consistent with SIADH.

Teaching Points (Gurleen):

- **HYPONATREMIA + DISORIENTATION**: are they related? CNS processes, time course
- **HYPONATREMIA -** hypo-osmolarity, excess water
  - -Na no longer represent osmoles: mannitol, lipids, protein
  - -**5 contributors:** increased water intake, decreased solute intake, thiazide diuretics, kidney disease, ADH
  - -check serum Osm (exclude hyperosmolar)→ urine Osm → urine Na
- **INAPPROPRIATE ADH** - endocrinopathy (adrenal insufficiency), cancer/paraneoplastic (small cell carcinoma), neurologic
  - -post-op → common (can be appropriate ADH from volume loss)
  - -ADH on: urine Osm > serum Osm, SIADH - high urine Na

Collect clues:

- **CONSTIPATION:** Age is important clue
  - -anatomic obstruction (volvulus, obs) vs. motility issue (meds - opiates, electrolytes - hyperCa, hypoK). Muscle - Hypothyroid, scleroderma. Neurologic - Parkinson's, diabetes, AIP (can present as macroscopic hematuria). Lead toxicity
- **HEMATURIA:** Don't miss - rhabdo, mimickers-AIP (dark urine)
  - -Think anatomically → kidney (mass, RCC, vascular such as renal vein thrombosis), ureter (stone), bladder
- **AIP:** abdominal pain, neurologic (neuropathy), sympathetic (tachycardia, hypertension). Can cause SIADH.