



CASE PRESENTATION:

BY DR.MANSOURI



PRESENT ILLNESS

- - 70-year-old male
- - Symptoms: Confusion, nausea, vomiting, headache, weakness, seizure

What is more ?

PAST MEDICAL HISTORY

- - Past medical history: CHF, CKD, DM, recent excessive water intake

What can we add in present illness now?

- - DH: indopamide 2.5 BD, Valsomix-H 80/5/12.5, nephrovit, Gloripa, Insulin, Lasix 20 BD

PHYSICAL EXAMINATION FINDINGS

- - Altered mental status
- - Bp: 100/50, PR: 90, RR: 14, Sat : 95%
- - Heart: NL sound, Lung: NL sound , Abdomen: NL
- - Normal deep tendon reflexes

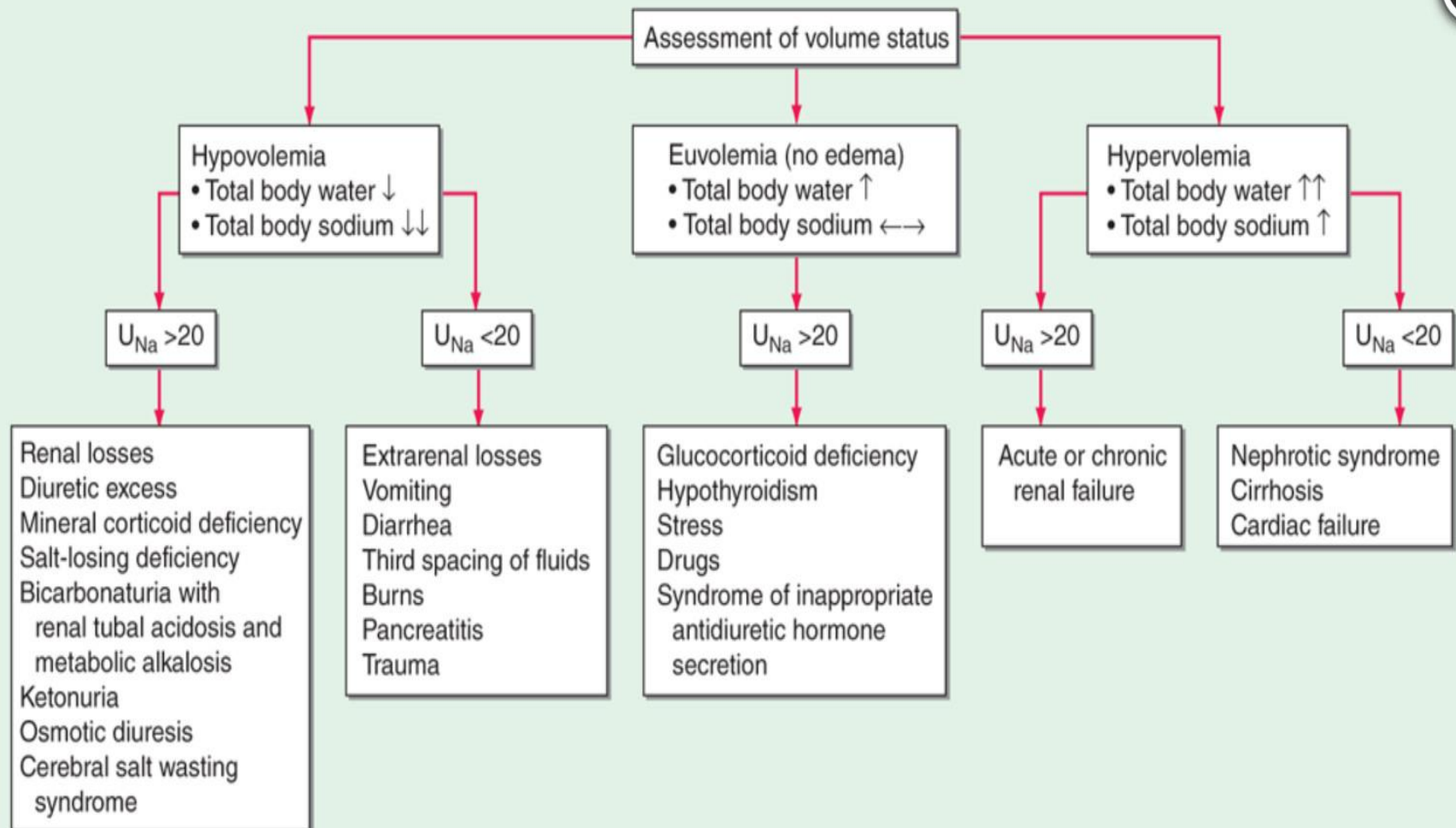
What could we add here?

- 
- **What is your DDX?**

LAB TEST:

- Cr:1.98, BS: 166, Na:116, K:4, Ca: 8.6, LFT: NL,
- WBC:7400, Hb:10, PLT: 298
- PH: 7.39, PCO2: 38.9, HCO3: 23
- What else?

HYPONATREMIA



WAY OF DIAGNOSIS

- - Serum Sodium < 120 mEq/L
- - Serum Osmolality: < 275 mOsm/kg (hypotonic hyponatremia)
- - Urine Osmolality: High (> 100 mOsm/kg)
- - Urine Sodium: Differentiates SIADH (>30 mEq/L) vs. hypovolemia (<20 mEq/L)
- - TSH, Cortisol: Rule out hypothyroidism/adrenal insufficiency

ACUTE TREATMENT OF HYPONATREMIA (NA < 120, SYMPTOMATIC)

- - Hypertonic saline (3% NaCl) infusion
- - Goal: Increase Na by 4-6 mEq/L in first 6 hours
- - Monitor sodium correction rate (<8-10 mEq/L per 24 hrs to prevent osmotic demyelination syndrome)
- - Seizure control with benzodiazepines if needed

CHRONIC TREATMENT OF HYPONATREMIA

- - Fluid restriction (<800 mL/day for SIADH)
- - Salt tablets or urea in resistant cases
- - Loop diuretics + sodium supplementation in hypervolemic hyponatremia
- - Vasopressin receptor antagonists (e.g., Tolvaptan) for SIADH
- - Treat underlying causes (CHF, cirrhosis, adrenal insufficiency, hypothyroidism)

MONITORING AND PREVENTION

- - Regular sodium monitoring
- - Avoid rapid correction (> 10 mEq/L/day)
- - Educate patients on proper fluid intake
- - Treat underlying conditions to prevent recurrence

TAKE-HOME MESSAGE

- Severe hyponatremia ($\text{Na} < 120$) is a medical emergency. Careful correction is needed to avoid complications like osmotic demyelination syndrome. Long-term management requires identifying and treating the underlying cause.



Thanks for your attention