

Hypertension

1. Define normal blood pressure, pre-hypertension, stage 1 and stage 2 hypertension. Describe the end-organ injuries that occur due to long-standing hypertension.
2. Describe the patient(s) who should be evaluated for secondary causes of hypertension and the preferred diagnostic strategy for each identifiable cause.
3. Identify the medications which are first-line anti-hypertensives for non-black patients and black patients *without* DM and CKD and *with* DM and CKD.
4. Identify the BP targets for patients aged ≥ 60 years old, < 60 years old, patients with chronic kidney disease and patients with diabetes.
5. Define hypertensive urgency and emergency and the indications for admission to the hospital and ICU treatments.

Hyponatremia

1. Define hyponatremia (mild, moderate, and severe), and specifically the time frame of acute versus chronic hyponatremia.
2. Describe the signs and symptoms of hyponatremia from subtle to severe.
3. Describe the initial management of a patient with severe, symptomatic hyponatremia.
4. Give the differential diagnosis for the following:
 - a. Hypertonic hyponatremia
 - b. Isotonic hyponatremia
 - c. Hypotonic hyponatremia (What is the serum osmolality threshold for this?)
5. What is the first step in determining the etiology of a HYPOTONIC hyponatremia?
6. Describe the urine studies and lab findings (urine osmolality and/or urine sodium) that can help distinguish between the different causes of HYPOTONIC hyponatremia. Know the management of each of these diagnoses.
7. Describe how to determine the free water deficit in a patient with hypernatremia and how to manage the patient to avoid osmotic demyelination.

Hyperkalemia

1. Describe the laboratory evaluation that must be obtained to work up the hyperkalemic patient. (Comment on pseudohyperkalemia, EKG findings and sensitivity, and the required urine studies.)
2. Describe the acute management of the hyperkalemic patient including steps to stabilize the myocardial membrane, shift potassium into the cells, and lower the total body potassium. Know the appropriate doses, methods of delivery, and contraindications to calcium gluconate, insulin and glucose, beta-agonists, and kayexalate.
3. Know when to hospitalize and when to treat hyperkalemia.