13 ELECTROLYTE DISORDERS (NA & K))

أسئلة امتحانات السنين السابقة (نظام جديد)

1. The most common cause of a potassium level greater than 5.5 mmol/L is: A. Heavy exercise. B. Renal failure. — راوند 57 C. In vitro hemolysis. D. Potassium sparing diuretics. E. Acidosis	**B**
2. Normal serum K is: A. 2.4-3.4 mEq/L. B. 3.2-4.2 mEq/L. — راوند 57 C. 3.5- 5 mEq/L. D. 2.4-28 mEq/L.	**C**
3. Which one of the following is the earliest finding in an ECG of a patient with hyperkalemia? A. Sine wave B. Peak T wave — راوند 59 C. Flattened p wave D. QRS widening E. AV dissociation	**B**
4. Which of the following can cause a shift of potassium out of cells? A. Acidosis B. Insulin C. Beta-adrenergic stimulants — راوند 59 D. Aldosterone E. None of the above	**A**
5. Which of the following is a long-term treatment for a patient with chronic hyperkalemia? A. ACE inhibitors B. Calcium channel blockers — راوند 59 C. Potassium exchange resin D. Beta adrenergic blocker E. Potassium sparing diuretics	**C**
6. Which of the following drugs may probably precipitate hyperkalemia in a patient with kidney disease? A. Thiazide diuretics B. Loop diuretics — فاينال 60 C. Digoxin toxicity D. Carbonic anhydrase inhibitors E. Beta-2 adrenergic stimulants	**C**

أسئلة أخري

1. Cause of paralytic ileus is : A. Hyponatremia B. Hypochloremia C. Hypokalemia D. Hypocalcemia	**C**
2. A 62-yr-old female on regular hemodialysis had missed some of her dialysis sessions because of a fracture neck femur. Her serum K 7.3 mmol/L serum Ca 9 mg/dl. What is the most likely ECG finding? A. Short PR interval B. Shortened QRS duration C. Prominent P wave D. Tall and peaked T wave E. Elevated ST segment	**D**
3. What is the clinical definition of hyponatremia? A. Serum Na concentration below 145 meq/L B. Serum Na concentration below 135 meq/L C. Serum Na concentration below 125 meq/L D. Serum Na concentration below 115 meq/L E. Serum Na concentration below 105 meq/L	**B**

1. Hyponatremia most frequently represents an abnormality in the regulation of which substance? A. Sodium B. Potassium C. Water D. Glucose E. Albumin	**C**
2. What is the primary cause of pseudohyponatremia? A. Excessive intake of free water B. High levels of fat or protein in the plasma C. Inappropriate secretion of ADH D. Excessive use of loop diuretics E. Severe gastrointestinal fluid loss	**B**
3. In which condition is the measured serum osmolality typically high despite a low serum sodium? A. Hypotonic hyponatremia B. Pseudohyponatremia C. SIADH D. Hyperglycemia E. Primary polydipsia	**D**
4. Which of the following is a cause of hypotonic hyponatremia where ADH levels are typically suppressed? A. SIADH B. Primary polydipsia C. Heart failure D. Addison's disease E. Hypothyroidism	**B**

5. Which malignancy is most commonly associated with the development of SIADH? A. Renal cell carcinoma B. Small cell carcinoma of the lung C. Prostate cancer D. Squamous cell skin cancer E. Osteosarcoma	**B**
6. What is a required diagnostic criterion for SIADH regarding urinary concentration? A. Urinary osmolality < 50 mOsm/kg B. Urinary osmolality > 100 mOsm/kg C. Urinary sodium < 10 mmol/L D. Plasma osmolality > 300 mOsm/kg E. Presence of glucose in the urine	**B**
7. A patient with SIADH is expected to have which clinical volume status? A. Severe hypovolemia B. Gross hypervolemia with edema C. Clinical euvolemia D. Dehydration with poor skin turgor E. Hypotension and tachycardia	**C**
8. Which drug class is a common cause of euvolemic hyponatremia? A. Loop diuretics B. ACE inhibitors C. SSRI antidepressants D. Beta-blockers E. Statins	**C**

9. What is the primary mechanism behind the CNS symptoms of acute hyponatremia? A. Cerebral ischemia B. Entry of water into brain cells causing edema C. Intracranial hemorrhage D. Depletion of neurotransmitters E. Accumulation of urea in the brain	**B**
10. Which neurological complication is a risk of overly rapid correction of chronic hyponatremia? A. Cerebral edema B. Subarachnoid hemorrhage C. Osmotic demyelination syndrome (CPM) D. Wernicke's encephalopathy E. Epilepsy	**C**
11. What is the characteristic urinary sodium concentration (U[Na]) in hypervolemic hyponatremia caused by heart failure? A. U[Na] > 40 mmol/L B. U[Na] > 20 mmol/L C. U[Na] < 20 mmol/L D. U[Na] = 140 mmol/L E. U[Na] is undetectable	**C**
12. How much will the serum sodium concentration fall for every 100 mg/dL increase in glucose? A. 0.5 mEq/L B. 1.0 mEq/L C. 2.0 mEq/L D. 5.0 mEq/L E. 10.0 mEq/L	**C**

13. What is the recommended maximum rate of sodium correction in chronic hyponatremia to avoid ODS? A. 2 mEq/L in 24 hours B. 8 mEq/L in 24 hours C. 15 mEq/L in 24 hours D. 20 mEq/L in 24 hours E. 24 mEq/L in 24 hours	**B**
14. Which treatment is most appropriate for a patient with symptomatic acute hyponatremia (<48 hours)? A. Fluid restriction only B. 3% Hypertonic saline bolus C. Large volumes of 5% Dextrose D. High protein diet E. Oral vasopressin tablets	**B**
15. What is the primary mainstay of treatment for hypervolemic hyponatremia (e.g., in cirrhosis)? A. Aggressive isotonic saline infusion B. Fluid restriction and diuretics C. Potassium supplementation D. Desmopressin administration E. Increasing salt intake	**B**
16. Hypernatremia is defined as a serum sodium concentration greater than: A. 135 meq/L B. 140 meq/L C. 145 meq/L D. 155 meq/L E. 165 meq/L	**C**
17. Which demographic is most commonly affected by hypernatremia? A. Young athletes B. Pregnant women C. Elderly patients D. Adolescent males E. Newborns	**C**
18. Which of the following is a cause of hypernatremia due to osmotic diuresis? A. Excessive sweating B. Glucose in uncontrolled diabetes mellitus C. Low protein diet D. Hypothyroidism E. SIADH	**B**
19. What is the main clinical manifestation of hypernatremia? A. Peripheral edema B. Acute change in mental status C. Bradycardia D. Muscle hypertrophy E. Hypothermia	**B**
20. "True hyponatremia" is characterized by which of the following? A. Normal osmolality B. High osmolality C. Low osmolality (<285 mOsm) D. High plasma protein levels E. High plasma lipid levels	**C**

21. Which of the following causes hypovolemic hyponatremia with a urine sodium >20 mmol/L? A. Vomiting B. Diarrhea C. Diuretics D. Burns E. Pancreatitis	**C**
22. What is the role of Tolvaptan in treating hyponatremia? A. It is a sodium supplement B. It is a Vasopressin Receptor Antagonist C. It increases ADH production D. It acidifies the urine E. It slows down heart rate	**B**
23. Which condition is a cause of euvolemic hyponatremia with urine osmolality <100 mOsm/kg? A. SIADH B. Hypothyroidism C. Beer potomania D. Glucocorticoid deficiency E. Heart failure	**C**
24. In the correction of chronic hyponatremia, which group of patients requires even slower correction (4-6 mmol/L/day)? A. Patients with hypertension B. Patients with severe malnutrition or alcoholism C. Young healthy adults D. Patients with hyperthyroidism E. Patients with renal stones	**B**
25. Which of the following is an extra-renal cause of hypovolemic hyponatremia (Urine Na <20 mmol/L)? A. Mineralocorticoid deficiency B. Renal failure C. Excessive sweating D. Salt-losing nephritis E. Thiazide use	**C**
26. What is the goal of the initial therapy for acute hyponatremia in the first six hours? A. Complete normalization of sodium B. Decrease intracranial pressure and prevent brain herniation C. Increase body weight by 5kg D. Induce sleep in the patient E. Lower the blood pressure to 90/60 mmHg	**B**
27. Which hormone deficiency must be excluded before diagnosing SIADH? A. Insulin B. Parathyroid hormone C. Glucocorticoid (Cortisol) D. Growth hormone E. Testosterone	**C**
28. Which of the following is a CNS cause of SIADH? A. Pneumonia B. Stroke C. Small cell lung cancer D. Thiazide diuretics E. Pancreatitis	**B**

29. What happens to brain cells within hours as an adaptation to changes in plasma tonicity? A. They double in size B. They adapt to prevent severe cerebral edema C. They undergo apoptosis immediately D. They stop all electrical activity E. They increase sodium intake from the CSF	**B**