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PRACTICE QUESTIONS

Ministry of Health Kuwait Medical Licensing Department

SINTM

Internal Medicine for Senior

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Ministry of Health Kuwait Medical Licensing Department **SINTM**, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, **SINTM**
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

MULTIPLE CHOICE

A 58-year-old man with type 2 diabetes mellitus presents with a 2-week history of polyuria, polydipsia, and altered mental status. Vital signs: BP 100/60 mmHg, HR 110 bpm, RR 22/min, temperature 37.1°C. Laboratory results: plasma glucose 720 mg/dL, serum sodium 152 mEq/L, serum potassium 4.8 mEq/L, serum osmolality 360 mOsm/kg, arterial pH 7.36, bicarbonate 24 mEq/L, and serum ketones negative. Which of the following are the most appropriate initial management steps? (Choose two.)

- ☒ **A** Begin aggressive IV fluid resuscitation with isotonic saline
- ☐ **B** Administer IV insulin bolus followed by continuous infusion
- ☐ **C** Initiate aggressive IV fluid resuscitation with hypotonic (0.45%) saline as the first-line fluid
- ☐ **D** Add IV potassium only after insulin infusion has been started and serum K⁺ falls below 5.3 mEq/L
- ☒ **E** Start prophylactic subcutaneous low-molecular-weight heparin for thromboembolism prevention

ANSWER A • E

WHY This patient has hyperosmolar hyperglycemic state (HHS): very high glucose, high osmolality, absent ketoacidosis, and altered mental status. Initial management requires aggressive IV isotonic saline resuscitation to restore intravascular volume and lower serum osmolality gradually, plus prophylactic anticoagulation because HHS carries a high risk of arterial and venous thromboembolism. IV insulin infusion is added after initial fluids and once potassium is confirmed adequate, but a bolus is generally avoided. Hypotonic saline is not first-line because it can cause too rapid falls in osmolality.

QUESTION 2

MULTIPLE CHOICE

A 64-year-old man presents to the Emergency Department with retrosternal chest pain for the past 2 hours. ECG shows ST-segment elevation of 3 mm in leads II, III, and aVF. Troponin I is elevated. Aspirin 300 mg has been chewed. Which of the following are the most appropriate immediate management steps? (Choose two.)

- ☒ **A** Administer a loading dose of a P2Y12 inhibitor (clopidogrel, ticagrelor, or prasugrel)
- ☐ **B** Give IV beta-blocker immediately regardless of hemodynamic status
- ☒ **C** Activate the catheterization laboratory for primary percutaneous coronary intervention (PCI) if achievable within 90 minutes of first medical contact
- ☐ **D** Administer fibrinolytic therapy if primary PCI cannot be performed within 120 minutes of first medical contact
- ☐ **E** Wait for serial troponins before initiating any anticoagulation

ANSWER A - C

WHY The diagnosis is inferior wall STEMI (ST elevation in II, III, aVF). Immediate dual antiplatelet therapy with aspirin plus a P2Y12 inhibitor loading dose plus activation of the cath lab for primary PCI within 90 minutes of first medical contact is the standard of care. Fibrinolysis is reserved for situations where primary PCI cannot be performed within 120 minutes. IV beta-blockers are contraindicated acutely if there is heart failure, hypotension, bradycardia, or AV block and should not be given blindly.

QUESTION 3

TRUE FALSE

A patient has the following arterial blood gas: pH 7.30, PaCO₂ 50 mmHg, HCO₃⁻ 24 mEq/L, and PaO₂ 70 mmHg on room air. The acid-base disturbance is uncompensated respiratory acidosis.

- ☒ **A** True
- ☐ **B** False

ANSWER A

WHY pH 7.30 indicates acidemia. PaCO₂ is elevated (50 mmHg, normal 35–45), making respiratory acidosis the primary disorder. HCO₃⁻ is 24 mEq/L (normal 22–26), so there is no metabolic compensation yet — the disorder is therefore uncompensated (acute) respiratory acidosis. The statement is True.

QUESTION 4

SINGLE CHOICE

A 45-year-old woman presents with fatigue, pruritus, and jaundice. Laboratory tests reveal: total bilirubin 6.5 mg/dL, direct bilirubin 5.2 mg/dL, alkaline phosphatase 480 U/L (markedly elevated), ALT 60 U/L, AST 55 U/L, and positive antimitochondrial antibodies (AMA). What is the most likely diagnosis?

- ☐ A Autoimmune hepatitis
- ☒ B Primary biliary cholangitis (PBC)
- ☐ C Primary sclerosing cholangitis (PSC)
- ☐ D Viral hepatitis B

ANSWER B

WHY The combination of cholestatic-pattern liver enzymes (markedly elevated alkaline phosphatase with only mildly elevated transaminases), direct hyperbilirubinemia, pruritus, and positive antimitochondrial antibodies is classic for primary biliary cholangitis (PBC), a chronic autoimmune cholestatic liver disease that predominantly affects middle-aged women. Autoimmune hepatitis typically shows high transaminases and ANA/anti-smooth muscle antibodies. PSC usually shows p-ANCA and a male predominance, often associated with IBD. Viral hepatitis B causes hepatocellular injury with high transaminases.

QUESTION 5

SINGLE CHOICE

A 60-year-old man with known hypertension presents with severe headache, blurred vision, and BP 240/130 mmHg. Fundoscopy shows bilateral papilledema with hemorrhages and exudates (Grade IV hypertensive retinopathy). There is no neurologic deficit and no chest pain. What is the most appropriate initial management?

- ☐ A Oral captopril and discharge with outpatient follow-up
- ☒ B IV labetalol or nicardipine with gradual blood pressure reduction of about 20–25% in the first hour, then to 160/100 over the next 2–6 hours
- ☐ C Sublingual nifedipine to rapidly reduce BP to 140/90 mmHg within 30 minutes
- ☐ D IV furosemide alone and discharge if BP improves

ANSWER B

WHY This is a hypertensive emergency (malignant hypertension) with papilledema and end-organ damage. BP must be lowered gradually in a monitored setting using IV agents such as labetalol, nicardipine, or sodium nitroprusside — aiming to reduce MAP by no more than ~25% in the first hour, then toward 160/100 mmHg over the next 2–6 hours, avoiding precipitous drops that can cause cerebral or coronary hypoperfusion. Sublingual nifedipine is contraindicated due to unpredictable, dangerous hypotension. Oral therapy and discharge are inappropriate for hypertensive emergency.

QUESTION 6

SINGLE CHOICE

A 72-year-old woman with a urinary tract infection presents with confusion, hypotension (BP 82/50 mmHg), tachycardia (HR 122 bpm), tachypnea (RR 26/min), temperature 38.8°C, and lactate 4.5 mmol/L. Despite 2 liters of IV crystalloids, BP remains 86/52 mmHg. What is the next best step?

- ☒ **A** Start IV norepinephrine as the first-line vasopressor
- ☐ **B** Start IV dopamine as the first-line vasopressor
- ☐ **C** Transfuse packed red blood cells
- ☐ **D** Restrict further fluids and observe

ANSWER A

WHY This patient has septic shock — infection plus persistent hypotension and elevated lactate despite adequate fluid resuscitation. Per Surviving Sepsis Campaign guidelines, norepinephrine is the first-line vasopressor. Dopamine is no longer recommended first-line due to higher risk of arrhythmias. PRBC transfusion is reserved for patients with hemoglobin <7 g/dL (and acute coronary syndrome exceptions). Restricting fluids would worsen tissue perfusion.

QUESTION 7

SINGLE CHOICE

A 38-year-old woman presents with weight loss, heat intolerance, palpitations, tremor, and exophthalmos. Thyroid function tests: TSH <0.01 mIU/L, free T4 4.5 ng/dL (elevated), free T3 elevated. What is the most likely diagnosis?

- ☐ A Subclinical hyperthyroidism
- ☒ B Graves' disease
- ☐ C Toxic multinodular goiter
- ☐ D Thyroiditis (subacute)

ANSWER B

WHY The combination of overt hyperthyroidism (suppressed TSH, elevated free T4 and T3) with ophthalmopathy (exophthalmos) is virtually pathognomonic for Graves' disease, an autoimmune disorder caused by TSH receptor-stimulating antibodies. Subclinical hyperthyroidism has normal free T4/T3. Toxic multinodular goiter typically lacks ophthalmopathy. Subacute thyroiditis is usually painful, often follows a viral illness, and shows transient hyperthyroidism with low radioiodine uptake.

QUESTION 8

SINGLE CHOICE

A 70-year-old man with a history of chronic lymphocytic leukemia (CLL) presents with fatigue and shortness of breath on exertion. CBC: hemoglobin 7.8 g/dL, MCV 102 fL, WBC 18,000/ μ L with lymphocytosis, platelets 150,000/ μ L. Reticulocyte index is low. Peripheral smear shows hypersegmented neutrophils. What is the most likely cause of his anemia?

- ☐ A Autoimmune hemolytic anemia
- ☐ B Iron deficiency anemia
- ☐ C Anemia of chronic disease
- ☒ D Megaloblastic anemia due to vitamin B12 or folate deficiency

ANSWER D

WHY Macrocytic anemia (MCV 102 fL) with hypersegmented neutrophils and a low reticulocyte index indicates megaloblastic anemia, classically from vitamin B12 or folate deficiency. In CLL patients, folate deficiency can occur due to increased utilization, and B12 deficiency can occur from autoimmune gastritis. Cold agglutinin disease (AIHA) would show elevated reticulocytes and spherocytes with elevated LDH and bilirubin. Iron deficiency gives microcytic anemia. Anemia of chronic disease is typically normocytic.

QUESTION 9

SINGLE CHOICE

A 55-year-old man develops sudden pleuritic chest pain and dyspnea 4 days after total knee replacement. HR 118 bpm, BP 110/70 mmHg, RR 26/min, SpO₂ 90% on room air. ECG shows sinus tachycardia; chest X-ray is normal. What is the most appropriate next diagnostic step?

- ☒ **A** CT pulmonary angiography (CTPA)
- ☐ **B** D-dimer testing
- ☐ **C** Ventilation–perfusion (V/Q) scan
- ☐ **D** Transthoracic echocardiography

ANSWER A

WHY This patient has high pretest probability for pulmonary embolism (recent orthopedic surgery, tachycardia, hypoxemia, pleuritic chest pain). In a high-pretest-probability patient, D-dimer is not useful because it will likely be elevated regardless and may yield false negatives with poor predictive value. CTPA is the imaging modality of choice and is readily available, providing direct visualization of clots. V/Q scan is reserved mainly for patients with contraindications to contrast. Echocardiography can suggest PE by showing RV strain but is not diagnostic.