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PRACTICE QUESTIONS

Dubai Health Authority (DHA)

NROLO

Specialist Neurology Exam

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Dubai Health Authority (DHA) **NROLO**, 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, **NROLO**
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

A 68-year-old man presents with sudden onset right hemiparesis and aphasia, with the time last known well being 2 hours ago. Non-contrast CT of the brain is performed. Which of the following is the most appropriate immediate next step in management?

- ☐ A Perform CT angiography of the head and neck vessels
- ☐ B Start intravenous unfractionated heparin immediately
- ☒ C Administer intravenous alteplase if no contraindications are present
- ☐ D Obtain an MRI of the brain with diffusion-weighted imaging
- ☐ E Start aspirin 300 mg orally

ANSWER C

WHY In acute ischemic stroke within 4.5 hours of symptom onset, IV thrombolysis with alteplase (or tenecteplase per current AHA/ASA guidance) is the standard reperfusion therapy after excluding hemorrhage on non-contrast CT. CT/MR angiography may follow to assess for large vessel occlusion and thrombectomy candidacy, but reperfusion therapy should not be delayed. Heparin is not indicated in acute ischemic stroke, aspirin is reserved for patients not receiving thrombolysis, and MRI is not the first imaging choice for hyperacute stroke triage.

QUESTION 2

SINGLE CHOICE

A 72-year-old man with a 6-year history of Parkinson's disease is being considered for advanced therapy. He continues to experience disabling motor fluctuations and dyskinesias despite optimized oral levodopa and adjunct therapy. Which of the following interventions is most appropriate to consider as the next step?

- ☐ A Increase the dose of immediate-release levodopa
- ☐ B Switch from levodopa to a dopamine antagonist
- ☒ C Refer for deep brain stimulation evaluation
- ☐ D Discontinue all antiparkinsonian medications
- ☐ E Add benzodiazepine for tremor

ANSWER C

WHY Patients with Parkinson's disease who have motor fluctuations and dyskinesias refractory to optimal medical therapy are candidates for device-aided therapies such as deep brain stimulation (DBS) of the STN or GPi, or intestinal levodopa-carbidopa infusion. Dopamine antagonists worsen parkinsonism, and increasing levodopa typically worsens dyskinesias.

QUESTION 3

SINGLE CHOICE

A 24-year-old woman presents with recurrent episodes of brief loss of awareness, each lasting 5–10 seconds, with rapid blinking and slight smacking of the lips, occurring multiple times per day. EEG shows generalized 3 Hz spike-and-wave discharges. Which antiepileptic medication is the most appropriate first-line therapy?

- ☐ A Carbamazepine
- ☒ B Sodium valproate
- ☐ C Phenytoin
- ☐ D Gabapentin
- ☐ E Pregabalin

ANSWER B

WHY The clinical and EEG features are consistent with juvenile absence epilepsy (generalized epilepsy). Sodium valproate is a broad-spectrum antiepileptic effective for generalized epilepsies and remains an appropriate first-line option, particularly when considering efficacy across multiple generalized seizure types. Carbamazepine and phenytoin can worsen absence seizures, while gabapentin and pregabalin are not first-line for generalized epilepsies. (Ethosuximide is also used for absence seizures but is not listed.)

QUESTION 4

SINGLE CHOICE

A 32-year-old woman presents with subacute optic neuritis in the right eye. MRI of the brain and spinal cord demonstrates multiple ovoid periventricular white matter lesions, one of which enhances with gadolinium, and a short-segment spinal cord lesion. Cerebrospinal fluid analysis shows oligoclonal bands. Which of the following is the most likely diagnosis?

- ☐ A Acute disseminated encephalomyelitis
- ☒ B Multiple sclerosis
- ☐ C Neuromyelitis optica spectrum disorder
- ☐ D Progressive multifocal leukoencephalopathy
- ☐ E Small vessel ischemic disease

ANSWER B

WHY The combination of optic neuritis, periventricular white matter lesions (typical of demyelination), short-segment spinal cord involvement, and CSF oligoclonal bands fulfills the dissemination in space and time required for a diagnosis of relapsing-remitting multiple sclerosis using the McDonald criteria. NMOSD would typically show a longitudinally extensive spinal cord lesion and aquaporin-4 antibodies, and ADEM typically presents with encephalopathy following a preceding infection or vaccination.

QUESTION 5

SINGLE CHOICE

A 45-year-old man presents with progressive proximal lower limb weakness, difficulty climbing stairs, and mild calf hypertrophy. Serum creatine kinase is markedly elevated ($>10\times$ upper limit of normal). Nerve conduction studies are normal, while electromyography shows myopathic motor units. Which of the following is the most likely diagnosis?

- ☐ A Amyotrophic lateral sclerosis
- ☐ B Chronic inflammatory demyelinating polyneuropathy
- ☒ C Becker muscular dystrophy
- ☐ D Myasthenia gravis
- ☐ E Guillain-Barré syndrome

ANSWER C

WHY Progressive proximal weakness, calf pseudohypertrophy, markedly elevated CK, normal nerve conduction studies, and myopathic EMG changes in a male patient in the 4th–5th decade are characteristic of Becker muscular dystrophy, a later-onset dystrophinopathy compared to Duchenne. ALS typically shows upper and lower motor neuron signs with denervation on EMG, CIDP shows demyelinating features on nerve conduction, and myasthenia gravis features fatigability with normal CK.

QUESTION 6

SINGLE CHOICE

A 28-year-old woman presents with 3 days of severe, strictly unilateral periorbital headache associated with ipsilateral lacrimation, conjunctival injection, rhinorrhea, and ptosis. Attacks last 60–90 minutes and occur 1–2 times daily, with restlessness during episodes. Which of the following is the most appropriate acute therapy?

- ☐ A Oral sumatriptan
- ☒ B Inhaled oxygen via non-rebreather mask
- ☐ C Oral propranolol
- ☐ D Oral topiramate
- ☐ E Indomethacin

ANSWER B

WHY The clinical picture is classic for cluster headache. Acute treatment options include high-flow inhaled oxygen (typically 12–15 L/min via non-rebreather mask) and subcutaneous sumatriptan. Oral triptans, while used in migraine, are not the optimal acute therapy for cluster headache due to delayed onset. Propranolol and topiramate are migraine prophylactics. Indomethacin is the specific therapy for paroxysmal hemicrania and hemicrania continua, which are shorter-duration TACs.

QUESTION 7

SINGLE CHOICE

A 74-year-old woman presents with a 2-year history of progressive memory impairment, difficulty finding words, and getting lost in familiar places. Examination shows intact gait, preserved motor strength, and no focal neurological deficits. Which of the following is the most likely underlying neuropathology?

- ☐ A Lewy body pathology in the substantia nigra
- ☐ B Pick bodies in the frontotemporal cortex
- ☒ C Beta-amyloid plaques and neurofibrillary tangles
- ☐ D Prion protein deposition with spongiform change
- ☐ E Huntingtin inclusions in the caudate

ANSWER C

WHY A 2-year progressive amnesic cognitive decline with prominent episodic memory impairment and preserved early motor function is most consistent with typical Alzheimer's disease dementia, the neuropathology of which involves extracellular beta-amyloid plaques and intracellular hyperphosphorylated tau neurofibrillary tangles. Lewy body disease is associated with visual hallucinations and parkinsonism, frontotemporal dementia with personality and language changes, prion disease with very rapid progression, and Huntington disease with chorea and psychiatric features.

QUESTION 8

SINGLE CHOICE

A 58-year-old man suddenly develops dense left hemiplegia (face, arm, and leg equally affected) with left hemisensory loss and left homonymous hemianopia, but preserved consciousness and intact language. Which of the following is the most likely vascular territory affected?

- ☐ A Right anterior cerebral artery
- ☒ B Right middle cerebral artery trunk
- ☐ C Right posterior cerebral artery
- ☐ D Left middle cerebral artery
- ☐ E Basilar artery

ANSWER B

WHY Contralateral hemiplegia (face, arm, and leg) with hemisensory loss and homonymous hemianopia, without aphasia (suggesting preserved left/non-dominant hemisphere function) and with preserved consciousness, indicates a large right hemispheric infarct involving the right middle cerebral artery territory including the lenticulostriate perforators and adjacent optic radiations. Right ACA infarcts produce predominant leg weakness with behavioral changes; right PCA infarcts produce homonymous hemianopia with visual recognition deficits; basilar infarcts cause brainstem features.

QUESTION 9

MULTIPLE CHOICE

A 60-year-old man presents with sudden vertigo, vomiting, dysarthria, dysphagia, and crossed sensory loss (ipsilateral face, contralateral body). MRI confirms a lateral medullary infarct. Which of the following are recognized clinical features of lateral medullary (Wallenberg) syndrome? (Choose two.)

- ☒ **A** Ipsilateral Horner syndrome
- ☐ **B** Contralateral lower facial weakness
- ☐ **C** Ipsilateral palatal weakness and hoarseness
- ☐ **D** Ipsilateral hemiparesis
- ☒ **E** Contralateral loss of pain and temperature from the body

ANSWER A - E

WHY Lateral medullary syndrome (Wallenberg) classically features ipsilateral Horner syndrome (descending sympathetic fibers), ipsilateral loss of pain and temperature from the face (spinal trigeminal nucleus), contralateral loss of pain and temperature from the body (spinothalamic tract), ipsilateral palatal weakness and hoarseness from nucleus ambiguus involvement, vertigo, vomiting, and nystagmus from vestibular nuclei. Hemiparesis and lower facial weakness are not part of this syndrome because the corticospinal tract and facial motor nucleus are not affected in the lateral medulla.