

Specialty Certificate in Neurology Sample Questions

Question: 1

A 70-year-old woman developed features of Parkinson's disease. Levodopa was unhelpful. Nine months later her memory deteriorated. Cognitive function fluctuated and she was worse at night, with confusion and visual hallucinations.

What is the most likely diagnosis?

- A corticobasal degeneration
- B dementia with Lewy bodies
- C multiple system atrophy
- D Parkinson's disease with superimposed Alzheimer's disease
- E vascular dementia

Question: 2

A 75-year-old woman complained of weakness of her left leg. Forty-eight hours previously she had been given a spinal anaesthetic for a left total-hip replacement. The operation note and anaesthetic chart suggested no untoward events during the operation.

On examination, neurological signs were confined to the left leg. There was severe weakness of flexion of the knee, dorsiflexion, plantar flexion, inversion and eversion of the ankle, extension of the great toe and flexion and extension of the toes. The knee jerk was normal but the ankle jerk was absent. There was diminished sensation to pinprick over the calf, the sole and dorsum of the foot extending up the anterolateral aspect of the shin to just below the tibial tuberosity.

What is the most likely diagnosis?

- A common peroneal nerve lesion
- B diabetic amyotrophy
- C L5/S1 disc prolapse
- D sciatic nerve lesion
- E spinal extradural haematoma

Question: 3

A 36-year-old woman presented with weakness and cramps in the hands, worsening over the preceding 2 years. On examination of the upper limbs, there was no wasting or fasciculation, tone was decreased, the reflexes were normal and there was marked weakness, particularly of the fingers of the left hand. Sensation was normal.

Investigations:

MR scan of cervical spine	normal
serum creatine kinase	300 U/L (24–170)
cerebrospinal fluid: total protein	0.6 g/L (0.15–0.45)

What is the most likely diagnosis?

- A amyotrophic lateral sclerosis
- B chronic inflammatory demyelinating polyradiculoneuropathy
- C inclusion body myositis
- D multifocal motor neuropathy with conduction block
- E myasthenia gravis

Question: 4

A 29-year-old man presented with agitation and drowsiness. Prior to admission he had become apathetic and had gained 6 kg in weight.

On examination, he appeared unkempt. His Glasgow coma score was 12, his temperature was 38°C and his visual acuity was 6/18 bilaterally. There was horizontal nystagmus and dysarthria.

Investigations:

CT scan of head	right frontotemporal calcification and oedema with leptomenigeal contrast enhancement and dilated ventricles
cerebrospinal fluid: opening pressure	160 mmH ₂ O (50–180)
cell count	14/μL (≤5) (all lymphocytes)
total protein	0.55 g/L (0.15–0.45)
glucose	7.2 mmol/L (3.3–4.4)
plasma glucose	23.4 mmol/L
CT scan of thorax	mediastinal lymphadenopathy

What is likely to be the most useful diagnostic test?

- A brain biopsy
- B complement concentration
- C lymph node biopsy
- D MR scan of head
- E serum ACE

Question: 5

A 50-year-old man presented with sudden transient diplopia accompanied by loss of feeling on the left side of the body. The diplopia had resolved by the time he was seen.

On examination, there was a right partial ptosis, right pupil smaller than left, normal eye movements and pupil light reactions. There was sensory loss over the left side of the face and head, and the whole of the left side of the body. The motor system was normal other than mild right-sided ataxia.

Which is the most likely anatomical site for the presumed vascular lesion?

- A basal (ventral) right side of midbrain
- B basal (ventral) right side of pons
- C dorsolateral right side of medulla
- D dorsolateral right side of midbrain
- E dorsolateral right side of pons

Question: 6

A 40-year-old woman was referred regarding screening for an intracranial aneurysm. She was asymptomatic other than occasional migraine with typical visual aura. She did not smoke and drank occasional alcohol. Her elder brother had suffered an aneurysmal subarachnoid haemorrhage (SAH) 2 years previously.

What advice should she be given regarding investigation?

- A her risk of aneurysmal SAH is too low to justify screening
- B the most appropriate imaging is intravenous digital subtraction angiography
- C the most appropriate investigation is CT angiography
- D the most appropriate investigation is transcranial Doppler sonography
- E there are insufficient data available to answer this question confidently at present

Question: 7

A 26-year-old woman presented with three headaches over a 7-month period. Each episode was characterised by severe right-sided headache lasting 12 hours, preceded by teichopsia and associated with mild nausea.

What is the most appropriate initial treatment?

- A Cafergot® suppository at the onset of the next attack
- B ibuprofen at the onset of the next attack
- C pizotifen prophylaxis
- D propranolol prophylaxis
- E sumatriptan at the onset of the next attack

Question: 8

A 50-year-old man presented with daytime somnolence, anxiety and a feeling of breathlessness especially on lying flat, which had increased over 6 weeks. There was no history of lung disease. He was uncertain if he snored at night. He now sat up to sleep.

On examination, he had a body mass index of 35 kg/m^2 (18–25), collar size 46 cm and no spinal abnormality. Neurological and cardiac examinations were normal. He seemed very anxious, panicky, tachypnoeic and was hyperventilating. He refused to lie down to be examined, insisting that he would not be able to breathe.

Investigations:

ECG	normal
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forced vital capacity (FVC):

sitting	3.0 L
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semi-recumbent	1.2 L
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What is the most likely cause for his symptoms?

- A hyperventilation due to anxiety disorder
- B laryngeal obstruction
- C obstructive sleep apnoea
- D severe expiratory muscle weakness
- E severe inspiratory weakness

Question: 9

A 44-year-old woman presented with disturbed sleep for 7 years. She was unaware of any problem, but her husband reported that she sat up and rubbed her head for 3–4 minutes, between three and ten times a night. Occasionally she would stand up. She snored when lying on her back. Her father had late onset epilepsy.

Examination was normal. Her electroencephalography was normal.

What is the most likely diagnosis?

- A familial frontal lobe epilepsy
- B jactatio capitis nocturna
- C parasomnia
- D periodic limb movement of sleep
- E rapid eye movement sleep disorder

Question: 10

A 23-year-old man presented 1 hour after a head injury sustained while playing rugby. He had briefly lost consciousness and was witnessed to have a few clonic movements of the limbs. He regained consciousness within 30 seconds with no post-traumatic amnesia or confusion.

On examination, his Glasgow coma score was 15 and there were no abnormal neurological signs.

Which of the following options is most appropriate?

- A electroencephalography
- B MR scan of brain
- C no investigation
- D serum prolactin
- E X-ray of skull

Answers

1. Answer: B

2. Answer: D

3. Answer: D

4. Answer: C

5. Answer: D

6. Answer: A

7. Answer: B

8. Answer: E

9. Answer: A

10. Answer: C