

NEUROLOGY

- 1. A 23yearold man presents with visual loss in the right eye, diagnosed as optic neuritis. Which one of the following statements would be seen in an afferent pupillary defect?**

 - accommodation response is unaffected
 - hypersensitive response to pilocarpine in the affected eye
 - irregular pupil of the affected eye
 - pupil of affected eye larger than the unaffected eye
 - pupil of affected eye smaller than the unaffected eye
- 2. A 75yearold man presents with 12 months history of cognitive impairment, parkinsonism, intermittent confusion and generalised myoclonus. He was started on 62.5 tds of sinemet. In the following 2 months he was started experiencing visual hallucinations. The most likely diagnosis is:**

 - Idiopathic Parkinson's disease
 - Alzheimer's disease
 - Diffuse Lewy body disease
 - Multiple system atrophy
 - Progressive supranuclear palsy
- 3. Which visual field defect is most likely to occur with multiple sclerosis?**

 - bitemporal hemianopia
 - central scotoma
 - homonymous hemianopia
 - increased blind spot
 - tunnel vision
- 4. Which is true of herpes simplex encephalitis?**

 - brain MRI is characteristically normal
 - fits are uncommon
 - genital herpes is usually present
 - temporal lobe involvement is common
 - viral identification using polymerase chain reaction on CSF is nonspecific
- 5. Which of the following investigations best supports a diagnosis of new variant CJD:**

 - CSF analysis
 - CT brain
 - EEG
 - EMG
 - MRI brain
- 6. Which of the following is a recognised cause of a phrenic nerve palsy?**

 - Aortic aneurysm
 - Dermoid
 - Ganglioneuroma
 - Pericardial cyst
 - Sarcoidosis
- 7. A 33 year old epileptic female presents with visual problems. Examination reveals a constriction of visual fields to confrontation. Which of the following may be responsible for her visual deterioration?**

 - Vigabatrin
 - Lamotrigine
 - Gabapentin
 - Phenytoin
 - Sodium Valproate
- 8. A 19 year old girl presents at the antenatal clinic. She is approximately six weeks pregnant and the pregnancy was unplanned. She has a two year history of grand mal epilepsy for which she takes carbamazepine. She has had no fits for approximately six months. She wants to continue with her pregnancy if it is safe to do so. She is worried about her anticonvulsant therapy and the effects on the baby and enquireshow she should be managed?**

 - Advise termination due to drug teratogenicity
 - Continue with carbamazepine
 - Stop carbamazepine until the second trimester
 - Switch therapy to phenytoin
 - Switch therapy to sodium valproate
- 9. A female patient aged 30 has a 5 years history of difficulty getting upstairs and out of a low chair and mild upper limb weakness but no pain. There is no family history. She presented with severe type 2 respiratory failure. EMG showed evidence of myopathy. The most likely diagnosis is:**

 - Polymyositis
 - Inclusion body myositis
 - Acid Maltase Deficiency
 - MillerFisher Syndrome
 - LambertEaton Myasthenic Syndrome
- 10. A 75 yearold woman with acute monocular visual loss. Fundoscopy reveals a swollen pale optic disc in the affected eye. What is the most likely diagnosis?**

 - Central retinal vein occlusion.
 - Closed angle glaucoma.
 - Giant cell arteritis.
 - Optic neuritis.
 - Raised intracranial pressure.
- 11. A 45yearold man presents with an insidious onset of binocular horizontal diplopia and left sided facial pain. On examination he has a left abducens nerve palsy and numbness over the maxillary division of the left trigeminal nerve. The most likely anatomical site of his neurological lesion is:**

 - Cavernous sinus
 - Petrous apex
 - Superior orbital fissure
 - Cerebellopontine angle
 - Midbrain
- 12. An adolescent boy presents with unexplained neurological illness. Which one of the following would suggest substance abuse?**

 - A history of low selfesteem.
 - A history of social isolation.
 - Deposits around the mouth.
 - A history of family conflict.
 - A history of attention deficit disorder.
- 13. A 45yearold woman noticed tinnitus in her left ear which progressed over some weeks to hearing loss in that ear. On physical examination she is found to have a marked decrease in hearing on the left, with Rinne test indicating air conduction better than bone conduction. The other cranial nerves I VII and IX XII are intact. A brain MRI scan revealed a solitary, fairly discrete, 3 cm mass located in the region of the left cerebellopontine angle. Which of the following statements is most appropriate to tell the patient regarding these findings?**

- a. A test for HIV1 is likely to be positive
 b. Other family members should undergo MR imaging of the brain
 c. Remissions and exacerbations are likely to occur in coming years
 d. The lesion can be resected with a good prognosis
 e. You are unlikely to survive for more than a year
14. **A 22yearold man suffers a deep laceration to the forearm resulting in transection of the median nerve. Following this injury, the nerve will undergo which of the following pathological processes?**
 a. Chronic inflammation
 b. Coagulative necrosis
 c. Fibrinoid necrosis
 d. Segmental demyelination
 e. Wallerian degeneration
15. **Which of the following features is characteristic of myasthenia gravis?**
 a. Diplopia
 b. Equal sex incidence
 c. Fasciculation
 d. Lid lag
 e. Loss of pupillary reflexes
16. **A 25yearold woman presents with a severe migraine. Which of the following is not a recognised feature of migraine?**
 a. Some symptoms improved by tricyclic antidepressants
 b. Third nerve palsy
 c. External ophthalmoplegia
 d. bilateral fortification spectra
 e. precipitation by oral contraceptives
17. **A 48yearold female patient develops an acute, severe and isolated right C6 radiculopathy affecting both the motor and sensory roots. She is examined in an EMG clinic 3 weeks after the onset of symptoms. Which of the following statements is true?**
 a. Absent sensory nerve potentials would be expected on examination of the thumb and index finger on the right.
 b. A repeat examination 12 months later is likely to reveal rapidly recruited low amplitude short duration motor units in the clinically involved muscle on EMG.
 c. Fibrillation potentials would be expected in the right brachioradialis and abductor pollicis brevis.
 d. Triceps tendon jerk is likely to be depressed or absent.
 e. Voluntary motor unit activity may be absent in the right biceps.
18. **A 15 year old boy presents with tremor of both hands. Over the previous months he has developed a mild dysarthria. He has a history of behavioural problems, of a depressive/psychotic nature. The most likely diagnosis is:**
 a. Alzheimer's disease
 b. Huntington's disease
 c. Neuroanthocytosis
 d. variant Creutzfeldtjakob disease
 e. Wilson's disease
19. **A 24 year old female presents with vague frontal headaches and visual disturbance. She has a past history of acne for which she is receiving treatment. Examination reveals her to be obese with a blood pressure of 110/70 mmHg. There is absence of the central retinal vein pulsation on fundoscopic examination. Which of the following drugs account for these findings?**
 a. Isotretinoin
 b. Ampicillin
 c. Topical tetracycline
 d. Dianette
 e. Erythromycin
20. **Which of the following is true of human neurons?**
 a. myelin sheaths extend across the nodes of Ranvier.
 b. unmyelinated fibres have faster conduction.
 c. sodium ion influx occurs during the action potential.
 d. the action potential increases with increased stimulation.
 e. increased extracellular calcium leads to increased neuronal excitability.
21. **A 34 year old male presents with backpain and weakness. Which of the following would support a diagnosis of prolapsed intervertebral disc?**
 a. bilateral symmetrical nerve involvement
 b. Loss of sensation over the left outer upper thigh
 c. no evidence of nerve compression
 d. pain which is worse on resting
 e. pain which is unremitting in character
22. **The anticonvulsant Levetiracetam**
 a. Is used as monotherapy for the treatment of generalised convulsions
 b. Acts via the GABA receptor
 c. Is associated with induction of hepatic cytochrome p450 enzymes
 d. Is well absorbed via the oral route
 e. Is associated with increased plasma concentrations of sodium valproate
23. **Following factors decrease large intestinal motility:**
 a. Parasympathetic activity
 b. Anticholinergic agents
 c. Gastric Distension
 d. CCKPZ
 e. Laxatives.
24. **A 72 year old female presents with general slowness. Examination reveals a tremor of the hands. What frequency of tremor would you suspect in Parkinson's disease?**
 a. 1 Hz
 b. 2 Hz
 c. 5 Hz
 d. 8 Hz
 e. 10 Hz
25. **Which statement is true regarding Gabapentin?**
 a. is a potent hepatic enzyme inducer
 b. side effects typically include visual field defects with longterm use
 c. therapy is best monitored through measuring plasma concentrations
 d. is of particular value as monotherapy in absence attacks (petit mal)
 e. requires dose adjustment in renal disease
26. **A 62yearold man presented with difficult walking. He had a past history of diabetes mellitus and cervicalspondylosis, which had required surgical decompression eight years previously. He drank 40 units of alcohol weekly. On examination there was fasciculation, wasting and weakness in the left deltoid and biceps, with weakness in the shoulder**

- girdle muscles bilaterally. There was fasciculation in the glutei and quadriceps bilaterally, weakness of hip flexion and foot dorsiflexion, brisk reflexes in upper and lower limbs, and extensor plantar responses. There was no sensory impairment. What is the diagnosis?
- alcoholic myopathy
 - diabetic amyotrophy
 - motor neurone disease
 - recurrent cervical cord compression
 - syringomyelia
27. Which of the following is least likely to cause choreiform movements?
- polyarteritis nodosa
 - polycythaemia rubra vera
 - Rheumatic fever
 - systemic lupus erythematosus
 - thyrotoxicosis
28. A 24yearold man presents with a five month history of low back pain, radiating to his buttocks, and back stiffness worse in the morning and worse after periods of inactivity. Which of the following signs is the most likely to be present?
- exaggerated lumbar lordosis
 - positive femoral stretch test
 - positive Trendelenburg test
 - restricted straight leg raising
 - sacroiliac joint tenderness
29. A previously well 27yearold woman presents with a history of transient ischaemic attack affecting her right side and speech. She had returned to the United Kingdom from a holiday in New Zealand two days previously. On examination there was nothing abnormal to find. An ECG, chest Xray, CT brain scan and routine haematology and biochemistry were all normal. What is the most likely underlying abnormality?
- atrial myxoma
 - carotid artery stenosis
 - embolus from paroxysmal atrial fibrillation
 - patent foramen ovale
 - subarachnoid haemorrhage
30. Which of the following factors is the most likely to account for this problem?
- altered volume of distribution
 - delayed gastric emptying
 - first pass metabolism
 - hepatic enzyme induction
 - reduced gut blood flow
31. A 25yearold female presents with 2 days history of diplopia and unsteadiness. 2 weeks ago she suffered an upper respiratory tract infection. On examination there is complete ophthalmoplegia, areflexia and gait ataxia. Which of the following blood tests is the most likely to confirm the underlying diagnosis?
- Acetylcholine receptors antibodies
 - Anti GM1 antibodies
 - Anti GQ1b antibodies
 - Anti Hu antibodies
 - Anti purkinje cell antibodies
32. Which of the following is true of tetanus?
- failure to culture *Clostridium tetani* from the wound would make the diagnosis doubtful
 - infection confers lifelong immunity
 - there is a characteristic EEG
 - Clostridium* specific intravenous immunoglobulin is of no benefit once spasm has started
 - cephalic tetanus causes severe dysphagia
33. A 68yearold man presents with progressive visual impairment. On examination there is an incongruous homonymous hemianopia. The most likely anatomical site of the neurological lesion is at:
- optic nerve
 - optic tract
 - chiasma
 - optic radiation
 - occipital lobe
34. A 21 year old female with epilepsy is well controlled on sodium valproate 600mg bd and had been taking oral contraceptives for three years. She presented to her general practitioner 12 weeks pregnant. Which of the following is correct?
- An alternative anticonvulsant should be used in place of sodium valproate
 - Interaction of sodium valproate with the oral contraceptive increased the risk of pregnancy
 - The dose of sodium valproate should be increased
 - There is an increased risk of a neural tube defect in her fetus
 - She is at increased risk of anaemia in pregnancy
35. A 40yearold man has had decreased mentation with confusion as well as increasing incoordination and loss of movement in his right arm over the past 6 weeks. An MRI scan shows 0.5 to 1.5 cm lesions in cerebral hemispheres in white matter and at the greywhite junction that suggest demyelination. A stereotactic biopsy is performed, and immunohistochemical staining of the tissue reveals JC papovavirus in oligodendrocytes. Which of the following laboratory test findings is most likely to be associated with these findings?
- CD4 lymphocyte count of 90/microliter
 - Haemoglobin A1c of 9.8%
 - HDL cholesterol of 0.7 mmol/L
 - Oligoclonal bands in CSF
 - Serum sodium of 110 mmol/L
36. A 60yearold man presents with an episode of memory loss. Three days earlier he had become confused. His wife led him into the house he apparently sat down at her request, and had a cup of tea. He then wandered around the house, confused, but remained conscious and able to have some conversation with his wife, though continuing to ask similar questions repeatedly. After three hours, he abruptly returned to normal and had no recollection of the events. What is the most likely diagnosis?
- alcohol related amnesia
 - chronic subdural haematoma
 - complex partial status epilepticus
 - hysterical fugue state
 - transient global amnesia
37. A 65yearold man presents with 4 months history of swallowing difficulties (worse with liquids than solids). He also complains of nasal regurgitation, coughing and choking episodes during meals and slight dysarthria. He lost 1 stone over the last 8 weeks. Which of the following investigations is the most appropriate for this case?
- Gastroscopy
 - Barium swallow
 - CXR

- d. Tumour markers
e. Acetyl choline receptors antibodies
38. **A complete unilateral facial hemiparesis may be caused by which of the following?**
a. An intracranial tumour
b. Birth injury
c. Cerebellar atrophy
d. Myasthenia gravis
e. Phenothiazine toxicity
39. **Regarding pseudotumours cerebri (benign hypercranial hypertension) which is true?**
a. A mildly increased CSF cell count is typical.
b. May be caused by prolonged steroid therapy.
c. Is occasionally associated with focal neurological signs.
d. Frequently presents with ataxia.
e. Is distinguished from hydrocephalus by the absence of suture separation.
40. **Which of the following associations is correct?**
a. Renal transplantation and NonHodgkin's lymphoma
b. Hepatitis B and aplastic anaemia
c. Turner's syndrome and acute myeloid leukaemia
d. Basophilia and chronic myeloid leukaemia
e. Crohn's disease and TB
41. **A demyelinating polyneuropathy is typically caused by:**
a. Diabetes
b. Excessive alcohol
c. Hereditary motorsensory neuropathy
d. Renal failure
e. Vitamin B12 deficiency
42. **Causes of dilated pupils include:**
a. Argyll Robertson pupil
b. Ethylene glycol poisoning
c. Myotonic dystrophy
d. Organophosphate poisoning
e. Pontine haemorrhage
43. **Which ONE of the following would be expected in a third nerve palsy?**
a. Enophthalmos
b. Constricted pupil
c. Convergent strabismus
d. Increased lacrimation
e. Unreactive pupil to light
44. **A 20yearold female presents with acute onset of left foot drop. Examination reveals weakness of ankle dorsiflexion and eversion. There is a small area of sensory loss in the first web space. Reflexes were all present and plantars flexor. Which of the following nerves is likely to be involved?**
a. Tibial nerve
b. Common peroneal nerve
c. Sciatic nerve
d. Femoral nerve
e. Inferior gluteal nerve
45. **Which of the following is a characteristic feature of transient global amnesia?**
a. abnormal behaviour
b. apraxia
c. confabulation
d. loss of personal identity
e. normal perception
46. **A lesion of the occipital lobe causes:**
a. Acalculia
b. Astereogenesis
c. Constructional apraxia
d. Cortical blindness
e. Visuospatial neglect
47. **A 17yearoldman has been diagnosed with schizophrenia 4 weeks ago. He was started on haloperidol. Two weeks later he was found confused and drowsy. On examination he was pyrexial (40.7 C), rigid with blood pressure of 200/100. Which of the following treatment will you initiate?**
a. phenytoin
b. diazepam
c. cefuroxime
d. acyclovir
e. dantrolene
48. **A 50 yearold male epileptic presents with paraesthesia of hands and feet. He also has unsteadiness when walking. On examination he has Dupuytren's contracture in his left hand, a peripheral sensory neuropathy and palpable lymph nodes in his neck and axillae. Which of the following drugs is the most likely cause of these features?**
a. Carbamazepine.
b. Clonazepam
c. Lamotrigine.
d. Phenytoin.
e. Sodium valproate.
49. **An 80yearold woman has a three month history of progressive numbness and unsteadiness of her gait. On examination, there is a mild spastic paraparesis, with brisk knee reflexes, ankle reflexes are present with reinforcement, extensor plantars, sensory loss in the legs with a sensory level at T10, impaired joint position sense in the toes, and loss of vibration sense below the iliac crests.**

Investigations were as follows:

Haemoglobin 12.0 g/dl

MCV 99 fl

What is the most likely diagnosis?
a. anterior spinal artery occlusion
b. dorsal meningioma
c. multiple sclerosis
d. subacute combined degeneration of the cord
e. tabes dorsalis
50. **A 16 year old girl presented with a three week history of headache and horizontal diplopia on far right lateral gaze. On two separate occasions she noted dimmed vision whilst bending forwards. Over the last year she had gained 12 kilograms in weight. On examination, her weight was 95 kg, and height 162cms. Neurological examination revealed bilateral papilloedema and a partial right sixth cranial nerve palsy. What is the most likely diagnosis?**
a. Benign intracranial hypertension.
b. Multiple sclerosis.
c. Pituitary tumour
d. Superior sagittal vein thrombosis.
e. Thyroid eye disease.

51. Which of the following clinical manifestations suggests Guillain Barré Syndrome?
- Weakness beginning in the arms
 - Asymmetrical involvement of distal muscles
 - Bulbar involvement in about 50% of cases
 - Brisk tendon reflexes
 - Normal CSF protein
52. In herpes simplex encephalitis which of the following statements is correct?
- brain MRI is characteristically normal
 - temporal lobe involvement is common
 - fits are uncommon
 - cold sores or genital herpes are usually present
 - viral identification by PCR on cerebrospinal fluid is nonspecific
53. A 25 yearold lady recently diagnosed with rheumatoid arthritis. She has developed weakness, double vision and tiredness. Examination reveals bilateral weakness of eye abduction, bilateral ptosis, slightly reduced proximal motor power in the limbs, normal reflexes and sensation. What is the diagnosis?
- Chronic progressive external ophthalmoplegia.
 - GuillainBarre syndrome.
 - Multiple sclerosis.
 - Myasthenia gravis.
 - Polymyositis
54. A 63 year old male is admitted with acute onset unsteadiness of gait, dizziness and dysphagia. Examination revealed a rightsided Horner's syndrome, nystagmus, loss of pain and temperature sensation on the left side of the trunk and in the left arm and leg, and gait ataxia. What is the most likely diagnosis?
- leaking posterior communicating artery aneurysm
 - left sided acoustic neuroma
 - posterior inferior cerebellar artery occlusion
 - right sided pontine infarct
 - spontaneous left sided cerebellar haemorrhage
55. Which of the following features are not compatible with the diagnosis of motor neuron disease?
- Dementia
 - Dysphagia
 - Muscle cramps
 - Neck weakness
 - Optic atrophy
56. A 35yearold man has wrist drop of his right hand. Examination reveals a small area of sensory loss on the dorsum of the hand. Which of the following nerves is likely to be involved?
- Median nerve
 - Ulnar nerve
 - Long thoracic nerve
 - Radial nerve
 - T1 nerve root
57. A 92yearold man was admitted in a confused state. He has a history of immobility due to severe lower back pain. He had been losing weight for three months and had complains of weakness, urinary frequency, thirst, poor urinary stream and constipation. Lumbar spine Xrays show severe osteopenia and collapse of the body of the vertebra at L3. Investigations show:

haemoglobin 9.6 g/dl

sodium 144 mmol/l

potassium 3.9

urea 10.4

creatinine 120

glucose 8

dip stick urine blood ++, protein +

What is the most important immediate investigation?

- Chest Xray
 - MSU
 - prostate specific antigen
 - serum calcium
 - serum protein electrophoresis
58. A 25yearold old woman presents with 2 hrs of a unilateral temporal headache increasing in severity. The Pain is of a throbbing character and is exacerbated by light. There are no abnormal signs on examination. What is the diagnosis?
- Acute Subarachnoid haemorrhage.
 - Cluster headache.
 - Intracranial Tumour.
 - Migraine.
 - Tension headaches.
59. 50yearold old man is admitted to hospital unconscious, and smelling of alcohol. One hour after admission,he becomes suddenly sweaty with a regular tachycardia of 110 bpm and a BP of 100/50. What is the diagnosis?
- Alcohol withdrawal.
 - Hepatic encephalopathy.
 - Hypoglycaemia.
 - Subdural haematoma.
 - Wernicke's encephalopathy.
60. A 70yearold man presents with weight loss, lower limb weakness and dry mouth. He has been a heavy smoker. On examination, he looks cachectic; he has proximal lower limb weakness, areflexia (reflexes normalise with repetitive muscle contraction). There is no wasting or fasciculations. Sensory examination is normal. Which of the following blood test is the most likely to confirm the diagnosis?
- Acetylcholine receptors
 - Voltage gated calcium channels antibodies
 - Anti GM1 antibody
 - Antinuclear antibody
 - Anti Ro/La antibodies
61. 54 year old female is admitted with progressive weakness following a trivial flulike illness. Which of the following would exclude GuillainBarre Syndrome as the diagnosis?
- Autonomic dysfunction
 - Elevated protein on CSF examination
 - Evidence of muscle wasting
 - Ophthalmoplegia
 - Sensory level below D1
62. An 18 year old man presented with a history of a sudden onset of a frontal headache and photophobia. He had neck stiffness and a temperature of 38°C. Which one of the following findings would suggest a diagnosis of subarachnoid haemorrhage rather than bacterial meningitis?
- a blood neutrophil leucocytosis
 - a family history of polycystic renal disease

- c. a fluctuating conscious level
d. a history of diabetes mellitus
e. a history of opiate abuse
63. A 45-year-old man has a history of progressive weakness for 5 weeks. He had particular difficulty getting out of the bath. On examination there was severe truncal and proximal limb weakness, without wasting or fasciculation. Tendon reflexes, plantar and sensation were all normal. The vital capacity was 1.8L. What is the most likely diagnosis?
a. cervical myelitis
b. Guillain-Barre syndrome
c. polio
d. polymyositis
e. syringiobulbia
64. Which is true regarding cerebral palsy?
a. The incidence is 2 per 100 live births.
b. Visual impairment occurs in 50%.
c. Hearing loss is present in 5%.
d. Epilepsy is present in 40%.
e. Learning impairment is present in 30%.
65. A right carotid artery stenosis could not account for:
a. Contralateral hemiplegia
b. Contralateral hemisensory loss
c. Drop attacks
d. Dysphasia
e. Right amaurosis fugax
66. Which of the following statements about the spinal cord is true?
a. A lesion of the left side of the spinal cord at C5 causes pyramidal weakness of the right leg
b. Centrally placed spinal cord lesions affect joint position sense before other modalities of sensation
c. Conus medullaris lesions characteristically cause mixed upper and lower motor neurone signs in the legs
d. The spinal cord ends at the lower border of the L3 vertebra
e. The spinothalamic tracts are supplied principally by the anterior spinal artery
67. A 50-year-old man presented with 18 months history of paraesthesiae of his feet and hands. On examination there is numbness of glove and stocking distribution with generalised hyporeflexia. Nerve conduction studies revealed demyelinating sensory polyneuropathy. Which of the following conditions is the most likely diagnosis?
a. Alcohol abuse
b. Diabetes
c. Chronic inflammatory demyelinating polyneuropathy
d. Vasculitis
e. Vitamin B12 deficiency
68. Which of the following would be the result of a spinal lesion at the level of C8?
a. a reduced brachioradialis reflex
b. inability to abduct the shoulder
c. loss of sensation over the lateral aspect of the arm
d. winging of the scapula
e. weakness of finger flexion
69. Psychiatric illness rather than an organic brain disorder is suggested by:
a. Onset for the first time at the age of 55 years
b. A family history of major psychiatric illness
c. Impaired short term memory
d. No previous history of psychiatric illness
e. Clouding of consciousness
70. A 27-year-old male presents with 3 months of difficulty walking. Examination reveals motor weakness of left leg in a pyramidal distribution with increase in tone. Impaired pinprick sensation of right leg extending into the groin. What is the cause of these signs?
a. A central cauda equina lesion.
b. A cervical spinal cord lesion.
c. A foramen magnum lesion.
d. A left-sided thoracic spinal cord lesion.
e. Bilateral cerebral hemisphere lesions.
71. Which of the following relate to Dopadecarboxylase inhibitors?
a. enhance the effect of levodopa on the substantia nigra
b. reduce the extracerebral complications of Ldopa therapy
c. have anticholinergic activity
d. should not be given in combination with dopamine agonists
e. prevent Ldopa associated dyskinesias
72. Which of the following associations of muscles and nerve supply are NOT true:
a. Triceps and C7
b. Deltoid and C5
c. Gastrocnemius and S1
d. Quadriceps and L3
e. Long flexors of fingers and C6
73. Which of the following would be expected following distal occlusion of the posterior cerebral artery?
a. cerebellar ataxia
b. contralateral hemiplegia
c. dysarthria
d. homonymous hemianopia
e. palatal palsy
74. A young teenager presents with fever and headache. He has received oral Amoxicillin for 3 days. Which of the following CSF findings would exclude a partially treated meningitis?
a. Negative gram stain
b. A CSF glucose of 45% of blood glucose
c. A white cell count of 50
d. A negative CSF culture
e. Negative Kernig's Sign
75. A 52-year-old man has a slurring of his speech. Examination reveals bilateral partial ptosis and frontal balding, and difficulty releasing his grip after shaking hands. What is the most likely diagnosis?
a. myasthenia gravis
b. Eaton-Lambert syndrome
c. Myotonia dystrophica
d. Duchenne muscular dystrophy
e. Myotonia congenita
76. A 43-year-old woman develops a progressive, ascending motor weakness over several days. She is hospitalized and requires intubation with mechanical ventilation. She is afebrile. A lumbar puncture is performed with normal opening pressure and yields clear, colorless CSF with normal glucose, increased protein, and cell count of 5/microliter, all lymphocytes. She gradually recovers over the next month. Which of the

- following conditions most likely preceded the onset of her illness?
- Ketoacidosis
 - Staphylococcus aureus septicemia
 - Systemic lupus erythematosus
 - Viral pneumonia
 - Vitamin B12 deficiency
77. A 19-year-old woman presents to the clinic having had 5 blackouts over the last year, all while she is standing up. She gets warnings of blurred vision, nausea, feeling hot. She had been witnessed twice to have jerking of all limbs while she is unconscious. The attacks last 3060 seconds. She recovers quickly after the attacks. She has never bitten her tongue or sustained any injuries. Physical examination and an ECG are normal. Her grandmother and sister suffer from epilepsy. Which of the following investigations is the most appropriate?
- EEG
 - 24 hour ECG recording
 - CT brain
 - ECHO
 - Tilt table test
78. A 36-year-old man has a 3-month history of pain in feet and lower legs. He was diagnosed as having diabetes at age 14 and treated with insulin. He is a cannabis smoker and drinks 30 units of alcohol per week. On examination he has impaired pain and temperature sensation in feet and lower legs, normal joint position and vibration sense. His reflexes are normal. What is the diagnosis?
- Alcoholic polyneuropathy.
 - Chronic inflammatory demyelinating polyneuropathy (CIDP)
 - Diabetic polyneuropathy.
 - Syringomyelia.
 - Vitamin B12 deficiency.
79. A lesion of the parietal lobe causes:
- Bitemporal hemianopia
 - Homonymous inferior quadrantanopia
 - Perseveration
 - Primitive reflexes
 - Wernicke's (receptive) aphasia
80. The following are recognized features of Pancoast's tumour except:
- ipsilateral Horner's syndrome
 - wasting of the dorsal interossei
 - pain in the arm radiating to the fourth and fifth fingers
 - erosion of the first rib
 - weakness of abduction at the shoulder
81. Causes of a small pupil include:
- Carbon Monoxide Poisoning
 - Ethylene Glycol Poisoning
 - Holme's Adie pupil
 - Pontine haemorrhage
 - Third Nerve Palsy
82. A 70-year-old female patient presents with 2 months history of apathy, withdrawal, urinary and faecal incontinence and anosmia. The most likely anatomical site of the neurological lesion is at the:
- frontal lobe
 - parietal lobe
 - temporal lobe
 - occipital lobe
 - internal capsule
83. A 21-year-old man recovered from the immediate effects of a head injury sustained in a motor cycle accident three months previously. Which one of the following is the most likely delayed consequence of severe traumatic brain injury?
- Episodic hypersomnia
 - Multiple obsessional symptoms
 - Outbursts of aggressive behaviour
 - Pathological jealousy
 - Persistent anxiety
84. A patient presented with a quadrantic hemianopia. Which of the following conditions is most likely to cause such a presentation?
- a lesion of the occipital cortex
 - a lesion of the optic chiasma
 - bilateral diabetic retinopathy
 - chloroquine poisoning
 - tobacco amblyopia
85. A 22-year-old female presents with a month history of episodic, brief visual loss affecting the right eye. Over the last one year she had gained a considerable amount of weight. Examination reveals a BMI of 35, with bilateral optic disc swelling, worse on the right and small retinal haemorrhages on the right. What is the most likely diagnosis?
- benign intracranial hypertension
 - Craniopharyngioma
 - Graves' Ophthalmopathy
 - Optic neuritis
 - sagittal sinus thrombosis
86. Frontal lobe brain damage is associated with:
- astereognosis
 - auditory agnosia
 - dressing apraxia
 - focal epileptic fits
 - perseveration
87. Chronic subdural haematoma in a 75-year-old man is NOT associated with the presence of:
- hemiparesis
 - internuclear ophthalmoplegia
 - impaired cognitive function
 - fluctuating level of consciousness
 - bilateral papilloedema
88. A broad-based ataxic gait occurs characteristically with:
- proximal myopathy
 - basal ganglia lesion
 - rightsided cerebral infarction
 - phenytoin toxicity
 - cerebellar vermis lesion
89. Which ONE of the following is associated with Parkinsonian features?
- Chronic carbon dioxide retention
 - Kernicterus
 - Lead poisoning
 - Mercury poisoning
 - Wilson's disease
90. A 30-year-old female presents to the eye clinic with an acute

- history of pain and blurring in the right eye. Examination reveals a visual acuity of 6/36 in the right eye but 6/6 in the left eye, a central scotoma in the right eye, with a right swollen optic disc. What is the most likely diagnosis?
- Compression of the optic nerve
 - Cavernous sinus thrombosis
 - Glaucoma
 - Optic neuritis
 - Retinal vein occlusion
91. A 47yearold man presents with memory impairment worsening over 9 months. He has jerking movements of his limbs and biphasic highamplitude sharp waves on EEG. Which diagnosis is most likely?
- Alzheimer's disease
 - CreutzfeldtJakob disease
 - Multiinfarct dementia
 - Normal Pressure Hydrocephalus
 - Pick's disease
92. A 72yearold woman has a five year history of worsening mental functioning with trouble remembering things. She has no problems with movement. She is noted on an MRI scan of the brain to have symmetrically increased size of the lateral ventricles along with cerebral cortical atrophy in a mainly frontal and parietal distribution. A lumbar puncture reveals a normal opening pressure, and analysis of the clear, colorless cerebrospinal fluid reveals a glucose and protein which are in normal ranges. Cell count on the CSF shows 3 WBCs (all lymphocytes) and 1 RBC. A fundoscopic examination is normal. Which of the following findings is most likely associated with her underlying disease process?
- Increased numbers of Lewy bodies
 - Loss of Betz cells
 - Loss of gamma aminobutyric acid (GABA)
 - Perivascular mononuclear inflammation
 - Presence of the e4 allele of apolipoprotein E
93. A 60yearold man was brought to casualty after a fall in his bathroom. Seen immediately by his family, he was already picking himself up from the floor and said he was not injured. His wife felt that he was transiently dazed. On examination, he was alert, and no abnormalities were noted. His past medical history included a history of hypertension for which he was taking bendrofluazide 2.5 mg daily. He was discharged without any further intervention. Two weeks later his wife brings the patient to see you because the dazed state has returned. Examination reveals a temperature of 36.7C, a pulse rate of 84 bpm regular, a blood pressure of 152/94 mm Hg. On questioning he is slightly slowed, being disoriented to time with some deficit in recent memory. The patient moves slowly, but power is normal. Neurologic examination shows slight hyperactivity of the tendon reflexes on the right with unclear plantar responses because of bilateral withdrawal. Which of the following would you request?
- 24hour ambulatory electrocardiogram
 - CSF analysis
 - CT of the head
 - Electromyography and nerve conduction testing
 - EEG
94. Which of the following forms of encephalitis is caused by a neuroimmunological response?
- Herpes simplex
 - Measles
 - HIV infection
 - Enteroviruses
 - Cytomegalovirus
95. A 60yearold woman presents with a 24 hours history of headache and vomiting. She has been on steroids for temporal arteritis for the last 3 years. Examination demonstrates pyrexia, neck stiffness, photophobia, dysarthria, nystagmus and ataxia. CSF shows neutrophilic pleocytosis, low glucose, elevated protein. What is the most likely diagnosis?
- Carcinomatous meningitis
 - Cryptococcal meningitis
 - Listeria meningitis
 - Meningococcal meningitis
 - Tuberculous meningitis
96. In which of the following is mental retardation an expected finding?
- Alkaptonuria
 - Cystinuria
 - Glycogen storage disease
 - Lactose intolerance
 - Maple syrup urine disease
97. Which of the following is correct regarding Herpes simplex encephalitis?
- shows a peak incidence in the Autumn
 - is associated with a polymorphonuclear pleocytosis in the CSF
 - produces a diffuse, evenly distributed inflammation of cerebral tissues
 - produces a typical EEG pattern with lateralised periodic discharges at 2 Hz
 - should be treated with acyclovir as soon as the diagnosis is confirmed by urgent CSF viral antibody titres
98. A 73yearold man presents with an abrupt onset of double vision and left leg weakness. Examination shows weakness of abduction of the right eye, rightsided facial weakness affecting upper and lower parts of the face. He also has a left hemiparesis. Where is the lesion?
- left frontal lobe
 - left lateral medulla
 - right corpus striatum
 - right midbrain
 - right pons
99. Which of the following statements regarding hiccup is true?
- Is caused by a tonic relaxation of the diaphragm.
 - May be caused by local irritation to the vagus nerve.
 - Can reliably be treated with theophylline.
 - May be caused by a posterior fossa tumour.
 - May be caused by a foreign body in the nose.
100. In considering the management of convulsions select the correct statement from the list below.
- If the fit lasts longer than 5 minutes, then PR diazepam should be given.
 - Phenobarbitone is a useful therapy in school age children.
 - Paraldehyde is best given intramuscularly.
 - Hypoglycaemia should always be considered.
 - When associated with fever, antibiotics should always be given to cover the possibility of meningitis.
101. The action of noradrenaline released at sympathetic nerve endings is terminated by
- enzymatic decarboxylation
 - enzymatic inactivation by catecholOmethyl transferase
 - reuptake of noradrenaline by the axonal terminals

- d. oxidative deamination by monoamine oxidase
e. Removal by the circulating blood
102. A 65 yearold woman with 12 hour history of unsteady gait, sudden onset associated with vomiting and headache. Following this she had increasing drowsiness. What is the diagnosis?
- Acute subdural haemorrhage
 - Cerebellar haemorrhage.
 - Frontal subdural empyema
 - Herpes simplex encephalitis.
 - Pituitary apoplexy.
103. A 18yearold female presents with a 3 days history of progressive weakness and numbness of her legs, urinary retention and back pain 2 weeks following an upper respiratory infection. On examination there is spastic paraparesis, sensory level up to T5, extensor plantars. Examination of cranial nerves and upper limbs is normal. MRI of the spine is normal. The most likely diagnosis is:
- Multiple sclerosis
 - Anterior spinal artery occlusion
 - Postinfectious transverse myelitis
 - Thoracic disc prolapse
 - Guillain Barre syndrome
104. A 40yearold man with a long history of alcohol abuse is admitted with a subacute illness, comprising headache, fever, meningism and ataxia. MRI brain showed patchy high signal abnormality of the brain stem. CSF analysis showed polymorphonuclear pleocytosis and low glucose. He had failed to improve after 3 days of intravenous cefotaxime treatment. The most likely diagnosis of the meningitis is:
- Mycobacterium tuberculosis
 - Cryptococcus neoformans
 - Nocardia asteroides
 - Staphylococcus aureus
 - Listeria monocytogenes
105. A 27yearold man presents with a two years history of intermittent tingling sensation involving his left side. It starts in his fingers and spreads in 1020 seconds to affect the whole arm and leg on the same side. The attacks only last for one minute. The most likely diagnosis is:
- Migraine with aura
 - Transient ischaemic attacks
 - Somatosensory seizures
 - Hyperventilation
 - Multiple sclerosis
106. A 24yearold man presents with a headache that has been present for nine months. He has headache almost every day, mainly frontal, sometimes with nausea. Current medication includes paracetamol, brufen and codeine with only transient relief of symptoms. He has a history of depression. Examination was normal. What is the most likely diagnosis?
- analgesic misuse headache
 - cluster headache
 - frontal brain tumour
 - headache due to depression
 - migraine
107. A 60yearold man awakens with painless loss of vision of his left eye. Three years earlier he had suffered a similar episode involving the right eye. Visual loss in that eye has been stationary. He does not complain of any systemic symptoms. What is the most likely diagnosis?
- Optic neuritis
 - Nonarteritic ischaemic optic neuropathy
 - Arteritic ischaemic optic neuropathy
 - Acute angleclosure glaucoma
 - Compressive optic neuropathy
108. A 67yearold man has drunk 8 units of alcohol a day for most of his adult life. He has worsening symptoms of poor memory, a widebased gait and urinary incontinence for ten months. What is the most likely diagnosis?
- HIV encephalitis
 - meningovascular syphilis
 - normal pressure hydrocephalus
 - syringomyelia
 - WernickeKorsakoff syndrome
109. A 40 year old male is diagnosed with Dystrophia myotonica. Which one of the following features would be expected in this patient?
- Autosomal recessive inheritance
 - Cataracts
 - Fasciculations would predominate
 - Progressive external ophthalmoplegia
 - Preserved tendon reflexes despite muscle wasting
110. A 40yearold man presents with 2 years history of intermittent strictly unilateral headaches. The pain is excruciating severe. It is located around the orbital region. The headache usually lasts 4560 minutes. It usually appears early hours in the morning. There is associated ptosis and lacrimation on the side of the headache. The most likely diagnosis is:
- Cluster headaches
 - Migraine
 - Tension type headache
 - Giant cell arteritis
 - Trigeminal neuralgia
111. A 50 year old female presents with a 4 month history of progressive distal sensory loss and weakness. On examination positive neurological findings include moderate proximal and distal weakness of arms and legs, glove and stocking sensory loss and areflexia. Planter responses were mute. The following conditions could give a similar picture:
- GuillianBarre syndrome
 - Chronic inflammatory demyelinating neuropathy(CIDP)
 - Cervical spondylosis
 - Hereditary motor and sensory neuropathy(HMSN)
 - Myasthenia Gravis
112. Which one of the following would support a diagnosis of subacute combined degeneration of the cord rather than multiple sclerosis?
- absent ankle jerks
 - autonomic symptoms
 - cerebellar signs
 - extensor plantars
 - visual problems
113. A 65yearold woman has a one month history of malaise, weight loss, right sided pain around the eye and headaches. She has also noticed intermittent diplopia. Five years previously she had a mastectomy for carcinoma of the breast. On examination, temperature was 37.5°C, there was tenderness of the scalp on the right forehead and temple, and some minor weakness of abduction of the right eye. ESR 55 mm/hour. What is the most likely diagnosis?

- a. thyroid eye disease
b. frontal sinusitis
c. giant cell arteritis
d. meningeal metastatic disease
e. posterior communicating artery aneurysm
114. A sixty year old male presents with a six month history of a gradually increasing burning sensation in his feet. Examination revealed normal cranial nerves and higher mental function. Normal bulk, tone, power, light touch and pinprick sensation, coordination and reflexes in upper and lower limbs. The clinical findings are consistent with
- a. Large fibre sensory neuropathy
b. Small fibre sensory neuropathy
c. Diabetic Amyotrophy
d. Motor neurone disease
e. Sjogrens syndrome
115. Which of the following anatomical considerations is correct:
- a. optic chiasm lesions characteristically produce a bitemporal hemianopia
b. central scotoma occurs early in papilloedema
c. in cortical blindness pupillary reactions are abnormal
d. optic tract lesions produce an ipsilateral homonymous hemianopia
e. optokinetic nystagmus is found with bilateral infarction of the parietooccipital lobes
116. A 62 year old male is noted to have a broadbased ataxic gait. This is characteristic of which of the following?
- a. A basal ganglia lesion
b. Cerebellar vermis lesion
c. Osteomalacia
d. phenytoin toxicity
e. Rightsided cerebral infarction
117. A lesion of the facial nerve in the internal auditory meatus will NOT affect
- a. taste
b. sweating over the cheek
c. lacrimation
d. hearing
e. blinking
118. Which of the following is a form of generalised seizure?
- a. Aversive seizures
b. Epilepsia partialis continua
c. Automatisms
d. Lennox Gastaut Syndrome
e. Benign rolandic epilepsy
119. A 21yearold female presented with a sudden onset of left sided head and neck pain. 24 hours later she presents with sudden onset of right hemiparesis, facial weakness and homonymous hemianopia and left horner's syndrome. A CT brain showed a left middle cerebral artery territory infarction. The most likely diagnosis is:
- a. Cardiac embolism
b. Migraine
c. Left Carotid artery dissection
d. Antiphospholipid syndrome
e. Systemic vasculitis
120. A 25 yearold man presents with 24 hours blurred vision in left eye and mild frontal headache. He has a 10 year history of Diabetes Mellitus. Examination reveals a central scotoma. What is the diagnosis?
- a. Central retinal artery occlusion.
b. Diabetic retinopathy.
c. Optic neuritis.
d. Pituitary tumour.
e. Migraine.
121. A 72yearold lady has 4 months of memory loss, urinary incontinence and falls. On examination she has mild memory loss and a broadbased, slow gait. Muscle tone is normal and both plantar reflexes are downgoing. What is the likely diagnosis?
- a. Alzheimer's disease
b. Frontal lobe dementia
c. Multinfarct dementia
d. Normalpressure hydrocephalus
e. Parkinson's disease
122. Baclofen
- a. acts directly on skeletal muscle
b. causes rhabdomyolysis
c. reduces cerebral but not spinal spasticity
d. cause hallucinations when withdrawn
e. reduce Ca²⁺ release from sarcoplasmic reticulum
123. A 26yearold previously healthy woman has the sudden onset of mental confusion. She has a seizure and is brought to the hospital. Her vital signs show blood pressure 100/60 mm Hg, temperature 37 C., pulse 89, and respirations 22. A lumbar puncture reveals a normal opening pressure, and clear, colorless cerebrospinal fluid is obtained with 1 RBC and 20 WBC's (all lymphocytes), with normal glucose and protein. An MRI scan reveals swelling of the right temporal lobe with hemorrhagic areas. Which of the following infectious agents is the most likely cause for these findings?
- a. Haemophilus influenzae
b. Herpes simplex virus
c. Influenza virus
d. Mycobacterium tuberculosis
e. Neisseria meningitidis
124. Which of the following statements regarding central pontine myelinolysis is correct?
- a. Consciousness is preserved characteristically.
b. MR imaging shows diagnostic features in the majority of patients.
c. The cause has been linked to overrapid correction of hyponatraemic states.
d. The condition is confined to malnourished alcoholic patients.
e. The pathological changes are confined to the pons.
125. A 48 year old man presented with a two week history of recurrent severe rightsided. Periorbital headache, frequently nocturnal and occurring at least once daily, usually lasting an hour. He had noticed lacrimation from the right eye and blockage of the right nostril during the headache. At the time of the examination he was free from headache and there were no abnormal physical signs. Which of the following is the most likely diagnosis?
- a. cluster headache
b. intracranial aneurysm
c. orbital pseudotumour
d. right maxillary sinusitis
e. trigeminal neuralgia

126. Which of the following is a true of myasthenia gravis?
- there is a strong association with antinicotinic receptor antibodies
 - neurotransmitter released at the motor end plate is greatly reduced
 - repetitive stimulation of a motor nerve produces a reduction in the amplitude of the 5th response compared with the 1st in 98% of cases (electrodecremental test)
 - electrical recordings of single motor unit activity commonly reveal variation in the latency of the various muscle fibre responses (jitter)
 - subjective improvement in muscle strength following edrophonium is diagnostic of the condition
127. A 55yearold man has progressive weakness of his hands over a period of 1 year. Examination reveals wasting of the muscles of the hands and forearms and fasciculation. There is hyperreflexia of his lower limbs and upgoing plantars. Sensation is normal. Which of the following is the most likely diagnosis?
- Alzheimer's disease
 - Motor Neurone Disease
 - Multiple Cerebral Infarcts
 - Multiple Sclerosis
 - Syringomyelia
128. A 25yearold female presented with 6 months history of depression, irritability and painful sensory symptoms in her legs. Over the last 4 weeks she presents a broad base ataxic gait. An MRI brain showed bilateral posterior thalamic nuclei (pulvinar region) high signals. The most likely diagnosis is:
- Sporadic CJD
 - New variant CJD
 - Wilson disease
 - Multiple system atrophy
 - Herpes simplex encephalitis
129. A 70yearold woman presented with episodic impairment of consciousness. Which of the following is the most likely cause?
- Alzheimer type dementia
 - chronic subdural haematoma
 - CreutzfeldtJacob disease
 - depressive stupor
 - normal pressure hydrocephalus
130. A lesion of the Frontal lobe causes:
- Apraxia
 - Broca's (expressive) aphasia
 - Cortical blindness
 - Homonymous hemianopia
 - Visuospatial neglect
131. A 65yearold man has a monotonous, slurred speech. He has an expressionless face and a festinant gait. There is also impairment of vertical gaze. What is the most likely underlying aetiology?
- ShyDrager syndrome
 - idiopathic
 - cerebrovascular disease
 - Wilson's disease
 - SteeleRichardsonOlszewski syndrome
132. Which of the following may cause a downbeat nystagmus?
- Chiari type I malformation
 - Unilateral medial longitudinal fasciculus lesion
 - Central cerebellar lesion
 - Wernicke's encephalopathy
 - Aqueduct stenosis
133. A 35 year old female presents with headaches. Examination reveals papilloedema. Which of the following would make the diagnosis of benign intracranial hypertension unlikely?
- Absence of retinal venous pulsations
 - Bilateral upgoing plantar responses
 - Normal ventricles on CT or MRI scan
 - Reduced visual acuity
 - VIIth cranial nerve palsy
134. A teenage girl presents with GuillainBarre syndrome. Her weakness continues to worsen after admission to hospital. Which of the following should be used to monitor her?
- arterial blood gases
 - chest expansion size
 - FEV1/FVC ratio
 - PEFR
 - vital capacity
135. A 60 year old man has Parkinson's disease. He is started on treatment with Ldopa and dopa decarboxylase inhibitor therapy. However he continues to have troublesome tremor. Which of the following drugs would be most likely to help?
- Amantadine.
 - Benzhexol.
 - Propranolol
 - Ropinirole
 - Selegiline
136. Which of the following would be expected features of a LEFT Posterior cerebral artery occlusion :
- a right homonymous hemianopia
 - internuclear ophthalmoplegia
 - Wernicke's aphasia
 - pure aphasia (i.e. without alexia)
 - decerebrate state
137. A 70yearold woman has a history of dyspnoea and palpitations for six months. An ECG at that time showed atrial fibrillation. She was given digoxin, diuretics and aspirin. She now presents with two shortlived episodes of altered sensation in the left face, left arm and leg. There is poor coordination of the left hand. ECHO was normal as was a CT head scan. What is the most appropriate next step in management?
- anticoagulation
 - carotid endarterectomy
 - clopidogrel
 - corticosteroid treatment
 - no action
138. A patient presented with a quadrant hemianopia. Which of the following conditions is most likely to cause such a presentation?
- a lesion of the occipital cortex
 - a lesion of the optic chiasma
 - bilateral diabetic retinopathy
 - chloroquine poisoning
 - tobacco amblyopia

1260 139. A 57-year-old man develops deep venous thrombosis during a hospitalization for prostatectomy. He exhibits decreased mental status with right hemiplegia, and a CT scan of the head suggests an acute cerebral infarction in the distribution of the left middle cerebral artery. A chest X-ray reveals cardiac enlargement and prominence of the main pulmonary arteries that suggests pulmonary hypertension. His serum troponin I is <0.4 ng/mL. Which of the following lesions is most likely to be present on echocardiography?

- a. Coarctation of the aorta
- b. Dextrocardia
- c. Pulmonary stenosis
- d. Tetralogy of Fallot
- e. Ventricular septal defect

140. A 55-year-old woman has had worsening shortness of breath for several years. She now has to sleep sitting up on two pillows. She has difficulty swallowing. There is no history of chest pain. She is afebrile. Recently, she suffered a stroke with left hemiparesis. A chest X-ray reveals a near-normal left ventricular size with a prominent left atrial border. Which of the following conditions is most likely to account for these findings?

- a. Aortic coarctation
- b. Cardiomyopathy
- c. Essential hypertension
- d. Left renal artery stenosis
- e. Mitral valve stenosis

141. A 63-year-old male is admitted with acute onset unsteadiness of gait, dizziness and dysphagia. Examination revealed a rightsided Horner's syndrome, nystagmus, loss of pain and temperature sensation on the left side of the trunk and in the left arm and leg, and gait ataxia. What is the most likely diagnosis?

- a. leaking posterior communicating artery aneurysm
- b. left-sided acoustic neuroma
- c. posterior inferior cerebellar artery occlusion
- d. right-sided pontine infarct
- e. spontaneous left-sided cerebellar haemorrhage

142. Which of the following would be expected following distal occlusion of the posterior cerebral artery?

- a. cerebellar ataxia
- b. contralateral hemiplegia
- c. dysarthria
- d. homonymous hemianopia
- e. palatal palsy

143. Which of the following would be expected features of a LEFT Posterior cerebral artery occlusion :

- a. a right homonymous hemianopia
- b. internuclear ophthalmoplegia
- c. Wernicke's aphasia
- d. pure aphasia (i.e. without alexia)
- e. decerebrate state

144. Regarding pseudotumours cerebri (benign hypercranial hypertension) which is true?

- a. A mildly increased CSF cell count is typical.
- b. May be caused by prolonged steroid therapy.
- c. Is occasionally associated with focal neurological signs.
- d. Frequently presents with ataxia.
- e. Is distinguished from hydrocephalus by the absence of suture separation.

145. Which of the following clinical manifestations suggests Guillain Barré Syndrome?

- a. Weakness beginning in the arms
- b. Asymmetrical involvement of distal muscles
- c. Bulbar involvement in about 50% of cases
- d. Brisk tendon reflexes
- e. Normal CSF protein

146. A complete unilateral facial hemiparesis may be caused by which of the following?

- a. An intracranial tumour
- b. Birth injury
- c. Cerebellar atrophy
- d. Myasthenia gravis
- e. Phenothiazine toxicity

147. A 65-year-old male presents with bilateral leg pain. There is no relevant past medical history, and no excess alcohol use. Both knee reflexes are reduced. Fasting glucose is 6.5 mmol/L. Which is the next most likely investigation to confirm the diagnosis?

- a. B12 and folate
- b. Chest X-ray
- c. CSF examination
- d. MRI spine
- e. Oral glucose tolerance test

148. A 45-year-old man presents with headaches and low libido. He is found to be hypopituitary. The CT scan shows a pituitary tumour with suprasellar extension. Which of the following structures is likely to be compressed?

- a. Abducens nerve
- b. Hypothalamus
- c. Oculomotor nerve
- d. 3rd Ventricle
- e. Optic nerve

149. A 66-year-old woman complains of stiffness and weakness climbing stairs. She has a history of hypertension and diet-controlled type 2 diabetes. On examination, there is mild upper arm weakness, hip flexion is 4-/5 bilaterally, with bilateral wasting and flickers of fasciculations in the right quadriceps. Knee extension is 4/5. Dorsiflexion and plantar flexion are strong. Brisk knee and ankle reflexes are elicited, as well as a positive Hoffman's and Babinski's sign. Sensory examination and cranial nerves are normal. Her BM is 8.9, her pulse is regular and her blood pressure is 178/97. What is the most likely diagnosis?

- a. Myasthenia gravis
- b. Diabetic neuropathy
- c. Myositis
- d. Motor neurone disease
- e. Multiple sclerosis (MS)

150. A 23-year-old man is stabbed in the neck. Once stabilized, his MRI shows a right hemisection of the cord at C6. What is the expected result of this injury?

- a. Paralyzed diaphragm
- b. Absent sensation to temperature in the left hand
- c. Paralysis of the left hand
- d. Absent sensation to light touch in the left hand
- e. Brisk right biceps reflex

151. A 23-year-old woman complains that her right leg has become progressively stiff and clumsy over the last couple of weeks. She is worried as she has not been able to go to work for the

- last 4 days. On examination, tone is increased and there is a catch at the knee. She has six beats of clonus and an upgoing plantar. Power is reduced to 3-4/5 in the right leg flexors. There is no sensory involvement and the rest of the neurological exam is normal other than a pale disc on ophthalmoscopy. On further questioning, she admits that she has had two episodes of blurred vision in her right eye in the last two years. Each lasted a couple of weeks from which she fully recovered. What is the most appropriate initial treatment?
- A non-steroidal anti-inflammatory drug (NSAID)
 - Interferon-beta
 - Bed rest
 - Methotrexate
 - A course of oral steroids
152. A 78 year old right-handed male collapses and is brought into accident and emergency. He seems to follow clear one-step commands but he gets very frustrated as he cannot answer questions. He is unable to lift his right hand or leg. He has an irregularly irregular pulse and his blood pressure is 149/87. He takes only aspirin and frusemide. What is the most likely diagnosis?
- Left cortical infarct
 - Right internal capsule infarct
 - Left cortical haemorrhage
 - Left internal capsule haemorrhage
 - Brainstem haemorrhage
153. A 19-year-old woman collapses at a concert and is witnessed to have a tonic-clonic seizure lasting 2 minutes. When the paramedics arrive and ask her questions, she mumbles but no-one can understand what she is saying. Only when the paramedic applies pressure to her nailbed does she open her eyes and reach out with her other hand to rub her nail and then push him away. What is her Glasgow Coma Scale (GCS)?
- 12
 - 11
 - 10
 - 9
 - 8
154. A 79-year-old man is admitted with left hemiparesis. CT reveals a middle cerebral artery infarct. What is his most significant risk factor for stroke?
- Hypertension
 - Smoking
 - Family history
 - Diabetes
 - Cholesterol
155. A 42-year-old woman presents with ataxia. Gadolinium-enhanced MRI reveals multiple subcortical white matter lesions as well as enhancing lesions in the cerebellum and spinal cord. She is diagnosed with MS. Two months later she develops optic neuritis. What feature is associated with a milder disease course?
- Her age of 42
 - Her initial presentation of ataxia
 - Her female gender
 - The interval between the two episodes of two months
 - Her MRI scan appearance
156. A 71-year-old man with atrial fibrillation is seen in clinic following an episode of syncope. He describes getting a poor night's sleep and, as he got out of bed in the morning, feeling dizzy for a couple of seconds before the lights dimmed around him. He was woken a couple of seconds later by his wife who had witnessed the event. She says he went pale and fell to the floor and his arms and legs jerked. After waking, he was shaken but was 'back to normal' a few minutes after the event. His medication includes aspirin, atenolol and frusemide. What is the most likely diagnosis?
- Vasovagal syncope
 - Orthostatic hypotension
 - Cardiogenic syncope
 - Transient ischaemic attack (TIA)
 - Seizure
157. A 41-year-old man complains of terrible headache. It started an hour ago, without warning, while stressed at work. It affects the right side of his head. He scores it '11/10' in severity. When asked, he agrees that light does bother him a little. He had a similar episode six months ago, experiencing very similar headaches over 2 weeks which resolved spontaneously. On observation, he looks quite distressed and prefers to pace up and down, unable to sit still. What is the diagnosis?
- Subarachnoid haemorrhage
 - Tension headache
 - Intracerebralhaemorrhage
 - Migraine
 - Cluster headache
158. A 49-year-old man complains of sudden onset, painless unilateral visual loss lasting about a minute. He describes 'a black curtain coming down'. His blood pressure is 158/90, heart rate 73 bpm. There is an audible bruit on auscultation of his neck. His past medical history is insignificant other than deep vein thrombosis of his right leg ten years ago. The most likely diagnosis is:
- Retinal vein thrombosis
 - Retinal artery occlusion
 - Amaurosisfugax
 - Optic neuritis
 - Acute angle glaucoma
159. A 77-year-old woman is admitted to hospital with a urinary tract infection. She receives antibiotics and seems to be responding well. On the fourth day she is eating her lunch when she suddenly drops her fork. She calls for the nurse who notices the left side of her face is drooping. What is the best next course of action?
- CT head
 - Thrombolysis
 - MRI head
 - Aspirin
 - Place nil by mouth
160. A 71-year-old right-handed male is brought in by ambulance at 17:50 having suffered a collapse. His wife came home to find him on the floor unable to move his right arm or leg and unable to speak. Her call to the ambulance was logged at 17:30. He has a past medical history of well-controlled hypertension, ischaemic heart disease and atrial fibrillation for which he is on warfarin. He had a hernia repair three months ago and his brother had a 'bleed in the brain' at the age of 67. What is the absolute contraindication to thrombolysis in this male?
- Family history of haemorrhagic stroke
 - History of recent surgery
 - Time of onset
 - Current haemorrhagic stroke
 - Warfarin treatment
161. A 69-year-old man presents to clinic with a six-month history of progressive lower back pain which radiates down to his buttock. He found the pain was exacerbated while taking his daily morning walk and noticed that it eased going uphill but

worsened downhill. He stopped his daily walks as a result and he now walks only slowly to the shops when he needs to, taking breaks to sit down and ease the pain. He has a history of hypertension, diabetes and prostatic hyperplasia. What is the diagnosis?

- Peripheral vascular disease
- Osteoporotic fracture
- Spinal stenosis
- Sciatica
- Metastatic bone disease

162. A 31-year-old woman presents to accident and emergency with progressive difficulty walking associated with lower back pain. A few days ago she was tripping over things, now she has difficulty climbing stairs. She describes tingling and numbness in both hands which moved up to her elbows, she is unable to write. On examination, cranial nerves are intact but there is absent sensation to vibration and pin prick in her upper limbs to the elbow and lower limbs to the hip. Power is 3/5 in the ankles and 4-/5 at the hip with absent reflexes and mute plantars. Her blood pressure is 124/85, pulse 68 and sats 98 per cent on air. She has a past medical history of type I diabetes and recently recovered from an episode of food poisoning a month or two ago. What is the diagnosis?

- MS
- Guillain-Barré syndrome (GBS)
- Myasthenia gravis
- Diabetic neuropathy
- Infective neuropathy

163. A left-handed 79-year-old man presents with a troublesome resting tremor of his left hand. The tremor is evident in his writing. He has also noticed his writing is smaller than it used to be. He complains he has difficulty turning in bed to get comfortable and his wife complains that he sometimes kicks her in the middle of the night. When he gets out of bed in the morning he feels a little woozy, but this resolves after a while. On examination, he blinks about three times a minute and his face does not show much emotion. Glabellar tap is positive. He has a slow, shuffling gait. He has difficulty stopping, starting and turning. He holds his feet slightly apart to steady himself. When you pull him backwards, he is unable to right himself and stumbles back. Which of the signs and symptoms is not commonly associated with parkinsonism?

- Postural instability
- Rapid eye movement (REM) sleep disturbance
- Hypomimia
- Broad-based gait
- Autonomic instability

164. A 33-year-old woman attends her six-month follow-up appointment for headache. They are migrainous in nature but whereas she used to have them every few months, over the last three months she has experienced a chronic daily headache which varies in location and can be anywhere from 3-7/10 severity. Her last migraine with aura was two months ago. She takes co-codamol qds and ibuprofen tds. What is the best medical management?

- Stop all medication
- Start paracetamol
- Start sumatriptan
- Start propranolol
- Continue current medication

165. A 17-year-old girl is brought into accident and emergency with generalized tonic-clonic seizure. Her mother had found her fitting in her bedroom about 20 minutes ago. The ambulance crew handover state that her sats are 96 per cent on 15 L of oxygen and they have given her two doses of rectal diazepam

but she has not stopped fitting. What is the most appropriate management?

- Lorazepam
- Phenobarbital
- Intubation
- Call ITU
- Phenytoin loading

166. A 72-year-old man with known epilepsy and hypertension is admitted with pneumonia. His drug history includes aspirin, phenytoin, bendroflumethiazide and amlodipine. His heart rate is 67, blood pressure 170/93, sats 96 per cent on 2 L of oxygen. Neurological examination is normal. His doctor requests blood tests including phenytoin level. What is the correct indication for this test?

- Routine check
- Ensure levels are not toxic
- Confirm patient compliance
- Ensure therapeutic level reached
- Reassure the patient

167. A 23-year-old woman is seen in clinic for recurrent funny turns. She is not aware of them, but her family and friends have noticed them. They say she looks around blankly, then starts picking at her clothes and sometimes yawns, then she comes back after a minute. She can get drowsy after these episodes. What seizure type does this patient describe?

- Absence
- Tonic clonic
- Simple partial
- Complex partial
- Generalized

168. You are asked to perform a lower limb peripheral neurological examination on a 45-year-old diabetic male. The patient has normal tone, 5/5 power, normal plantars and proprioception. However, you notice that the patient does not respond to any sensory stimulus on the medial side of the right lower leg. Which dermatome is affected?

- L1
- L2
- L3
- L4
- L5

169. On examination, a patient has 5/5 power in all muscle groups of his upper limbs, 0/5 power in all the muscle groups of his lower limbs. Cranial nerves are intact. Where is the lesion?

- Muscle
- Neuromuscular junction
- Peripheral nerves
- Spinal cord
- Brain

170. On examination, a patient has 5/5 power in his upper limbs, 0/5 power in his lower limbs. Further examination reveals a sensory level at the umbilicus. Cranial nerves are intact. Where is the lesion?

- C4
- T4
- T10
- L1
- L

171. A patient is unable to move his right arm or leg. When asked to smile, the left side of his mouth droops. Where is the lesion?

- a. Left motor cortex
b. Right motor cortex
c. Left brainstem
d. Right brainstem
e. Cervical spine
172. A light is shone into a patient's right eye and it constricts. When moved to the left eye, the left eye constricts. When moved back to the right eye, the right eye dilates. What is the diagnosis?
a. Afferent lesion
b. Efferent lesion
c. Relative afferent lesion
d. Relative efferent lesion
e. Normal
173. A 55-year-old woman complains of double vision. She finds that she is more tired than usual and has difficulty climbing stairs, especially when they are very long. She has difficulty getting items off high shelves at work and lately even brushing her hair is a problem. During the consultation, her voice fades away during conversation. Reflexes are present and equal throughout. Which sign or symptom is most indicative of myasthenia gravis?
a. Proximal weakness
b. Normal reflexes
c. Diplopia
d. Fatigability
e. Bulbar symptoms
174. A 55-year-old woman complains of double vision. She finds that she is tired all the time and has difficulty climbing stairs. She has difficulty getting items off high shelves at work. Reflexes are absent but elicited after exercise. Shoulder abduction is initially 4–5 but on repeated testing is 4–5. What pathology is associated with this female's diagnosis?
a. Thyrotoxicosis
b. Peptic ulcer
c. Diabetes
d. Stroke
e. Lung cancer
175. On observation, a patient has a left facial droop. On closer examination his nasolabial fold is flattened. When asked to smile, the left corner of his mouth droops. He is unable to keep his cheeks puffed out. Eye closure is only slightly weaker compared to the right and his forehead wrinkles when he is asked to look up high. What is the diagnosis?
a. Right middle cerebral artery stroke
b. Parotid gland tumour
c. Left internal capsule stroke
d. Bell's palsy
e. Cerebellar pontine angle tumour
176. A female presents with diplopia. On closer examination, when asked to look right, her left eye stays in the midline but her right eye moves right and starts jerking. What is the diagnosis?
a. Myasthenia gravis (MG)
b. Vertigo
c. Cerebellar syndrome
d. MS
e. Peripheral neuropathy
177. A neurologist is examining a patient. She takes the patient's middle finger and flicks the distal phalanx, her thumb contracts in response. What sign has been elicited?
a. Chvostek's
b. Glabellar
c. Hoffman's
d. Tinel's
e. Babinski's
178. A 69-year-old man is taken to his GP by his concerned wife. She complains that he has not been himself for the last year. He has slowly become withdrawn and stopped working on his hobbies. Now she is concerned that he often forgets to brush his teeth. She has noticed he sometimes struggles to find the right word and this has gradually become more noticeable over the last couple of months. She presented today because she was surprised to come home to find him naked and urinating in the living room last week. He has a history of hypertension and is an ex-smoker. The most likely diagnosis is:
a. Depression
b. Frontotemporal dementia
c. Alzheimer's disease
d. Vascular dementia
e. Lewy Body disease
179. Which of the following is not a cause of absent ankle jerks and up-going plantars?
a. Friedreich's ataxia
b. B12 deficiency
c. MS
d. Cord compression
e. Motor neurone disease
180. A patient has difficulty walking. His gait is unsteady. He seems to have difficulty raising his right leg and swings it round in an arc as he walks. He holds his right arm and wrist flexed. What type of gait does this patient exhibit?
a. Hemiplegic
b. Scissoring
c. High stepping
d. Spastic
e. Stomping
181. A patient is admitted with a stroke. On examination of her visual fields, she is unable to see in the right lower quadrant of her field. Where is the lesion?
a. Optic chiasm
b. Left parietal lobe
c. Right temporal lobe
d. Right optic radiation
e. Left optic nerve
182. A 43-year-old woman presents with dizziness to accident and emergency. It started suddenly this morning, she awoke with a headache and the dizziness started when she sat up in bed. She describes the room spinning for a couple of minutes. It settles if she keeps still, but returns on movement. There is no tinnitus or deafness, but some nausea and no vomiting. The most likely diagnosis is:
a. Brainstem stroke
b. Benign paroxysmal positional vertigo
c. Ménière's disease
d. Vestibular neuronitis
e. Migraine
183. A 40-year-old woman seen in clinic has multiple fleshy nodules and several light brown, round macules with a smooth border on her back, arms and legs. There are also freckles under her arms. What is the underlying disorder?

- a. Neurofibromatosis type I
 b. Neurofibromatosis type II
 c. Tuberous sclerosis
 d. Hereditary haemorrhagic telangiectasia
 e. Sturge-Weber syndrome
184. A 19-year-old man is admitted with a GCS of 12. He was doing push ups when he complained of a sudden-onset, severe headache and collapsed. What would you expect on his CT?
 a. Convex haematoma
 b. Midline shift
 c. Crescent-shaped haematoma
 d. Blood along the sulci and fissures
 e. Intraventricular blood
185. A 60-year-old man presents with visual problems and dizziness. The dizziness started suddenly, he sees the room spinning around and he has noticed he keeps bumping into things on his right. His blood pressure is 159/91, heart rate 72. On examination, there is nystagmus and dysdiadochokinesia. Where is his stroke?
 a. Temporal lobe
 b. Left parietal lobe
 c. Right parietal lobe
 d. Anterior circulation
 e. Posterior circulation
186. A 45-year-old man presents with a 5-day history of progressive tingling and numbness of his hands and feet. He insists that he has never had this problem before and that he was perfectly fine a week ago. Over the last 2 days he has had some difficulty walking but mostly he complains about difficulty rolling up cigarettes. On examination, there is mild symmetrical distal weakness, mild gait ataxia and dysdiadochokinesia. He smokes 30 cigarettes a day and drinks 1–2 bottles of wine. He has a family history of hypertension and his 63-year-old mother has type 2 diabetes, whom over the last year has complained of numbness and burning in her feet. He self-discharges. A week later, his symptoms have peaked. He displays moderate distal weakness and numbness to his knees, after which he turns a corner and his symptoms start to slowly resolve. What is the diagnosis?
 a. Miller Fisher syndrome
 b. Alcoholic neuropathy
 c. Chronic idiopathic demyelinating polyneuropathy
 d. Charcot Marie Tooth disease
 e. GBS
187. A 28-year-old junior doctor has been complaining of a headache for the last 24 hours. It started gradually, intensifying slowly and involving the entire cranium, but over the last couple of hours she has noticed that turning her head is uncomfortable. She feels generally unwell and prefers to lie in a dark room. Her boyfriend has noticed that she seems irritable. On examination, she exhibits photophobia and there is neck stiffness. There is no papilloedema. Close examination of her skin reveals no rashes. Kernig's sign is negative. A lumbar puncture (LP) reveals low protein, normal glucose and lymphocytosis. What is the diagnosis?
 a. Viral meningitis
 b. Migraine
 c. Aseptic meningitis
 d. Bacterial meningitis
 e. TB meningitis
188. A 36-year-old woman presents to clinic with neurological symptoms. On examination, she is able to stand with her feet together. Upon closing her eyes, however, she is unable to keep her balance. What is the diagnosis?
 a. Diabetes
 b. Cerebellar problem
 c. Alcohol abuse
 d. Proprioceptive problem
 e. Visual problem
189. A 29-year-old man is brought to the emergency department in a comatose state a few hours after complaining of sudden onset of excruciating headache. Neurologic examination reveals dilated pupils poorly responsive to light. A CT scan of the head without contrast demonstrates hyperdensity within the suprasellar cistern, while MRI is unremarkable. Lumbar puncture shows hemorrhagic cerebrospinal fluid. Which of the following is the most likely diagnosis?
 a. Amyloid angiopathy-related hemorrhage
 b. Cavernous sinus thrombosis
 c. Hemorrhagic infarction
 d. Pituitary apoplexy
 e. Ruptured berry aneurysm
190. A 55-year-old woman complains of double vision. She is tired all the time and has difficulty climbing stairs. She has difficulty getting items off shelves. Reflexes are absent but elicited after exercise. Initial shoulder abduction is 4/5 but on repeated testing is 4+/5. What is the pathology associated with this female's diagnosis?
 a. Thyrotoxicosis
 b. Myasthenia Gravis
 c. Diabetes
 d. Stroke
 e. Lung cancer
191. The worst score in Glasgow Coma Scale (GCS) representing "none" in all three categories assessed is
 a. Fifteen
 b. Zero
 c. Three
 d. None
192. Nerve fiber most susceptible to hypoxia is-
 a. A
 b. C
 c. B
 d. D
193. Earliest cranial nerve to be involved in Acoustic Neuroma:
 a. 5th
 b. 7th
 c. 6th
 d. 8th
194. Deep peroneal nerve supplies all of the following except
 a. Tibialis anterior
 b. Extensor Hallucis longus
 c. Extensor digitorum longus
 d. Peroneus brevis
195. Which of the following structures enter through the greater sciatic notch and leave through the lesser notch
 a. Obturator nerve
 b. Pudendal artery
 c. Femoral vessels
 d. Lesser sciatic nerve

Neurology - Answers

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|-------|-------|--------|--------|--------|
| 1. a | 40. b | 79. b | 118. d | 157. e |
| 2. c | 41. c | 80. e | 119. c | 158. c |
| 3. b | 42. b | 81. d | 120. c | 159. e |
| 4. d | 43. e | 82. a | 121. d | 160. c |
| 5. e | 44. b | 83. e | 122. d | 161. c |
| 6. a | 45. e | 84. a | 123. b | 162. b |
| 7. a | 46. d | 85. a | 124. c | 163. d |
| 8. b | 47. e | 86. e | 125. a | 164. a |
| 9. c | 48. d | 87. b | 126. d | 165. e |
| 10. c | 49. b | 88. d | 127. b | 166. c |
| 11. b | 50. a | 89. e | 128. b | 167. d |
| 12. c | 51. c | 90. d | 129. b | 168. d |
| 13. d | 52. b | 91. b | 130. b | 169. d |
| 14. e | 53. d | 92. e | 131. e | 170. c |
| 15. a | 54. c | 93. c | 132. a | 171. c |
| 16. c | 55. e | 94. b | 133. b | 172. c |
| 17. a | 56. d | 95. c | 134. e | 173. d |
| 18. e | 57. d | 96. e | 135. b | 174. e |
| 19. d | 58. d | 97. d | 136. a | 175. a |
| 20. c | 59. c | 98. e | 137. a | 176. d |
| 21. b | 60. b | 99. d | 138. a | 177. c |
| 22. d | 61. e | 100. d | 139. e | 178. b |
| 23. b | 62. b | 101. c | 140. e | 179. c |
| 24. c | 63. d | 102. b | 141. c | 180. a |
| 25. e | 64. d | 103. c | 142. d | 181. b |
| 26. c | 65. c | 104. e | 143. a | 182. b |
| 27. a | 66. e | 105. c | 144. b | 183. a |
| 28. e | 67. c | 106. a | 145. c | 184. d |
| 29. d | 68. e | 107. b | 146. b | 185. e |
| 30. b | 69. b | 108. c | 147. e | 186. e |
| 31. c | 70. d | 109. b | 148. e | 187. a |
| 32. e | 71. b | 110. a | 149. d | 188. d |
| 33. b | 72. e | 111. b | 150. b | 189. e |
| 34. d | 73. d | 112. a | 151. e | 190. e |
| 35. a | 74. c | 113. c | 152. a | 191. c |
| 36. e | 75. c | 114. b | 153. d | 192. c |
| 37. e | 76. d | 115. a | 154. a | 193. d |
| 38. b | 77. e | 116. d | 155. c | 194. d |
| 39. b | 78. c | 117. b | 156. b | 195. a |