A □-type: Select the most appropriate answer

( ) 1. A 14-year-old female with frequent cramps of both legs during sleep at night for 6 months. What is the most appropriate diagnosis of according to her EEG (HFF=70 Hz, LFF=1 Hz)?
   A. Childhood epilepsy with occipital spikes.
   B. Lennox-Gastaut syndrome with generalized polyspikes.
   C. Juvenile myoclonic epilepsy with generalized polyspikes.
   D. Benign EEG variants (14-and-6 positive spikes).
   E. Childhood absence epilepsy.

解答：D

2. The following figure represents an interictal EEG of a 17-year-old male after sleep deprivation. He has epilepsy since 10 years with a family history of epilepsy. Neurological examinations and intelligence assessment revealed normal results. Which antiepileptic drug should be avoided in the treatment for this patient?

A. Levetiracetam
B. Carbamazepine
C. Valproic acid
D. Topiramate
E. Clonazepam

解答：B
題目之出處：Fisch and Spehlmann’s EEG primer 3rd edition. p.289; Merritt’s 11th ed. p. 1001
3. The following figure is a needle EMG finding in the anterior tibialis in a 54-year-old man with weakness in his legs. The least likely diagnosis according to the EMG finding is:

A. Amyotrophic lateral sclerosis
B. Sciatic nerve injury
C. Polyradiculopathy
D. Dermatomyositis
E. Chronic inflammatory demyelinating polyneuropathy

解答：D
題目之出處：Kimura, Electrodiagnosis in Disease of Nerve and Muscle. 3rd Edition p. 356-362
( ) 4. Which sleep stage is it in the following figure (paper speed = 30mm/second)?
   A. Wakefulness
   B. Stage 1
   C. Stage 2
   D. Slow-wave sleep
   E. Stage REM

解答：B
题目之出處：Adams and Victor’s Neurology, 8th edition, P.283
5. Which type of involuntary movements most likely occurs in a patient with the following finding on T1-weighted MR images?
A. Myoclonus
B. Tremor
C. Tics
D. Ballism
E. Dystonia

解答：D
題目之出處：Acta Neurologica Taiwanica 2004;13:170-177
6. A 60-year-old man suffered from right mouth angle twitching for 1 month. Neurological examination revealed palatal tremor and nystagmus. The brain MRI was as below.
Which statement is CORRECT? (Left: proton density Right: T2-weighted)
A. There might be a previous injury over left cerebellum
B. Tensor veli palatini is involved
C. The tremor will persist during sleep
D. The tremor frequency is around 7-10/sec
E. The patient may hear ear “click” occasionally

解答：C
题目之出处：Merritt’s Neurology 11th ed. P 812-813
7. A 45 years old woman has found her both thenar muscles atrophy since she was a child. Her grandfather had similar thenar muscle atrophy at one hand. She occasionally feels numbness at right hand and nuchal tightness. The figures are her hands and NCV study. What is the most likely cause to her thenar muscle atrophy?

A. Congenital agenesis of thenar muscles
B. Congenital carpal tunnel syndrome
C. Congenital C8T1 radiculopathy
D. Cerebral palsy
E. Klumpke’s paralysis

解答：A
題目之出處：personal collection
8. This is 55-year-old man suffering from progressive behavior disturbance and language disturbance. Which statement is **WRONG**?

A. If the orbitomedial frontal lobe is preferentially affected, apathy/indifference were prominent clinical features
B. Extrapyramidal signs are usually prominent
C. Tau-immunoreactive glial inclusions are found
D. Chromosome 17 mutation could be found in familial cases
E. Memory impairment is usually not the early symptom

解答：A

9. A 47 year-old vegetarian suffers from progressive numbness in bilateral hands, gait disturbance for 6 months. On Neurological examination, generalized hyper-reflexia on deep tendon reflex (DTR), bilateral Babinski sign and impaired vibration sensation over lower limbs were found. The figure shows the MRI with contrast study of T-spine. Which one is CORRECT?

A. The arrow points a “reversed V sign” at anterior cord.
B. CSF study is not necessary.
C. The differential diagnosis does not include HTLV associated myelopathy (HAM).
D. The diagnosis is Vitamin B12 insufficiency.
E. The diagnosis is neuro-syphilis.

解答：D
題目之出處：Adams & Victor’s Principles of Neurology, 8th Ed. P992
10. A 60-year-old female has a history of anemia and chronic renal insufficiency. She presented with 1-year history of progressive weakness and numbness of four limbs. Radiograph, laboratory studies, and nerve biopsy were done. Which of the following statement is least likely to be TRUE?
A. Painful dysesthesia and carpal tunnel syndrome are common complaints in these patients.
B. The most common neurological complications are cord and root compression.
C. Polyneuropathy occurs in 5% of these patients.
D. Abdominal fat biopsy could substitute for sural nerve biopsy in diagnosis.
E. The patient has a low likelihood of death within the next two years.

解答：E
题目之出处：Neurology in clinical practice 4th ED p2354
11. Mr. Yang received a muscle biopsy on the left biceps brachii. Which one is NOT correct:

A. This is an inflammatory myopathy.
B. The MHC class I molecules over-expressed in phagocytotic muscle fibers.
C. Steroid and immunosuppressive agents may be helpful.
D. IVIG is useless for the patient’s problem.
E. Skin lesion is common.

(Right H & E stain, Left: immunostaining with monoclonal antibody against human HLA-ABC)

解答：D
題目之出處：Inflammatory myopathy, Adams 8th ed, P. 1205-1207
12. A 72-y-o female patient presented with progressive memory impairment. The patient was diagnosed to have Alzheimer’s disease. Clinical dementia rating (CDR) revealed as Figure: Memory (M)=2, Orientation (O)=2, Judgment & Problem solving (JPS)=1, Community affairs (C)=3, Home & hobbies (HH)=3, Personal care (PC)=2. The patient’s global CDR score is?
A. 0.5
B. 1
C. 2
D. 3
E. Undetermined

解答：C
题目之出处：Acta Neurol Taiwan Vol 12 No 3, 2003:160
13. Which statement of the brain lesion was **WRONG**?

A. The pathogen usually localized infection of the respiratory tract, paranasal sinus, or cutaneous tissue

B. The invasive lesion usually presents in people with alcoholism, diabetes, chronic renal failure, drug addiction, or hematological malignancy.

C. The angio-invasive nature of the pathogen usually result in cerebral vasculitis

D. The lesion may be removed surgically.

E. Human mortality rates approach 95%.

解答：C

題目之出處：Acta Neurol Taiwan 2006, p49-50
A 7-year-old boy was taken to emergency room due to drowsy consciousness. High fever persisted for several days before he was taken to hospital. Some vesicles were also found on his hands (Fig. A). Neurological examination revealed frequent myoclonic jerks, tremors, ataxia and facial diplegia. Brain MRI was as following (Fig. B). Which one of the following descriptions about the diagnosis could be **WRONG**?

A. Neurological involvement may occur in up to 90% of patients  
B. Diagnosis may be made by virus isolation form throat, feces, or vesicles and by antibody studies.  
C. The pathogen was recognized as causing outbreaks of HFMD (hand-foot-and-mouth disease)  
D. Listeria monocytogenes could be the possible pathogen  
E. The disease primarily affected children and teenagers.

解答：A  
题目之出处：Merritt’s 11th ED, p181
15. A 25-year-old man was taken to a neurologic clinic due to irritability, anxiety and hallucination for 6 months. Then, ataxic gait, involuntary movement, rigidity and memory impairment were noted in recent 1 week. The brain MRI (T2-weighted and proton-density-weighted) was as following. What is the diagnosis for him?

A. Wilson disease
B. New variant Creutzfeldt-Jakob disease
C. Wernicke encephalopathy
D. Mitochondrial encephalomyopathy with lactic acidosis and stroke (MELAS)
E. Leigh disease

解答：B
題目之出處：Merritt’s Neurology 11th ed. P 268
16. A 48-year-old man with diabetes mellitus was brought to our ER due to fever, left retroorbital pain and conscious disturbance for 2 days. The neurological examinations showed proptosis, congestion, chemosis and fixed eyeball of his left eye, associated with right hemiparesis. The laboratory exams revealed leukocytosis, hyperglycemia (serum sugar: 482mg/dl.) and metabolic acidosis. The brain CT was as Figure A. Nasal endoscopic examination (Fig. B) and biopsy (Fig. C) were performed. Which one of the following descriptions is WRONG?

A. The fatal disease is caused by Zygomycetes
B. Occurs in patients with immunosuppression, uncontrolled diabetes, metabolic acidosis or iron chelation therapy.
C. It carries the tendency of extensive angioinvasion with resultant vessel thrombosis and tissue necrosis
D. For patients intolerant to amphotericin B, voriconazole is an alternative choice.
E. Improved outcome depends on early diagnosis, adequate medical treatment and aggressive surgical debridement

A.  
B.  
C.  

解答：D

Neurology in Clinical Practice, 4th edition, p. 1547- 1554
17. This 50-year-old man had symptoms of chronic headache, low grade fever, bursts of irritability, and anorexia for 3 months. He was admitted due to progressively worsening headache and neck stiffness. Brain CT with contrast done later was as follows. His lumbar puncture data was as follows. Which of the following diagnosis is the most likely?

A. Subarachnoid hemorrhage
B. Tuberculous meningitis
C. Cerebral venous thrombosis
D. Primary central nervous system lymphoma
E. Meningioma

<table>
<thead>
<tr>
<th>CSF data</th>
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<tbody>
<tr>
<td>WBC/RBC (per mm3)</td>
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<tr>
<td>Neutrophil/Lymphocyte (%)</td>
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<tr>
<td>Protein (mg/dl)</td>
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<tr>
<td>Sugar (mg/dl)</td>
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</tbody>
</table>

解答：B

題目之出處：Merritt’s 11th ED, p145, 146
18. A 45-year-old man with chronic alcoholism was found at home with altered consciousness. On admission, neurologic examination showed disorientation, perseveration, dysarthria, dyspraxia. Seizure attack was also noted in the emergency room. His brain MRI was as following. Which is the most likely diagnosis?
A. Multiple sclerosis
B. Central pontine myelinolysis
C. Marchiafava-Bignami disease
D. Neurosarcoidosis
E. Acute disseminated encephalomyelitis

解答：C
題目之出處：Merritt’s 11th ED, p963
19. This 7-year old boy complains of one-month history of progressively increasing vertigo with nausea and vomiting, worse on left lateral gaze and forward bending. He also notes gait instability. There is a tendency to fall to the left with positive Romberg test. The gait is broad-based. Brain MR and pathology were obtained. Which one of the following statement is the least likely?

A. One third of patients have isochromosome 17q
B. This is the most frequent malignant brain tumor in childhood.
C. Craniospinal irradiation is standard postoperative treatment
D. Preirradiation chemotherapy improves survival
E. Infants below age 3 years have inferior outcome and are considered high-risk patients.

解答：D
题目之出处：Merritt’s 11th ed, p428-441
20. A 60 years old farmer has mononeuropathy multiplex with gangrene amputation of fingertips and legs skin lesion as figures shown. He is a case of hepatitis C carrier with abnormal liver function- Total protein 6.2 mg/dl (6.4-8.4), Alb 3.2 gm/dl (normal 3.7-5.3), ALT 359 U/L(normal 0-40), AST 297 U/L (5-45), ALP 10-100 U/L (normal 10-100), GGT 197 U/L (8-61). What is the most likely cause to his neurological problem?
A. Organophosphate intoxication
B. Liver cirrhosis
C. Cryoglobulinemia
D. Parasite infection
E. Basal cell carcinoma

解答：C
題目之出處：personal collection, cryoglobulinemia confirmed by immunoserological test
21. A 55 years old man has had asymmetric shoulder and hip joint pain for about one and half years. Body weight loss is noted in this period. Proximal weakness of lower limbs developed in these 6 months. NCV/EMG showed ulnar and median nerves lesion at wrist. However, EMG of rectus femoris showed fibrillation potentials and positive sharp waves at rest, but no myopathic change at volition. His creatine kinase (CK) is within normal limit. Figures are his hands and muscle biopsy of right vastus lateralis with congo red stain. What is the most likely underlying disease in this case?

A. Polymyositis
B. Inclusion body myositis
C. Hyperparathyroidism
D. Multiple myeloma
E. Non-systemic vasculitic neuropathy

解答：D
題目之出處：personal collection, multiple myeloma is confirmed by bone marrow biopsy and aspiration
22. A 50-year-old woman has parkinsonian features for 1 year. Her MRI was shown below. What is the most possible diagnosis for the patient?

A. Parkinson’s disease
B. Progressive supranuclear palsy
C. Wilson’s disease
D. Lewy body dementia
E. Multiple system atrophy

解答：E

題目資料書名及章節：NICP VII p2141