



Question: 1

While reading out loud in kindergarten, a 6-year-old boy experiences his first generalized tonic-clonic seizure, which lasts for 2 minutes. The boy is developmentally normal. His past medical history is notable for asthma and two episodes of pneumonia that required antibiotics. In your office today, he is afebrile, and findings on physical examination are normal.

Of the following, the MOST compelling reason to administer an antiepileptic medication would be

- A. subsequent electroencephalography showing transient left temporal slowing
- B. the boy experiencing another seizure 1 month later
- C. the boy having had a febrile seizure at 2 years of age
- D. the boy's significant risk for aspiration during a seizure
- E. the occurrence of this seizure while the boy was awake



Question: 12

A 5-year-old boy is brought to the emergency department for wheezing and abdominal pain. He soon experiences emesis and diarrhea. On physical examination, the child has no fever, a pulse rate of 92 beats/min, blood pressure of 116/72 mm Hg, and a respiratory rate of 20 breaths/min. He has copious secretions and bibasilar rales. Pupils measure 2 mm bilaterally and react minimally to light. The boy is diffusely weak and has fasciculations. Deep tendon reflexes are difficult to elicit.

Of the following, the MOST likely diagnosis is

- A. acute intermittent porphyria
- B. botulism
- C. Guillain-Barré syndrome
- D. lead poisoning
- E. organophosphate intoxication



Question: 25

A 5-year-old boy presents with a 4-day history of fever, chills, headache, and myalgia. On the third day of the illness, he developed a macular rash on his ankles and wrists, which now has become petechial. A lumbar puncture reveals a white blood cell count of $0.2 \times 10^3/\text{mCL}$ ($0.2 \times 10^9/\text{L}$), a total protein of 45 mg/dL (450 g/L), glucose of 60 mg/dL (3.3 mmol/L), and a negative Gram stain.

Of the following, the MOST likely organism to cause meningitis in this patient is

- A. *Borrelia burgdorferi*
- B. herpes simplex virus
- C. *Mycobacterium tuberculosis*
- D. *Rickettsia rickettsii*
- E. *Streptococcus pneumoniae*



Question: 31

A 3-year-old girl presents to the emergency department with the sudden onset of weakness of the left arm and leg. The babysitter who brought her to the hospital knows only that the child is followed by an ophthalmologist for myopia and some other eye problems. Physical examination reveals a tall, thin child who has a fair complexion, blue eyes, a malar rash, and long, slender fingers. Neurologic examination reveals 2/5 strength in the left upper extremity and 3/5 in the left lower extremity.

Of the following, the laboratory test MOST likely to establish this child's underlying diagnosis is

- A. collagen studies from skin fibroblasts
- B. genetic testing for factor V Leiden
- C. hemoglobin electrophoresis
- D. lupus anticoagulant serum assay
- E. urine homocystine level



Question: 50

A mother brings her 7-year-old daughter to the clinic because the child's teacher has expressed concern about the girl's daydreaming throughout the school day. The mother is more concerned, however, about the child's frequent blinking. Findings on the physical examination are normal. After hyperventilating for 2 minutes, the child ceases all activity, and her head falls forward slightly.

Of the following, the MOST appropriate treatment for this child is

- A. atomoxetine
- B. atropine
- C. carbamazepine
- D. clonidine
- E. ethosuximide



Question: 51

You are meeting with a 17-year-old girl who has had complex partial seizures to discuss discontinuation of carbamazepine. She has had no seizure for 18 months. Full evaluation, including magnetic resonance imaging of the brain, has shown no cause for the seizures. Several colleges are recruiting the girl to play softball. She is sexually active.

Of the following, the statement you are MOST likely to make is that

- A. folate supplementation should be deferred until discontinuation of carbamazepine therapy
- B. she should not drive alone
- C. she should take showers instead of baths
- D. she should wear a helmet at all times while playing softball
- E. this is an ideal time to change from carbamazepine to oxcarbazepine



Question: 57

A term newborn experiences generalized tonic-clonic seizures 1 hour after birth. The vaginal delivery was unremarkable, and Apgar scores were 9 at both 1 and 5 minutes. The pregnancy was notable for the mother reporting that the "baby had hiccups." Except for the ongoing seizures, physical examination results are normal, and the baby boy is afebrile. Despite full dosing of intravenous fosphenytoin and phenobarbital, the seizures continue.

Of the following, the MOST likely cause of the child's seizures is

- A. Aicardi syndrome
- B. benign familial neonatal seizures
- C. hypoxic-ischemic encephalopathy
- D. nonketotic hyperglycinemia
- E. pyridoxine dependency



Question: 83

You are meeting with the parents of a 17-month-old boy who was evaluated the previous night in the emergency department for a first generalized seizure that lasted 7 minutes and followed a fever of 102.9°F (39.4°C). Other than otitis media, findings on the physical examination were normal, and the child was discharged home. The child is developmentally normal, and there is no family history of epilepsy. Upon examination, the child now appears well.

Of the following, your MOST likely statement to the parents is that

- A. antipyretic agents are effective in preventing future febrile seizures
- B. computed tomography of the head is preferred to brain magnetic resonance imaging for evaluation of this child
- C. electroencephalography is not indicated
- D. the chance of another febrile seizure is about 50%
- E. the child has a 5% chance of developing epilepsy



Question: 84

A 10-year-old boy presents after falling from a second floor window onto the pavement 30 minutes ago. There was a 3-minute loss of consciousness initially, but he has been alert and talking to his mother during the ambulance ride to the hospital. On physical examination, the child has tenderness and a hematoma over the right parietal region of his head. Results of an initial complete neurologic examination are normal, but on subsequent examination 15 minutes later, the boy exhibits marked lethargy and slurred speech.

Of the following, the MOST likely explanation for his current symptoms is

- A. cerebral contusion
- B. concussion
- C. epidural hematoma
- D. subarachnoid hematoma
- E. subdural hematoma



Question: 101

A 6-year-old girl whose family moved to your town about 6 months ago presents for ataxia of 3 months' duration. Her medical records reveal a history of frequent otitis media and sinusitis and reports of persistent conjunctivitis. On physical examination, the child experiences ataxia with finger-nose-finger pointing and walking. She has difficulty fixing her gaze on an object and has to move her head to refixate. Deep tendon reflexes are normal.

The laboratory test MOST likely to establish this child's diagnosis is a

- A. peripheral blood smear
- B. serum alpha-fetoprotein measurement
- C. serum biotinidase measurement
- D. urine amino acids measurement
- E. urine homovanillic acid measurement



Question: 109

A 2-month-old infant is brought to the emergency department by his parents with a history of rolling off the bed. The infant is awake and alert, and the only abnormal finding on physical examination is an area of soft-tissue swelling in the right parietal region. A radiograph reveals a right parietal skull fracture.

Of the following, the MOST appropriate next step in the evaluation of this infant is to obtain

- A. magnetic resonance imaging of the head
- B. serum level of 25-hydroxyvitamin D
- C. serum levels of calcium and phosphorus
- D. skeletal survey
- E. skin biopsy for osteogenesis imperfecta evaluation



Question: 145

A 5-month-old infant is brought to the emergency department for evaluation of a temperature of 103.3°F (39.6°C), irritability, decreased activity, and emesis. For the past 3 days she has been receiving high-dose amoxicillin for the treatment of bilateral otitis media. On physical examination, the child has a temperature of 104°F (40°C), appears ill, and is irritable. Studies obtained on her cerebrospinal fluid document: glucose, 10 mg/dL (0.56 mmol/L); protein, 150 mg/dL (15 g/L); white blood cell count of 620/mm³ with 85% polymorphonuclear leukocytes; and no red blood cells. Gram stain shows white blood cells, but no bacteria are seen.

Of the following, the MOST likely diagnosis in this patient is

- A. enteroviral meningitis
- B. herpes simplex virus encephalitis
- C. Lyme meningitis
- D. partially treated bacterial meningitis
- E. tuberculous meningitis



Question: 151

A 6-year-old boy presents with a 5-day history of worsening ataxia following an episode of gastroenteritis 1 week ago. On physical examination, the child has mild facial diparesis and areflexia. His gait is ataxic, and the child has weakness of the ankle flexor and extensor muscles.

Of the following, the test MOST likely to lead to the correct diagnosis is

- A. computed tomography of the head
- B. lumbar puncture
- C. measurement of serum vitamin E level
- D. ultrasonography of the abdomen
- E. urine toxicology screen



Question: 163

A 4-month-old boy presents with the complaint of colic. His mother reports that the child has multiple, daily, painful, brief episodes that are so severe that he repetitively flexes his upper and lower extremities all at once. The baby cries after the episodes. On physical examination, you note two 1- to 2-cm hypopigmented macules on the trunk, but the child appears otherwise normal.

Of the following, the MOST appropriate treatment for this child is

- A. acetaminophen
- B. adrenocorticotrophic hormone
- C. diazepam
- D. ranitidine
- E. simethicone



Question: 166

A 5-year-old girl presents with a 4-day history of vomiting but no diarrhea. The mother reports that the child has good urine output. Physical examination reveals an afebrile girl who has a pulse rate of 62 beats/min and a blood pressure 132/76 mm Hg. You note that she has truncal ataxia and difficulty abducting the right eye.

Of the following, the MOST appropriate intervention at this time is

- A. administration of a 10 mL/kg bolus of intravenous normal saline
- B. administration of intravenous dexamethasone
- C. administration of sublingual nifedipine
- D. placement of the child in a supine position
- E. rectal administration of trimethobenzamide



Question: 194

A mother brings her 15-year-old son to the clinic because she is annoyed that he throws his comb and toothbrush in the morning. Sometimes he drops his glass of orange juice. The boy reports that he cannot control these jerky arm movements, which occur upon awakening but disappear later in the day. Physical examination results are normal.

Of the following, the MOST appropriate next step in the management of this teen is

- A. administration of risperidone
- B. electroencephalography
- C. magnetic resonance imaging of the brain
- D. psychiatry consultation
- E. urine toxicology screen



Question: 208

A 7-year-old girl has had weakness of the right side of her face for 4 days following a systemic viral infection 2 weeks ago. She denies any hearing difficulty or hyperacusis and claims that tearing and taste are normal. Physical examination reveals weakness of the upper and lower face and an inability to close the right eye. Deep tendon reflexes are normal.

Of the following, the MOST appropriate next step is

- A. application of an ocular lubricant at night
- B. initiation of amoxicillin
- C. magnetic resonance imaging of the brain
- D. nerve conduction velocities and electromyography
- E. prescription of oral acyclovir



Question: 224

An 8-month-old girl is brought to the emergency department in status epilepticus. She has had diarrhea for the past 4 days. The infant had received bottled water for the first 3 days of her illness and cola for the past 24 hours.

Of the following, the MOST likely cause of this patient's status epilepticus is

- A. hypocalcemia
- B. hypoglycemia
- C. hypokalemia
- D. hypomagnesemia
- E. hyponatremia