

## Neuro/Psych Questions – Revised Numbering

- 1) Which of the following are “triggers” of vertigo
  - a) Standing up
  - b) Shopping malls
  - c) Car or boat travel
  - d) Sneezing
  - e) All of the above
- 2) Causes of central vertigo include
  - a) Multiple sclerosis
  - b) Wernicke’s syndrome
  - c) Arnold Chiari malformation
  - d) Paraneoplastic cerebellar degeneration
  - e) All of the above
- 3) Concerning the vestibular ocular reflex
  - a) The terms “COWS” when testing the vestibular ocular reflex is a mnemonic for caloric testing
  - b) Nystagmus quick phase originates in pons and midbrain
  - c) Horizontal eye movements are generated in the pons
  - d) Depth of field vision is not is not reduced by nystagmus
  - e) All of the above
- 4) Non vestibular causes of dizziness are
  - a) Head movements
  - b) Spinning
  - c) Hearing Loss
  - d) Impaired vision
  - e) Hyperventilation
- 5) Central vertigo symptoms would be
  - a) unidirectional
  - b) Fatigued
  - c) Inhibited by fixation
  - d) Bidirectional nystagmus
  - e) Sudden onset
- 6) Symptoms of peripheral vertigo would be
  - a) Slow onset
  - b) Not positionally dependent
  - c) Not as intense compared to central vertigo
  - d) Hearing loss possible
  - e) All of the above
- 7) Benign positional vertigo is
  - a) Caused by free floating magnesium carbonate crystals
  - b) Fatigable paroxysmal positional nystagmus after a rapid change from the sitting to the head hanging position
  - c) Treated by removing the crystals
  - d) Motion will ameliorate the symptoms
  - e) Spontaneous nystagmus occurs
- 8) Migraine headaches
  - a) Affect mostly men
  - b) Must have one of the following: nausea, photophobia, vomiting or phonophobia
  - c) Three of the following : Unilateral location, moderate severe intensity, pulsating quality or exacerbated by routine activity
  - d) Four attacks with headaches lasting at least 6 hours
  - e) None of the above
- 9) Deactivators of a migraine headaches includes
  - a) Pregnancy
  - b) Red Wine
  - c) Menstruation
  - d) Perfumes
  - e) Lack of Sleep
- 10) The least useful drugs for the prophylaxis of a migraine headache is
  - a) Beta blockers
  - b) Tricyclic antidepressants
  - c) Anticonvulsants
  - d) Anti serotonin drugs
  - e) NSAID
- 11) Concerning the treatment of migraine headaches, identify the true statement
  - a) Non selective beta blockers are useful, but selective beta blockers are not
  - b) Tricyclics are effective and are not limited by their side effects
  - c) SSRI generally very helpful
  - d) Depakote must be used at high doses (greater than 2 grams)
  - e) Calcium channel blockers are helpful
- 12) The gold standard for abortive therapy for migraine headaches is
  - a) Imitrex
  - b) Acetaminophen
  - c) NSAID
  - d) Demerol
  - e) Cardizem

- 13) Petit mal seizures
- Generally begin in childhood
  - Have no neurological problems
  - Respond well to medications
  - Less than 25% have spontaneous remissions prior to adulthood
  - EEG shows non generalized and asymmetric 3 Hz spike/wave discharges

- 14) Causes of seizures in neonates are
- Perinatal hypoxemia and ischemia
  - Intracranial hemorrhage and trauma
  - Acute CNS infection
  - Hypomagnesemia
  - All of the above

- 15) Definitive diagnosis of psychogenic seizures can be determined by
- Nystagmus testing
  - Prolactin level
  - Video-electrooculography
  - Psychologic test
  - Self injury

- 16) All of the following are consistent with syncope as opposed to seizure
- Sudden unconsciousness
  - Duration is minutes
  - Usually lasts more than 30 seconds
  - Cyanosis present
  - Pallor

- 17) All of the following are more consistent with a seizure than with a syncopal episode
- Disorientation less than 5 minutes
  - Tongue biting is rare
  - Incontinence is unusual
  - Headache occurs sometimes and is not rare
  - Disorientation lasts minutes to hours

- 18) Which of the following does not belong to the triad known in Lennox Gastaut Syndrome?
- Multiple seizure types
  - Afferent papillary defect
  - Impaired cognition
  - EEG shows slowing spike and wave discharges

Use the answers below for questions # 19 – 24 with regard to first line therapy

- Primary generalized tonic-clonic seizures
- Partial seizures
- Absence seizures
- Atypical absence, myoclonic and atonic seizures
- None of the above

- 19) Valproic acid, topiramate  
 20) Lamotrigine  
 21) Carbamazepine  
 22) Dilantin  
 23) Ethosuximide  
 24) Valproic acid is the only drug recommended for this type of seizure

- 25) Status epilepticus characteristics are
- Non continuous in nature
  - Impaired consciousness in the interictal period
  - Duration is > 2 minutes
  - Emergency must not be treated

- 26) Which of the following is NOT a cause of status epilepticus?
- Anticonvulsant withdrawal
  - Medical Noncompliance
  - Metabolic Disturbance
  - Drug Toxicity
  - Hyperglycemia

- 27) With regard to seizures in women
- Seizures decrease in frequency when period (menstruation) occurs
  - Prophylaxis with Diamox A
  - Antiepileptic drugs can be synergistic with contraception
  - Breast milk is free from anti-epileptic drugs

- 28) Signs and symptoms of Parkinson disease are:
- Intention tremor
  - Absence of Lewy body
  - Bradykinesia
  - Loss of postural reflexes
  - Absence of gait disturbance

- 29) The neuroanatomy of Parkinson's Disease is loss of nerve cells in
- Substantia nigra pars compacta
  - Locus coeruleus in the midbrain
  - Globus pallidus
  - Putamen
  - All of the above
- 30) Identify the eosinophilic intraneural inclusion granule present in the basal ganglia, brainstem, spinal cord and sympathetic ganglia
- Lewy body
  - Erythema Chronicum Granulosa
  - Auer Rod
  - Neurofibrillary tangle (NFT)
  - Pick bodies
- 31) The physical examination in a Parkinson's patient will characteristically reveal
- Kayser Fleisher ring
  - Postural reflexes
  - Non-hypophonic sound of voice
  - Dementia
  - 4- 6 Hz tremor
- 32) The physical examination in a Parkinson's patient will characteristically reveal
- Impaired cognition
  - Normal mood
  - Autonomic dysfunction
  - Tachykinesia
  - Blepharospasm
- 33) A reasonable differential diagnosis of Parkinson's disease is
- Wilson disease
  - Essential (benign familial) tremor
  - Progressive supranuclear palsy
  - Huntington disease
  - All of the above
- 34) Which of the following is Parkinson like disease symptoms that are present in other disease processes?
- Wilson's Disease
  - Huntington's Disease
  - Shy Dragger's Syndrome
  - Striatonigral Degeneration
  - All of the above
- 35) The most useful drug of the ones listed for the treatment of Parkinson's disease is
- Anticholinergic drugs
  - Amantadine
  - Levodopa (L-dopa)
  - Dopamine antagonists
  - Niacin
- 36) Which of the following are complications of L-Dopa Therapy
- Wearing off effect
  - On-Off Phenomenon
  - Dyskinesias
  - All of the above
  - None of the above
- 37) Normal Pressure Hydrocephalus (NPH) clinical triad is all of the following EXCEPT
- Wide gait disturbance
  - Dementia
  - Urinary incontinence
  - Peripheral neuropathy
  - Ataxia
- 38) Laboratory values in normal pressure hydrocephalus reveal
- Normal LP opening pressure
  - Cortical atrophy
  - Non dilated ventricles on CT scan
  - Obstructed aqueduct of Sylvius
  - None of the above
- 39) Huntington's Disease
- Autosomal Recessive
  - Histologically affects the caudate nuclei
  - GABA is increased
  - Memory is preserved throughout the illness
  - Treatment is curative with haloperidol or Phenothiazines
- 40) Amyotrophic Lateral Sclerosis (Lou Gehrig's disease) has which of the following characteristics
- Painful progressive weakness
  - Dysphagia and choking are common
  - Cervical segment is affected first
  - Death is due to primary cardiac arrest due to involvement of the Purkinje fibers
  - CPAP is not useful.

Answer questions # 41-44 with the following answers

- a) Glioblastoma Multiforme
- b) Oligodendroglioma
- c) Meningioma
- d) Astrocytoma
- e) None of the above

- 41) Cerebellum the most common location  
42) Brain tumor with a fried egg appearance  
43) CT shows an enhancing lesion with irregular bodies and central lucency suggesting necrosis; very malignant  
44) Surgery is curative. Rarely invade brain, usually invade skull, Few are malignant  
45) The organism most likely (in 2007) responsible for meningitis is (community acquired)  
a) Streptococcus pneumoniae  
b) Neisseria Meningitidis  
c) Group B streptococcus  
d) Listeria monocytogenes  
e) Hemophilus Influenzae  
46) A 32 year old man presents with meningitis. A spinal tap reveals lymphocytes. Additional diagnostic data most likely present is  
a) Low glucose in the spinal fluid  
b) High glucose in the spinal fluid  
c) Normal glucose in the spinal fluid  
d) Brain MRI will be normal  
e) Increased opening pressure

Use the following responses for questions # 47-52

- a) Ampicillin and Cefotaxime
- b) Ampicillin + (cefotaxime or Ceftriaxone) – also consider Dexamethasone
- c) (Cefotaxime or Ceftriaxone) + Vancomycin
- d) (Cefotaxime or Ceftriaxone) + Vancomycin + Ampicillin
- e) Ceftazidime + Vancomycin
- f) Ceftazidime (in place of cefotaxime or Ceftriaxone) + Ampicillin

- 47) Preterm infants  
48) Impaired Cell mediated immunity at any age  
49) Infants 1 -3 months  
50) Three months to 50 years old  
51) > 50 years old  
52) Hospital acquired meningitis, meningitis after head trauma or neurosurgery

- 53) Which of the following increase the morbidity of meningitis  
a) Seizures within 24 hrs of admission  
b) Decreased LOC on admission  
c) Intercurrent diseases  
d) Extremes of age  
e) All of the above  
54) Which of the following is the most common etiology of viral meningitis  
a) HIV  
b) CMV  
c) Rubella  
d) Measles  
e) EBV  
55) Which is the least common etiology of viral meningitis  
a) Adenovirus  
b) Arbovirus  
c) HSV-2  
d) HSV-1  
e) Mumps  
56) LCMV (Lymphocytic Choriomeningitis virus) should be suspected  
a) In HIV + patients  
b) In the late fall or winter  
c) With exposure of patient to horses  
d) In diabetic patients  
e) If there is history of a prior Yersinia enterocolitis infection  
57) The most common cause of encephalitis (of those listed) is  
a) Mumps  
b) Rubella  
c) Rabies  
d) LCMV (Lymphocytic Choriomeningitis Virus)  
e) Colorado Tick Fever Virus  
58) The least common cause of encephalitis (of those listed) is  
a) Influenza A  
b) Enterovirus  
c) HSV -1  
d) HIV  
e) EBV

- 59) Which of the following are typically NOT found in Ménière's Disease
- Monaural fullness
  - Fluctuating hearing
  - Episodic vertigo
  - Syncope
  - Tinnitus
- 60) Regarding Ménière's Disease
- Permanent sensor neuronal deafness will eventually occur
  - Hearing is abnormal at onset of disease
  - High frequency neuronal loss occurs early in the disease course
  - Attacks rarely last > 6 hours
  - Only surgical treatment is effective
- 61) Vestibular neuronitis is characterized by
- Gradual spontaneous loss of vestibular function
  - Unilateral loss of vestibular function
  - Hearing is also diminished
  - Bacterial etiology
  - Slow recovery taking months to years
- 62) Temporomandibular Joint (TMJ) syndrome is characterized by which of the following
- Pain that irradiates to the ear and jaw
  - Commonly bilateral pain
  - Pain is alleviated with chewing
  - Symptoms are worst in the morning
  - More frequent in males
- 63) Acute periodic paralysis characteristics include which of the following
- Mostly affects young females
  - Associated with alcohol withdrawal
  - Associated with hypernatremia
  - Associated with hyperkalemia
  - Associated with hypothyroidism
- 64) Guillain Barré Syndrome is characterized clinically by
- Males << females
  - Minor paresthesias
  - Areflexic ascending motor loss
  - Evolution is < 2 hrs in almost all cases to full syndrome
  - Axonal connections are usually broken in the disease
- 65) Events prior to Guillain Barré Syndrome which are thought to precipitate the disease is/are
- Influenza virus
  - Herpes
  - Mycoplasma Pneumonia
  - Borrelia Burgdorferi
  - All of the above
- 66) CSF analysis of Guillain Barré Syndrome is most consistent with
- Abnormal cell count
  - Increased protein concentration
  - Both of the above
  - None of the above
- 67) Which of the following is true of Guillain Barré syndrome
- Recovery is the rule ~ 85%
  - Mortality is < 0.1 %
  - Death results from primary cardiac dysrhythmia
  - Plasmapheresis will result in less mortality
  - Steroids are the treatment of choice
- 68) Which of the following is true of tick paralysis
- Results from an adult male tick that releases a neurotoxin
  - Descending paralysis
  - Occurs 1 -2 days after tick attaches
  - Treatment is to simply remove the tick and provide supportive measures
  - DEET is ineffective
- 69) Which of the following is true of Bells palsy
- Central 7<sup>th</sup> nerve dysfunction
  - Numbness occurs in 50% of patients
  - Spontaneous improvement (~ 90%) in about 2 weeks without therapy
  - The forehead frontalis muscle is never involved
  - Treatment involves ceftriaxone and ice packs
- 70) Myasthenia gravis
- Is due to receptor antibodies
  - Increases the number of acetylcholine receptors
  - Thymus removal leads to worsening of the disease
  - Is rarely paraneoplastic
  - Is associated with a hypoplastic thymus

- 71) In myasthenia gravis
- a) There is weakness of skeletal muscles with sensory loss
  - b) Diplopia does not occur
  - c) Ptosis does not occur
  - d) Edrophonium chloride (Tensilon) test if negative excludes the disease
  - e) Is treated with pyridostigmine

- 72) The difference between Myasthenia Gravis (MG) and Lambert Eaton Myasthenic Syndrome (LEMS)
- a) LEMS has absent reflexes while MG has normal reflexes
  - b) MG has dry mouth and impotence
  - c) LEMS shows decremental response to nerve stimulation
  - d) All of the above are true
  - e) None of the above are true

- 73) Which of the following is a treatment for Myasthenia Gravis Crisis management
- a) Antibiotics
  - b) Respiratory support
  - c) Plasmapheresis
  - d) Immunoglobulin
  - e) All of the above

- 74) Multiple Sclerosis
- a) Is twice more common in females
  - b) African Americans are at greatest risk
  - c) Lowest risk is in temperate climates
  - d) There is no familial preponderance
  - e) Highest risk is after menopause

- 75) Which of the following is the most common presenting symptom of multiple sclerosis
- a) Weakness
  - b) Optic neuritis
  - c) Sensory disturbance
  - d) Ataxia
  - e) Diplopia

- 76) Treatments for MS include
- a) Plasmapheresis
  - b) ACTH
  - c) Steroids
  - d) NSAIDs
  - e) IvIg

- 77) Regarding an epidural abscess
- a) Patients are usually without symptoms and have no fever
  - b) Neck or back pain with focal percussion pain is a prominent sign
  - c) The CSF protein level is low
  - d) CT scan is better than MRI
  - e) There is peripheral lymphopenia

- 78) The etiology of an epidural abscess is most likely
- a) Staphylococcus aureus
  - b) Streptococci
  - c) Gram Negative anaerobes
  - d) Tuberculosis
  - e) Enterococcus

- 79) Syringomyelia is characterized by
- a) Frequent childhood onset
  - b) Dissociated sensory loss
  - c) DTRs stay intact in upper extremity
  - d) DTRs diminish in lower extremities
  - e) 50% mortality rate

- 80) In cauda equina syndrome
- a) There is upper extremity sensory loss
  - b) The bowel function is normal
  - c) The prognosis is poor with high mortality
  - d) There is low back pain
  - e) There is a saddle motor deficit

For questions # 81-91 use the following responses  
**(Hint: Know this for real exam!)**

- f) Carotid artery
- g) Anterior Cerebral Artery
- h) Middle Cerebral Artery
- i) Posterior Cerebral Artery
- j) Vertebral Basilar Artery

- 81) Diplopia
- 82) Dizziness
- 83) Dysarthria
- 84) Crossed Face body/motor sensory
- 85) Cholesterol Plaques
- 86) Bruits may be present
- 87) Predominantly leg involvement
- 88) Aphasia (left dominant hemisphere)
- 89) Hemiparesis
- 90) Hemianopia with other symptoms
- 91) Hemianopia in isolation

- 92) Of the following what is NOT a contraindication for the use of TPA in a patient who presents to the ER.
- Awakens with a neurological deficit
  - Major surgery 3 weeks earlier
  - A-V malformation in the brain that is non operable
  - Blood pressure that is now 140/82 (through Nipride) although presentation revealed BP 220/135
  - Patient already on Coumadin
- 93) Hospitalization for depression is required for all of the following EXCEPT
- Suicide prevention
  - Psychosis
  - Refusal to eat or drink
  - Inability to manage other medical problems
  - Loss of a loved one
- 94) Risk factors for suicide include all of the following EXCEPT
- Alcoholism
  - Drug use
  - Prior attempts
  - Loss of Job
  - Obesity
- 95) Concerning suicide
- Males attempt more suicides than females
  - Females succeed more often than males
  - Depression is a risk factor
  - Prior attempts are rare
  - Widowed women are at greatest risk
- 96) Which of the following is true in Munchausen's Syndrome
- Males are less often affected than females
  - Incentive is to get drugs
  - Patients rarely demand expensive or invasive tests
  - Angry when refused medical care
  - The patient intentionally produces signs and symptoms
- 97) Which of the following is an alcohol abuse criterion
- Barely manages to fulfill major role obligations at work
  - Refrains from use of alcohol in physically hazardous situations
  - Recurrent alcohol related legal problems
  - Intermittent use because of social problems
  - Escalating interpersonal problems
- 98) Dependence criteria for alcohol include which of the following
- Intolerance
  - Delirium
  - Using less alcohol than was intended
  - Use continues despite knowledge that there is a physical or psychological problem related to alcohol
  - Lack of wish to decrease alcohol intake
- 99) Risk Factors for developing alcohol dependence include which of the following
- Antisocial personality
  - Other substance abuse/use
  - Major depression
  - Anxiety disorders
  - All of the above
- 100) Regarding the treatment of alcoholism, which of the following is true
- Total abstinence is the goal
  - Disulfiram may be useful
  - Underlying medical problems should be addressed
  - Early signs of withdrawal are tachycardia and autonomic stability
  - All of the above
- 101) Regarding alcohol withdrawal
- Delirium tremens usually appear 24 – 72 hrs after the last drink
  - Delirium tremens is lethal in about 15 % of cases
  - Delirium tremens can occur even if there is still measurable alcohol in the serum
  - It is often associated with hypotension
  - Hallucinations occur 72-96 hours later
- 102) Regarding alcohol withdrawal syndromes, which is true
- Seizures typically occur a minimum of 72 hrs after drinking has stopped
  - Hallucinations occur between 36 – 48 hrs afterwards without delirium
  - Wernicke's syndrome is a deficiency of Vit B6
  - Treatment is with large doses of benzodiazepines
  - Hypoglycemia can trigger Wernicke syndrome

- 1) e
- 2) e
- 3) e
- 4) e
- 5) d
- 6) c
- 7) b
- 8) b
- 9) a
- 10) d
- 11) a
- 12) a
- 13) c
- 14) e
- 15) c
- 16) e
- 17) e & d
- 18) b
- 19) e
- 20) a & b
- 21) b
- 22) b
- 23) c
- 24) d
- 25) b
- 26) e
- 27) b
- 28) c & d
- 29) e
- 30) a
- 31) e
- 32) e
- 33) e
- 34) e

- 35) b & c
- 36) d
- 37) d
- 38) a
- 39) b
- 40) b
- 41) d
- 42) b
- 43) a
- 44) c
- 45) a
- 46) c
- 47) a
- 48) f
- 49) b
- 50) c
- 51) d
- 52) e
- 53) e
- 54) a
- 55) a
- 56) b
- 57) a
- 58) a
- 59) d
- 60) a
- 61) b
- 62) a
- 63) d
- 64) c
- 65) e
- 66) b
- 67) a
- 68) d

- 69) b
- 70) a
- 71) e
- 72) a
- 73) e
- 74) a
- 75) c
- 76) b & c
- 77) b
- 78) a
- 79) b
- 80) d
- 81) j
- 82) j
- 83) j
- 84) j
- 85) f
- 86) f
- 87) g
- 88) h
- 89) h
- 90) h
- 91) i
- 92) d
- 93) e
- 94) e
- 95) c
- 96) e
- 97) c
- 98) d
- 99) e
- 100) e
- 101) b
- 102) d