1 . Most patients with intrinsic brainstem gliomas initially present with

A. Cranial neuropathies

B. Headache

C. Hydrocephalus

D. Nausea and vomiting

E. Papilledema

2 . Coup contusions most commonly occur at the

A. Cerebral convexities

B. Frontal and temporal poles

C. Orbital surface of the frontal lobes

D. Posterior fossa

E. Ventral surface of the temporal lobe

3 . The most common presenting symptom of a thoracic herniated disk is

A. Back pain

B. Leg numbness

C. Leg weakness

D. Thoracic numbness

E. Urinary incontinence

4 . The single most important factor in the recurrence of meningiomas is

A. Age of the patient

B. Bone invasion

C. Histologic type of benign meningioma

D. Postoperative tumor residual

E. Sex of the patient

5 . Of the following, the least comm on location of intracranial meningiomas is (the )

A. Intraventricular

B. Olfactory groove

C. Posterior fossa

D. Sphenoid ridge

E. Tuberculum sella

6. A bloody tap during lumbar puncture can be due to?

 1. Intracerebral hemorrhage

2. Injury to aorta

3. Injury to intercostal artery

4. Injury to venous plexus

5. Epidural hematoma

7. In which of the following cases would a lesion cause unilateral hearing loss?

 1. Damage to organ of Corti

2. Lateral lemniscus

3. Inferior Olivary nucleus

4. Medial geniculate body

5. All above mentioned

8. Which organism is most often responsible of meningitis in patients with VP shunts?

 1. Streptococcus agalactiae

2. Hemophilus influenza

3. Staphylococcus epidermiditis

4. Neisseria meningitides

5. None of above

9. Aneurysms most typically present with:

 1. Incidental demonstration on imaging

2. Parenchymal hemorrhage

3. Subarachnoid hemorrhage (SAH)

4. CN III (occulomotor) neuropathy

5. Paraparesis

10. A CSF leak after transsphenoidal hypophysectomy is initially treated with?

 1. Surgery

2. Blood patch

3. Packing

4. Observation

5. Lumbar puncture

11. A 17-year-old male hit on the head with a baseball bat. Deep painful stimulus

causes him to open his eyes and withdrawal and he mumbles incomprehensibly. What is his Glasgow

coma scale score?

 1. 11

2. 10

3. 8

4. 5

5. 14

12. Which of the following is false regarding carotid cavernous fistulas (CCF)?

 1. Commonly presents with diplopia and ophthalmoplegia

2. Indirect CCFs are most common in men

3. Barrow types A, B, and D involve the internal carotid artery

4. Commonly presents on imaging with a dilated superior ophthalmic vein

5. All above mentioned

13. In people who develop Parinaud syndrome, the location of damage is usually found in?

 1. Frontal lobe

2. Temporal lobe

3. Occipital lobe

4. Midbrain

5. Cerebellum

14. Which of the following is the most common type of brain tumor in children?

 1. Meningioma

2. Medulloblastoma

3. Ependymoma

4. Supratentorial low-grade astrocytoma

5. Osteoblastoma

15. Which is false about treatment of cerebral edema?

 1. Mannitol may be used

2. One must decrease fluid intake

3. Head up position may help

4. Hyperventilation may help

5. Mannitol should not be used

16. The development of the conus medullaris involves which of the following?

 1. The conus medullaris is above T12 at term

2. The conus medullaris is at L2 by 18 weeks gestation

3. The difference between the growth rate of the spinal cord and the vertebral column accounts for

the ascent of the conus medullaris

4. The level of the conus medullaris bears no relationship to the vertebral column

5. None of the above

17. Which of the following would be appropriate initial treatment for a herniated

cervical disc of the spine with cervical nerve root compression?

 1. Cervical collar and exercises

2. Cervical traction and bed rest

3. Cervical halo

4. Corticosteroids

5. Miorelaxants

18. Patients on bed rest may be encouraged to periodically plantar and dorsiflex their

ankles. What is the rationale for this?

 1. To prevent blood clots

2. To prevent muscle atrophy

3. To promote cardiac contractility

4. To increase blood flow to the legs

5. None of above

19. A 4 year old is brought in with persistent nausea, vomiting, and failure to thrive.

MRI of the brain shows an intensely enhancing mass in the left lateral ventricle and hydrocephalus.

Which of the following is the most likely diagnosis?

1. Malignant glioma

2. Choroid plexus papilloma

3. Subependymoma

4. Medulloblastoma

5. Meningioma

20. What part of the brain is affected in Parkinson disease?

 1. Cortex

2. Hypothalamus

3. Substantia nigra

4. Temporal lobe

5. Spinal cord

21. A head trauma patient develops anisocoria in the ER. Which of the following

statements is false about uncal herniation?

 1. There is compression of 3rd cranial nerve along the edge of the tentorium incisura

2. Compression of parasympathetic fibers on surface of 3rd cranial nerve causes unopposed

sympathetic dilation of pupil

3. Progressive compression of 3rd cranial nerve leads to oculomotor paralysis

4. The eye is usually deviated inferiorly and medially

5. All above mentioned

22. If someone has bitemporal hemianopsia, the lesion is most likely at:

 1. Occipital cortex

2. Tumor behind the eye

3. Optic chiasm

4. Cribriform plate

5. Basal ganglia

23. How does one test function of cranial nerve XI?

 1. Ask the patient to say "ah"

2. Have the patient shrug his or her shoulders while you resist the movement

3. Have the patient stick out his or her tongue and move it from side to side

4. Touch the pharynx with a cotton applicator

5. Ask the patient to say "hey"

24. Walking on toes is controlled by:

 1. L1

2. T12

3. L4

4. S1

5. L2

25. In which of the following is osteoblastoma most commonly found?

 1. Vertebral column

2. Pelvic bones

3. Small bones of hands

4. Appendicular skeleton

5. Sternum

26. Which of the following is the most common tumor that metastasizes to the brain in

which a primary tumor is not known at time of presentation?

 1. Lung

2. Breast

3. Renal

4. Colon

5. Liver

27. A patient presents with ascending paralysis after a short period of diarrhea. Which

of the following investigations would most likely yield a positive result in this patient?

 1. MRI of the spine

2. Lumbar puncture

3. Electromyography

4. Vertebral x-ray

5. Vertebral CT

28. Which lesion is associated with alexia with agraphia?

 1. Temporal lobe

2. Medulla

3. Thalamus

4. Parietal lobe

5. Occipital lobe

29. Which of the following nerves does not lie in the wall of the cavernous sinus?

 1. Ophthalmic division of trigeminal nerve

2. Maxillary division of trigeminal nerve

3. Mandibular division of trigeminal nerve

4. Abducens nerve

5. Optic nerve

30. After a stroke a patient has memory defects, contralateral sensory loss, thalamic

pain syndrome and homonymous hemianopsia. Which vessel was most likely involved?

 1. Basilar artery

2. Anterior cerebral artery

3. Middle cerebral artery

4. Posterior cerebral artery

5. Aorta

31. A 74-year-old female presents with headaches and CT of the head shows a right

hemisphere mass with associated overlying skull hyperostosis. What is the most likely diagnosis?

 1. Glioblastoma multiforme

2. Schwannoma

3. Meningioma

4. Hemangioblastoma

5. Intracerebral hematoma

32. Hip flexion is innervated by:

 1. L2

2. L4

3. L5

4. S4

5. S2

33. Which is the most common extra cranial solid tumor of childhood?

 1. Pheochromocytoma

2. Wilms tumor

3. Neuroblastoma

4. Sarcoma

5. Osteoma

34. Which of the following patients does not need a CT or MRI before lumbar

puncture?

 1. Focal neurologic deficits

2. Positive Kernig sign

3. Depressed level of consciousness

4. Recent head trauma

5. Headache in history

35. Which of the following occurs as a result of tearing of bridging cortical veins?

 1. Arterial epidural hemorrhage

2. Subarachnoid hemorrhage

3. Subdural hemorrhage

4. Venous epidural hemorrhage

5. Venous thrombosis

36. Which subtype of craniosynostosis is caused by premature closure of the sagittal

suture?

 1. Scaphocephaly

2. Trigonocephaly

3. Plagiocephaly

4. Treacher Collin syndrome

5. None of above

37. What is the most frequent mode of transmission in nosocomial infections?

 1. Airborne transmission

2. Contact transmission

3. Common vehicle transmission

4. Droplet transmission

5. None of above

38. Pseudotumor cerebri is associated with increased pressure in the:

 1. Central nervous system

2. Renal artery

3. Portal vein

4. Eye

5. Abdomen

39. Which spinal nerve is involved with the finger abduction?

 1. C5

2. C7

3. T1

4. L2

5. S2

40. Which is false about head trauma?

 1. Epidural hematoma can be intracranial or spinal

2. Epidural hematomas are more common than subdural hematomas

3. Skull fractures are often associated with epidural hematomas

4. Spinal epidural hematomas may follow a lumbar puncture

5. Depressed fractures do not require surgery

41. Which of the following is false about filum terminale?

 1. Is continuation of denticulate ligament

2. Consists of two parts -the upper and lower

3. Provides longitudinal support to the spinal cord

4. Many nerves exist at the terminal filum

5. Is continuation of basal ganglia

42. Which of the following is false regarding aneurysmal subarachnoid hemorrhage?

 1. Aneurysmal SAH is the most common cause of non-traumatic SAH

2. Rebleeding in the first 2 weeks is commonly seen in 40% of patients

3. The most useful imaging finding is hyperdense sulci on noncontrasted CT

4. Vasospasm of associated vessels is present in >60% of cases

5. Angiography is not required

43. Upper cervical pain is associated with which dermatome?

 1. T4

2. T1

3. C7

4. C3

5. C6

44. Which is true about brain abscess?

 1. The majority of infections are from spread elsewhere in the body

2. Upper respiratory infections often result in brain abscess

3. Most people have multiple brain abscesses

4. Brain abscess are usually treated with antibiotics

5. Most are treated surgically

45. A 40 year old male complains of progressive left sided headaches. The only

examination finding is a right sided drift. CT and MRI of the brain show a round, homogeneously

enhancing, calcified, dural-based lesion with compression of the left frontal lobe. Select the most

appropriate treatment.

 1. Chemotherapy

2. Surgical resection

3. Isoniazid, pyrazinamide, rifampin, and ethambutol

4. Whole brain irradiation

5. Observation

46. For L5 disk herniation, the best imaging study is?

 1. X-ray

2. CT scan

3. MRI

4. Nerve conduction test

5. Ultrasonography

47. Which of the following tests would be best to identify the leakage of CSF

associated with spontaneous intracranial hypotension?

 1. MRI of the brain with contrast

2. MR myelography

3. CT scan of the lumbosacral spine

4. CT scan of the brain

5. CT scan of the neck

48. What information do the posterior spinal cord columns convey?

 1. Vibration

2. Temperature and vibration

3. Temperature and proprioception

4. Proprioception and pain

5. Proprioception

49. Which is not a sign of an infection after a transsphenoidal hypophysectomy?

 1. Fever

2. Hyperglycemia

3. Nuchal rigidity

4. Headache

5. Hypoglycemia

50. Which pattern of injury is not seen in spinal cord trauma?

 1. Central cord syndrome

2. Short cord

3. Anterior cord syndrome

4. Brown-Sequard syndrome

5. Total cord lesion

51. The normal intracranial cerebrospinal fluid volume in adults is?

 1. 30 mL

2. 55 mL

3. 75 mL

4. 100 mL

5. 125 mL

52. Which area has the most epidural hematomas from trauma?

 1. Occipital

2. Frontal

3. Cerebellum

4. Temporoparietal

5. Cervical

53. Which of the following is the most appropriate management of a patient with

raised intracranial pressure without any other structural abnormalities?

 1. Check serum lead level

2. Cerebral angiography

3. Lumbar puncture

4. ESR

5. Serum C-reactive protein

54. A 6 month old infant is brought to the emergency department after 3 generalized

seizures. The child had been healthy up this point. She had a one day history of loose stools. Exam

shows a temperature of 39.0Â°C, a stiff neck, and lethargy. Which of the following is indicated?

 1. CT of the head

2. Lumbar puncture

3. EEG

4. MRI of the brain

5. Ultrasonography

55. What is the typical presentation of an acoustic neuroma?

 1. Unilateral hearing loss and tinnitus

2. Acute onset of vertigo lasting days to weeks

3. Vertigo only with position changes

4. Dysequilibrium

5. Monoparesis

56. Foot drop is caused by:

 1. Common peroneal nerve lesion

2. Superficial peroneal nerve lesion

3. Sciatic nerve

4. Femoral nerve

5. Deep peroneal nerve lesion

57. The diagnosis of Bell palsy is made by:

 1. CT scan

2. Electromyography

3. Clinical features and history

4. MRI

5. Ultrasonography

58. How does intracranial pressure change during a craniotomy with dura resection?

 1. Decreases

2. Increases a little

3. No change

4. Zero

5. Increases a lot

59. The diagnostic tests when suspicious of a prolactinoma should include:

 1. CT scan of the brain

2. Series of skull x-rays

3. MRI of the head

4. Serum prolactin levels

5. MRI of the neck

60. The classic "Adam's" triad in a patient with normal pressure hydrocephalus

includes?

 1. Dementia, intention tremor and aphonia

2. Memory loss, headache and blindness

3. Hemiplegia, dementia, speech slurring

4. Urinary incontinence, dementia and gait disturbance

5. Urinary incontinence, dementia and memory loss

61. Cord astrocytomas most commonly occur in the \_\_\_\_\_\_\_\_ segment of the cord

 1. Sacral

2. Lumbar

3. Thoracic

4. Cervical

5. Sacral

62. Which of the following is an unusual cause of a brain abscess?

1. Bacteroides

2. Peptostreptococcus

3. Staphylococcus aureus

4. Pseudomonas aeruginosa

5. Treponemma pallidum

63. A 30-year-old woman is involved in a motor vehicle accident. She complains of

neck pain and is 32 weeks pregnant. How should she be transported?

1. Trendelenburg

2. Left lateral decubitus

3. Supine on a backboard

4. Supine on a backboard with her right hip elevated

5. Sitting position

64. Which is false about blunt trauma injuries to the neck?

1. Stroke risk may be increased with fractures of C-spine levels 1-3

2. Blunt trauma to the neck can also cause damage to the carotid artery

3. C-spine fracture with subluxation can be associated with a vascular or neurological injury

4. Methylprednisone must be given within 1 hr of cervical spine injury

5. Blunt trauma to the neck can also cause damage to the superficial temporal artery

65. A 70 y/o has a stroke. Neurological exam discovers homonymous hemianopsia

and loss of contralateral pain and temperature sense. Which arterial branch is most likely involved?

1. Middle cerebral artery

2. Pontine branches of mid-basilar artery

3. Posterior cerebral artery

4. Posterior communicating artery

5. Anterior communicating artery

66. Which of the following is the most accurate description of Traumatic Brain

Injury (TBI)?

1. A form of acquired complex injury to the brain usually caused by sudden trauma with a broad

spectrum of symptoms and disabilities

2. A form of damage to the brain that may result in a bad headache, altered levels of alertness, or

unconsciousness

3. Any injury to the spinal cord that is caused by trauma instead of a disease

4. Any injury resulting in fracture of the skull

5. Any injury resulting in penetration of the skull

67. Which of the following disease processes do not cause compression on the

thecal sac on myelography images?

1. Hematoma

2. Abscess

3. Metastasis

4. Astrocytoma

5. Ependimoma

68. A patient has herniation of a lumbar disc at L3-L4 with right lower extremity

weakness. Pain occasionally requires opioids but she is able to do her usually activities and work.

Which of the following would be the indication for surgery?

1. Nighttime symptoms

2. Absent deep tendon reflexes on the left

3. Progressive weakness

4. MRI shows L4-L5 herniation, as well

5. Urinary bladder disturbances

69. The most common location of germ cell tumors in the central nervous system is?

1. Basal ganglia

2. Pineal region

3. Thalamus

4. Cerebellum

5. Pituitary gland

70. The Glasgow coma scale does not evaluate which of the following?

1. Eye opening

2. Verbal response

3. Reaction to painful stimuli

4. Motor response

5. Reaction to light

71. During a midline lumbar puncture, which layer is not traversed by the needle?

1. Supraspinous ligament

2. Anterior spinous ligament

3. Adipose

4. Vessels

5. Paraspinous ligament

72. Select the true statement about the straight leg raise when evaluating low back

pain.

1. Back pain referred from visceral organs will cause a positive reverse straight leg raise

2. If the foot is passively dorsiflexed during the straight leg raise it will show entrapment of the

contralateral nerve root

3. A more specific version of the test is the crossed straight leg raise

4. If there is restricted range of motion of the affected limb the test is positive

5. None of above

73. CT scan of the head is not required in trauma patient with?

1. GCS < 14

2. Evidence of basilar skull fracture

3. Amnesia lasting more than 30 mins

4. Neurologically intact person with very mild confusion

5. Neurologically intact person

74. Lesions of the skull bone are best investigated with:

1. Plain x-rays

2. MRI

3. CT scan

4. Ultrasound

5. Electromyography

75. Which of the following structure lies immediately posterior and superior to the

sphenoid sinus and medial to the cavernous sinus?

1. Pituitary gland

2. Maxillary sinus

3. Parotid gland

4. Frontal sinus

5. Lamina cribrosa

76. A tumor mass found in the cord on MRI is more likely an astrocytoma than an

ependymoma if:

1. The lesion shows marginal hemorrhage

2. The lesion shows mixed enhancement

3. The lesion has a craniocaudal extent greater than six vertebral segments

4. The lesion has a polar cyst

5. There is a hematoma inside the tumor

77. A 1 year old child was brought by his mother because of high grade fever. On

examination his anterior fontanel is bulging. Which of the following is the most appropriate initial

management of this patient?

1. Supportive care

2. Lumbar puncture and CSF analysis

3. MRI

4. Admission and empirical antibiotic treatment

5. Puncture of the fontanel

78. A patient undergoes a lumbar puncture and is found to have blood in the CSF .

He may have:

1. Subdural hematoma

2. Epidural hematoma

3. Subarachnoid hemorrhage

4. Astrocytoma

5. Occasional blood

79. What is the best pharmacological treatment for a small prolactinoma?

1. Bromocriptine

2. Cabergoline

3. Quinazoline

4. Radiation

5. Albendazol

80. A patient has blunt head trauma and on presentation Glasgow coma scale is 13,

he is hemodynamically stable, and his pupils are equal and reactive. 2 hours later his left pupil is

larger and his blood pressure is 180/105 mmHg. What is the next step in management?

1. Stat uninfused CT of the head

2. Intubate and hyperventilate

3. Neurosurgical consult

4. Lower the blood pressure

5. Increase the blood pressure

81. What is an important modifiable factor in maintaining patient body temperature

in the operating room?

1. Warm beddings

2. Warm fluids

3. Room temperature

4. Nutritional status

5. Muscular mass of the patient

82. Cerebrospinal fluid is produced by the?

1. Arachnoid villi

2. Ependymal cells

3. Pia mater

4. Subarachnoid layer

5. Dura mater

83. Why would atropine sulfate be given pre-operatively?

1. To help the patient relax

2. To lower the heart rate

3. To reduce respiratory secretions

4. To treat anxiety

5. To lower arterial pressure

84. Klumpke's palsy is due to:

1. Damage to the upper brachial plexus

2. Paralysis of C8, T1

3. Damage to median nerve

4. Damage to radial nerve

5. Damage to optic nerve

85. Which of the following is not consistent with the diagnosis of cortical blindness?

1. Loss of vision in both eyes

2. Preservation of extraocular movements

3. Absence of pupillary constriction to light

4. Retinal integrity

5. Unconsciousness

86. The most common organism isolated from surgical site infections is:

1. Streptococcus

2. Escherichia coli

3. Bacteroides

4. Staphylococcus

5. Fungi

87. Which one of the following types of fluids is not to be used for irrigation of

wounds?

1. Chlorinated solutions

2. Normal saline

3. Dextrose in water

4. Ringer lactate

5. Alcohol

88. The most common intracranial complication of untreated otitis media is:

1. Meningitis

2. Postauricular abscess

3. Labyrinthitis

4. Mastoiditis

5. Paravertebral abscess

89. Foot drop is typically caused by a lesion of the:

1. Sciatic nerve

2. Superficial peroneal nerve

3. Common peroneal nerve

4. Anterior tibial nerve

5. Radial nerve

90. Ventriculoperitoneal shunt malfunction for hydrocephalus in infants is unlikely to present

with which of the following?

1. Headache

2. Blurred vision

3. Bulging fontanel

4. Normal head circumference

5. Galactorhea

91. In an adult, the spinal cord ends at?

1. L2

2. L3

3. L4

4. L5

5. S1

92. What is the most common neoplasia found at the cerebellopontine angle?

1. Metastatic neoplasias

2. Vestibular schwannoma

3. Meningioma

4. Cerebellar astrocytoma

5. Osteoma

93. A defect in which of the following modalities is associated with Wernicke's

aphasia?

1. Speaking

2. Listening

3. Vision

4. Smell

5. Thinking

94. What percent of patients with acute cervical radiculopathy will improve with

nonsurgical therapy?

1. 10

2. 30

3. 50

4. 90

5. 100

95. During a transtentorial herniation, what part of the brain is affected?

1. Frontal lobe

2. Occipital lobe

3. Temporal lobe

4. Parietal lobe

5. Corpus callosum

96. Which of the following is associated with trauma to the frontal lobe?

1. Broca aphasia

2. Loss of pain and temperature sensation

3. Ataxic gait

4. Tremors

5. Hemiparesis

97. A patient is admitted to the neuro ICU with a basilar skull fracture. Later that

day, his nurse believes the patient has developed rhinorrhea. All of the following statements

concerning the nurses' response is correct EXCEPT:

1. Ensure the head of bed is raised at least 40 degrees

2. Test fluid for glucose and do halo test, if appropriate

3. Culture the nasopharynx

4. Call the physician

5. Call superman

98. Select the classic finding associated with herniation of the brain through the

foramen magnum.

1. Locked-in state

2. Catatonia

3. Respiratory arrest

4. Miotic pupils

5. Hemiparesis

99. While lifting a heavy box a patient feels sharp pain in his lower back. He has

numbness of his lateral thigh and with weakness in dorsiflexion of his right great toe. Which nerve

root is most likely affected?

1. L2-3

2. L3-4

3. L4-5

4. L5-S1

5. S2-S3

100. In the same tomogram, the odontoid process and second cervical vertebrae

extends above the foramen magnum. This may be associated with:

1. Brainstem compression

2. Syringomyelia

3. Meningomyelocele

4. Meningoencephalocele

5. Hearing disturbances

101. Following head trauma, which of the following patients does not need a CT scan

of the head?

1. Individual with seizures

2. Individual with progressive headache

3. Individual with an unreliable history

4. Individual with a GCS of 15

5. Individual with loss of consciousness

102. A 22 year old has suffered a basilar skull fracture. Which of the following

findings would not be seen in such a patient?

1. Raccoon eyes

2. Battle sign

3. Dysarthria

4. Otorrhea

5. Raccoon nose

103. What is the total possible score for the eye component of Glasgow Coma Scale?

1. 0

2. 4

3. 6

4. 7

5. 5

104. Which of the following head trauma patients requires surgery?

1. Those with large scalp laceration

2. Those with liner skull fractures

3. Those with depressed skull fractures

4. Those with cerebral edema that is not causing profound brain compression

5. Those that are already shaved

105. What is the most common cause of galactorrhea?

1. Nipple stimulation

2. Prolactinoma

3. Psychotropic medication

4. Hypothyroidism

5. Hyperthyroidism

 106. Which of the following statements are true about meningiomas?

1. They are benign tumors that are believed to arise from the dura.
2. The cerebellopontine angle is the most common location.
3. They are associated with neurofibromatosis type 2.
4. They can be cured by complete resection
5. They are associated with hyperostosis of the underlying bone, homogenous enhancement with contrast and an enhancing "dural tail" on imaging studies.

107. The following are true about brain abscesses in AIDs patients:

1. toxoplasmosis is the most common responsible organism.
2. they can be confused with CNS lymphoma based on the imaging studies alone.
3. often are due to staph or strep species.
4. they should be excised.
5. Often duet o bacteroides

108. A TIA may manifest itself by

1. Transient weakness, clumsiness and numbness of one hand that improves after several minutes of shaking the hand
2. A sudden inability to speak associated with clumsiness of the right hand
3. Transient inability to understand language
4. A sudden feeling of "lightheadedness"
5. Paraparesis

109. The carotid arteries in the neck can be visualized by

1. Duplex ultrasound examination
2. CT angiography
3. MR angiography
4. Digital subtraction angiography
5. Electrophisiology

110. Indications for carotid endarterectomy include (select all that apply):

1. 50% carotid stenosis in an asymptomatic patient
2. 80% carotid stenosis in an asymptomatic patient
3. 30% carotid stenosis in a patient having frequent TIAs
4. 60% carotid stenosis in a patient who has only had a single episode of AF
5. 30% carotid stenosis in an asymptomatic patient

111. Which muscle innervation is intact with a C5 spinal cord lesion?

1. Biceps

2. Hamstring

3. Abdominal

4. Soleus

5. Temporalis

112. A fried egg appearance of the perinuclear halo on CT brain scan is highly

indicative of:

1. Oligodendroglioma

2. Astrocytoma

3. Metastasis

4. Schwannoma

5. Meningioma

113. After a laminectomy, the caregiver should focus on?

1. Pulses

2. Infection

3. Bleeding

4. Neurological status

5. Mintal status

114. What is the definitive treatment for cervical spondylosis?

1. Cervical traction

2. Operative decompression

3. Pain medications

4. Cervical curettage

5. Observation

115. Bromocriptine therapy is used for:

1. Increasing production of GH

2. Reduction of symptoms from prolactin secreting adenomas

3. Unresponsive hypertensive crisis

4. Following unsuccessful treatment with Sertraline (Zoloft)

5. Hypotensive crisis

116. In a one year old child, an enhancing suprasellar mass is most likely a:

1. Metastasis from neuroblastoma

2. Craniopharyngioma

3. Pituitary macroadenoma

4. Dysgerminoma

5. Meningioma

117. Which one of the following oculomotor muscles is not innervated by the 3rd

cranial nerve?

1. Medial rectus

2. Lateral rectus

3. Inferior oblique

4. Superior rectus

5. Central rectus

118. What skull injury is consistent with Battle sign?

1. Frontal bone

2. Basilar skull

3. Occipital

4. Temporal

5. Parietal

119. Which factor increases the risk of developing a post dural puncture headache?

1. Age > 60 years

2. Cutting-edge needle

3. Fine bore needle

4. Trendelenberg position during procedure

5. None of above

120. A 63-year-old left-handed female complains of shaking of her right hand for 6

months. It is worst at rest but she can stop the tremor by concentrating. It does not interfere with her

life. She denies and problems with speech, swallowing, or behavior. Exam shows a resting tremor of

the right hand, mildly tremulous handwriting, and contralateral activation causes bilateral cogwheel

rigidity. Rapid alternating movement on the right is bradykinetic. Select the structure that is probably

involved.

1. Cerebellum

2. Anterior horn of the spinal cord

3. Brainstem nuclei

4. Cerebral cortex

5. Corpus callosum

121. After a spinal cord injury what type of shock develops?

Choices:

1. Hemorrhagic

2. Cardiogenic

3. Neurogenic

4. Hypovolemic

5. Spinal

122. What is the major risk in a patient who has suffered a subarachnoid hemorrhage

from a rupture aneurysm?

1. Infection

2. Vasospasm

3. Herniation

4. Embolic stroke

5. Ischemia

123. Which of the following is most likely to cause positional headaches?

1. 3rd ventricle colloid cyst

2. Chiari type II malformation

3. Cervical syrinx

4. Vestibular schwannoma

5. 4th ventricle colloid cyst

124. Lesions in the sella or adjacent cavernous sinus can cause all of the following

signs except:

1. Adducted eye, unilateral

2. Jaw pain, unilateral

3. Anisocoria

4. Inability to close eye, unilateral

5. Hearing loss

125. Select the most likely bacterial pathogen causing abscess after traumatic skull

fracture.

1. Staphylococcus aureus

2. Streptococcus pneumoniae

3. Haemophilus influenzae

4. Staphylococcus epidermidis

5. Bacteroides

126. Which patient is not at increased risk of vasospasm following subarachnoid

hemorrhage (SAH)?

1. Males

2. Younger age

3. Smoking

4. Large volumes of blood in the subarachnoid space

5. Taller patient

127. It takes the greatest amount of applied force to injury which of these vertebral

levels?

1. C1

2. C4

3. T4

4. L4

5. C2

128. Which of the following sites for lumbar disc herniation is most common?

1. L1-L2

2. L2-L3

3. L3-L4

4. L5-S1

5. L4-L5

129. What is true about Erb's palsy?

1. Involves injury to the 5th cervical nerve

2. Most infants who suffer this injury have a good prognosis

3. The limb is abducted, supinated and externally rotated

4. There is wasting of thenar muscles

5. Involves injury to the 6th cervical nerve

130. Which may be present in severe head injury?

1. ECG changes, seizures

2. Paralysis, abnormal posturing

3. Respiratory depression, Cheyne-Stokes breathing

4. Brown-Sequard syndrome

5. Cluver-Bucy syndrome

131. Which of the following patients with head trauma does not require admission?

1. Individual with alcohol intoxication

2. Individual with a GCS < 9

3. Presence of rhinorrhea

4. Individual who cannot sleep

5. Individual who cannot stand on one leg

132. A middle aged man complains of headaches and lateralizing weakness. CT scan

of the brain reveals an irregular mass in the left cerebral hemisphere confirmed as glioblastoma.

Which of the following statements regarding glioblastoma multiforme is true?

1. It originates from the nerve sheath.

2. It arises from the malignant degeneration of astrocytes

3. Most patients have a 95% 5-year survival

4. It is the most common tumor in children

5. It does not require surgery

133. All of the following tumors can arise from the pineal gland EXCEPT:

1. Teratoma

2. Pineoblastoma

3. Neuroblastoma

4. Embryonal carcinoma

5. Glioblastoma

134. In a 46 year old with pulsatile unilateral tinnitus, one would suspect?

1. Meningioma

2. Astrocytoma

3. Acoustic neuroma

4. Otitis media

5. Glioblastoma

135. Which of the following radiographic studies is best to examine basilar artery

infarcts?

1. MRI

2. CT

3. Transcranial Doppler

4. Positron emission tomography (PET)

5. Myelography

136. Which of the following is not a contraindication to a lumbar puncture?

1. Midline shift

2. Posterior fossa mass

3. Immunocompromised patient

4. Coagulopathy

5. Loss of consciousness

137. Which of the following conditions could not produce decerebrate rigidity?

1. Traumatic brain injury

2. Subdural hematoma

3. Cerebellar hemorrhage

4. Basilar impression

5. Fracture of L2 vertebral body

138. What is the most sensitive sign of high intracranial pressure?

1. Headache

2. Loss of consciousness

3. Visual defect

4. Dizziness

5. Inferior paraparesis

139. What degree of depression in a skull fracture is deemed necessary for elevation

by surgery?

1. 2 mm

2. 5 mm

3. 7 mm

4. 10 mm

5. 15 mm

140. A patient has countercoup head injury with resulting problems understanding,

speech and hearing. Select the part of the brain that was most likely injured.

1. Cerebellum

2. Frontal lobe

3. Parietal lobe

4. Temporal lobe

5. Occipital lobe

141. A patient is seen in the emergency departement after head trauma. He suddenly

develops status epilepticus. The first step in his management is:

1. Obtain urgent head CT

2. Insert rectal diazepam suppository

3. Get control of airways

4. Start an IV drip

5. None of above

142. The visual findings of uncal herniation do not involve compression of:

1. 6th nerve

2. 3rd nerve

3. 4th nerve

4. Parasympathetic input

5. 2nd nerve

143. Cerebral edema that occurs after a stroke usually reaches maximal severity after

what time period?

1. 24 hours

2. 48 hours

3. 96 hours

4. 7 days

5. 14 days

144. When does wound dehiscence occur after surgery?

1. 3 day

2. 7 days

3. 15 days

4. 30 days

5. 1 day

 145. What is the most important and consistent predictor for cerebrovascular

accidents?

1. Hyperlipidemia

2. Hypertension

3. Smoking

4. Family history

5. Oral contraceptives

146. In a patient with head trauma, which does not indicate rising intracranial

pressure (ICP)?

1. Pupillary dilatation

2. Wide pulse pressure

3. Cardiac arrhythmias

4. Rising blood pressure

5. Superior paraparesis

147. Broca aphasia is also known as:

1. Fluent aphasia

2. Agnosia

3. Expressive aphasia

4. Alexia

5. Motor aphasia

148. How is amblyopia defined?

1. Normal vision

2. Myopic vision

3. Vision that requires correction

4. Lazy eye

5. Decreased visual acuity

149. Which of the following is a feature of cauda equina syndrome?

1. Bilateral sciatica

2. Bowel dysfunction

3. Saddle sensory changes

4. Hypoesthesia in C7 region

5. Paralysis of diaphragm

150. The only identifiable risk factor for development of acoustic neuromas is?

1. Herpes simplex meningitis

2. Head trauma

3. Ionizing radiation

4. Fat diet

5. Hepatitis

151. In a patient with decorticate posturing you are unlikely to see:

1. Wrists flexed

2. Fingers flexed

3. Legs extended

4. Elbows extended

5. Fingers extended

152. Astereognosis is due to a defect in the:

1. Mid brain

2. Red nucleus

3. Parietal lobe

4. Caudate nucleus

5. Occipital lobe

153. Which of the following is the most common source of primary intraventricular

hemorrhage?

1. Hemorrhagic transformation of adjacent ischemic infarct

2. Extension from subdural hematoma

3. Subependymal vein hemorrhage

4. Choroid plexus hemorrhage

5. Extensions from epidural hematoma

154. Which of the following confirmatory tests is a reliable indicator of brain death?

1. Apnea test with a pCO2 <40

2. EMG

3. 4 - vessel cerebral angiography

4. CT scan of brain

5. MRI

155. Pulsatile exophthalmos is found in patients with which of the following disorders?

1. Neurofibromatosis

2. Sturge-Weber

3. Tuberous sclerosis

4. Mesial temporal sclerosis

5. Carotid-cavernous fistula

156. A patient undergoes a lumbar puncture and 10 cc of fluid is removed. How long

will the brain take to replenish the lost fluid?

1. 1 hr

2. 12 hours

3. 1 day

4. 1 week

5. 1 month

157. Periorbital ecchymosis is suggestive of:

1. Basilar skull fracture

2. Blindness

3. Tooth fracture

4. Migraines

5. Fracture of L2 vertebra

158. A patient presents with an intense headache, nausea and persistent vomiting that

has been ongoing for 2 months. Examination reveals that he has difficulty with upward gaze and is

unable to converge his pupils. The blood work is not very remarkable. The patient most likely has:

1. Acoustic neuroma

2. Astrocytoma of the mid brain

3. Pinealoma

4. Aneurysm of the anterior circulation

5. Pituitary adenoma

159. Spinal epidural abscess are commonly caused by?

1. Staphylococcus

2. E coli

3. Streptococcus

4. N.Gonorrhea

5. Fungi

160. Cauda equina syndrome:

1. Is side effect of chemotherapy treatments

2. Is inflammation of the spinal nerve roots

3. Develops with end stage rheumatoid arthritis

4. Develops following a compression of the heart

5. If caused by a disc hernia, requires surgery

161. Rupture of the middle meningeal artery in the cranial cavity causes which type of

hemorrhage?

1. Subdural hemorrhage

2. Subarachnoid hemorrhage

3. Epidural hemorrhage

4. Subpial hemorrhage

5. Intraventricular hemorrhage

162. Battle sign is indicative of a:

1. Migraine

2. Nasal fracture

3. Basilar skull fracture

4. Cerebral hemorrhage

5. Subarahnoid hemorrhage

163. What is the best radiologic modality in the evaluation of annular tears of spinal

disc?

1. X-ray

2. Ultrasound

3. CT

4. MRI

5. PET

164. A patient is seen in the ER for a concussion. The only complaint is a mild

headache. Neurological exam is normal. As he is being discharged, what is the most important

recommendation given?

1. Let him go to sleep

2. Keep him awake for at least 12 hours

3. Periodically check him for any physical or symptom changes from baseline

4. Plan to bring him back to the ER in the morning irrespective of status

5. Nothing from above

165. Which is the maximum possible score for Glasgow Coma Scale?

1. 5

2. 9

3. 11

4. 15

5. 17

166. Which of the following describes decerebrate posturing?

1. Flexed arms that are internally rotated with extended legs and clenched fists

2. Rigid extension of extremities with retraction of the head and neck and pointed toes

3. Rigid rotation of the neck with the chin on the shoulder

4. Involuntary flexion and extension of arms

5. None of above

167. What is the main bleeding source in an epidural hematoma?

1. Capillary

2. Venous

3. Arterial

4. Mix type

5. None of above

168. Which of the following is not commonly secreted by pituitary microadenomas?

1. Prolactin

2. Follicle stimulating hormone (FSH)

3. Parathyroid hormone (PTH)

4. Adrenocorticotrophic hormone (ACTH)

5. Pancreatin

169. During neck trauma, which cervical disc is most likely to herniate?

1. C1-C2

2. C3-C4

3. C5-C6

4. C6-C7

5. C4-C5

170. Which of the following would be most dense on an unenhanced CT of the brain?

1. CSF

2. Gray matter

3. Hematoma

4. White matter

5. Glioblastoma

171. In a tonsillar herniation, the cerebellar tonsils are displaced through the:

1. Foramen rotundum

2. Foramen spinosum

3. Foramen magnum

4. Foramen of Winslow

5. Foramen of Monroe