

**Q1: Which of the following is not a Feature of Neuronal Injury?**

- A) Shrinkage of the cell body.
- B) Pyknosis of the nuclei.
- C) The nuclei assume the angulated shape of the shrunken cell body.
- D) Prominent appearance of Nissl substance with intense eosinophilia of the cytoplasm.
- E) Spheroids can be recognized by silver staining or immunohistochemistry

Answer: **(D)**

**Q2: Central chromatolysis choose the wrong statement?**

- A) Cell body enlargement and rounding.
- B) Peripheral displacement of the nucleus.
- C) Loss of Nissl substance.
- D) Enlargement of the nucleolus.
- E) Feature of Neuronal Injury.

Answer: **(C)**

**Q3: Which of the following is not true?**

- A) Chronic injuries typically result in the breakdown of the blood-brain barrier and variable degrees of cerebral edema.
- B) Many neurodegenerative diseases are associated with specific intracellular inclusions.
- C) Lewy bodies are associated with Parkinson's disease.
- D) Tangles are associated with Alzheimer's disease.
- E) Dystrophic neurites is a disease in which neuronal processes become thickened and tortuous.

Answer: **(A)**

**Q4: About gliosis which of the following is false?**

- A) Astrocytes are the principal cells responsible for gliosis.
- B) The nucleus enlarges and becomes vesicular, and the nucleolus becomes prominent.
- C) Fibroblasts participate in healing after brain injury to a limited extent.
- D) Fibrillary astrocytes occurs in chronic gliosis which the cytoplasm of reactive astrocytes shrinks in size and the cellular processes become more tightly interwoven.
- E) Rosenthal fibers are thick, elongated, brightly eosinophilic protein aggregates found in astrocytic processes in some low-grade gliomas.

Answer: **(D)**

**Q5: Which of the following glial cells is damaged in progressive multifocal leukoencephalopathy?**

- A) Schwann cells.
- B) Microglial cells.
- C) Ependymal cells.
- D) Astrocytes.
- E) Oligodendrocytes.

Answer: **(E)**

**Q6: Activated macrophages can be seen in areas of the following conditions except?**

- A) Demyelination.
- B) Organizing infarct
- C) Hemorrhage
- D) Neurosyphilis.
- E) Gemistocytic astrocyte.

Answer: **(E)**

**Q7: Which of the following is not true?**

- A) Ependymal cells - line the ventricular system and the central canal of the spinal cord.
- B) Ependymal cells are directly responsible for the secretion of cerebrospinal fluid.
- C) Certain pathogens like cytomegalovirus can produce extensive ependymal injury.
- D) Choroid plexus are specialized epithelial covering that continues with the ependymal.
- E) None of the above.

Answer: **(B)**

**Q8: About cerebral Edema choose the wrong statement?**

- A) Cerebral edema is the accumulation of excess fluid within the brain parenchyma.
- B) Vasogenic edema occurs when the integrity of the normal blood-brain barrier is disrupted, allowing it to shift from the Extracellular spaces into the vascular compartment of the brain.
- C) Cytotoxic edema is an increase in intracellular fluid secondary to neuronal and glial cell membrane injury.
- D) The edematous brain is softer than normal and often appears to "overflow" the cranial vault.
- E) In generalized edema the gyri are flattened, the intervening sulci are narrowed, and the ventricular cavities are compressed.

Answer: **(B)**

**Q9: Which of the following is not true?**

- A) CSF circulates through the ventricular system and flows through the foramina of Luschka and Magendie into the subarachnoid space where it is absorbed by arachnoid granulations.
- B) The balance between rates of generation and resorption regulates CSF volume.
- C) Hydrocephalus is the accumulation of excessive CSF within the ventricular system.
- D) Overproduction of CSF, typically seen with tumors of the choroid plexus, is one of the common causes of hydrocephalus.
- E) Impaired flow or resorption can cause hydrocephalus.

Answer: **(D)**

**Q10: A 55-year-old patient came to the hospital with an accumulation of excessive CSF within the ventricular system the doctor saw an enlargement of a specific portion of the ventricles due to localized obstacles to CSF flow within the ventricular system. What is the diagnosis?**

- A) Noncommunicating hydrocephalus.
- B) Localized Vasogenic edema.
- C) Communicating hydrocephalus.
- D) Hydrocephalus ex vacuo.
- E) Generalized Vasogenic edema.

Answer: **(A)**

**Q11: A compensatory increase in CSF volume following the loss of brain parenchyma after infarcts or with degenerative diseases is called?**

- A) Noncommunicating hydrocephalus.
- B) Localized Vasogenic edema.
- C) Communicating hydrocephalus.
- D) Hydrocephalus ex vacuo.
- E) Generalized Vasogenic edema.

Answer: **(D)**

**Q12: About herniation which of the following is not true?**

- A) It occurs when the volume of tissue and fluid inside the skull increases beyond the limit permitted by compression of veins and displacement of CSF resulting in an increase in intracranial pressure.
- B) The cranial vault is subdivided by rigid dural folds falx and tentorium and a focal expansion of the brain displaces it in relation to these partitions.
- C) Herniation often leads to “pinching” and vascular compromise of the compressed tissue.
- D) Hydrocephalus and edema can lead to brain herniation.
- E) All of the above is true.

Answer: (E)

**Q13: A patient came to your clinic with a severe headache. On examination, you found a unilateral expansion of a cerebral hemisphere displaces the cingulate gyrus under the edge of the falx and compression of the anterior cerebral artery. What is the diagnosis?**

- A) Subfalcine cingulate herniation.
- B) Transtentorial uncinated herniation.
- C) Tonsillar herniation.
- D) Noncommunicating hydrocephalus.
- E) Communicating hydrocephalus.

Answer: (A)

**Q14: About Transtentorial herniation which of the following is not true?**

- A) Occurs when the medial aspect of the lobe is compressed against the free margin of the tentorium.
- B) Can cause pupillary dilation and impaired ocular movements on the side of the lesion (blown pupil).
- C) Can cause false localizing sign.
- D) Progression of transtentorial herniation is often accompanied by linear or flame-shaped hemorrhages in the midbrain and pons called Duret hemorrhages.
- E) Anterior cerebral artery may be comprised.

Answer: (E)

**Q15: A patient came to your clinic complaining of visual disturbances. You found that there is compression on the posterior cerebral artery that supplies the primary visual cortex. What is your diagnosis?**

- A) Subfalcine cingulate herniation.
- B) Transtentorial uncinated herniation.
- C) Tonsillar herniation.
- D) Noncommunicating hydrocephalus.
- E) Communicating hydrocephalus.

Answer: (B)

**Q16: A 45-year-old patient came to the hospital with respiratory and cardiac problems, sometimes he can't take a breath easily. On examination, the doctor didn't find any damages or issues within these systems. According to this case which of the following is the most accurate diagnosis?**

- A) Subfalcine cingulate herniation.
- B) Transtentorial uncinated herniation.
- C) Tonsillar herniation.
- D) Noncommunicating hydrocephalus.
- E) Communicating hydrocephalus.

Answer: (C)