LEGENDS

CNS- FINAL -TESTBANK

WEEK 5

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anatomy

cerebellum

Which bony structure surrounds the cerebellum?

A Posterior cranial fossa

B Anterior cranial fossa

C Hypophyseal fossa of sphenoid bone

D Temporal fossa

E Middle cranial fossa

Which structure is located caudally to the vermis of the cerebellum, and is connected to it via a handle-like structure?

A Flocculus

B Fastigial nucleus

C Middle cerebellar peduncle

D Biventral lobule of cerebellum

Which parts of the cerebellum does the primary fissure of the cerebellum (fissura prima cerebelli) separate?

A Superior semilunar lobule

B Anterior lobe of cerebellum

C Posterior lobe of cerebellum

D Central lobule of vermis

A ,A , (B&C)

Upward herniations are defined by the entrapment of the midbrain (mesencephalon) in a structure that lies between the cerebrum and the cerebellum. This structure is an extension of the dura mater. What is the name of this structure?

A Tegmentum of midbrain

B Gracile tubercle

C Tentorium cerebelli

D Pyramis of vermis

Patients with a lesion in the medial part of the cerebellum show atactic gait and body movements. Which part of the cerebellum is located medially and can lead to these symptoms if damaged?

E Superior cerebellar peduncle

A Dentate nucleus

B Tonsil of cerebellum

C Flocculus

D Vermis of cerebellum

What is the largest nucleus found in the white matter of the cereum?

A Globus pallidus

B Substantia nigra

C Dentate nucleus

D Red nucleus

C , D , C

Which part of the cerebellum influences the movements of the long axis of the body?

A Vermis

B Intermediate zone

C Lateral hemispheres

D Folia

What neurotransmitter do Basket Cells and Stellate Cells use to inhibit Purkinje cells?

A GABA

B Glutamate

C Dopamine

D Serotonin

Which cells are considered the only output neurons from the cerebellar cortex?

A Purkinje Cells

B Granule Cells

C Stellate Cells

D Golgi Cells

A , A, A

Which part of the cerebellum is involved in the integration of sensory input with motor commands to produce adaptive motor coordination?

A Spinocerebellum

B Cerebrocerebellum

C Vestibulocerebellum

D Flocculonodular lobe

Which part of the brain functions in maintaining balance and controlling head and eye movements?

A Contralateral cerebral cortex

B Dentate nucleus

C Vestibulocerebellum

D Middle cerebell peduncle

A , C

1-Fibers that leave the interposed nucleus to reach the red nucleus pass through which of the following?

A. Inferior cerebellar peduncle.

B. Superior cerebellar peduncle.

C. Middle cerebellar peduncle.

D. Pyramids.

E. Thalamus.

2-The term dysdiadokinesia literally means ?

A. Disorder of speech.

B. Rythmic oscillation of the eye.

C. Struggling of performing fast alternating movements.

D. Alteriation of gait.

E. Loss muscle tone.

3-The word nystagmus means ?

A. Rhythmic oscillations of the eyes.

B. Difficulty performing rapid alternating movements.

C. Disorders of speech.

D. Involuntary oscillations of limbs.

E. Past pointing.

4-The function of the vermis is to ?

A. influences the movements of the long axis of the body.

B. Control muscles of the distal parts of the limbs.

C. concerned with planning of sequential movements of the entire body.

D. Short memory.

E. Emotions.

B , C , A , A

Basal nuclei

Corpus striatum is:

- ○ Amygdaloid nucleus and caudate nucleus
- ○ Caudate nucleus and thalamus
- ○ Lentiform nucleus and Caudate nucleus
- ○ Lentiform nucleus and thalamus
- ○ Amygdaloid nucleus and lentiform nucleus

Neuronal degeneration in the substantia nigra will produce:

- ○ Multiple sclerosis
- ○ Blindness
- ○ Huntington disease
- ○ Parkinson disease
- ○ dementia

What are the names of the two parts of the lentiform nucleus?

A Amygdaloid body

B Claustrum

C Putamen

D Globus pallidus

E Caudate nucleus

C , D , (C&D)

Thalamus

Which part of the thalamus is concerned with emotional tone and recent memory mechanisms?

A Dorsomedial nucleus

B Anterior thalamic nuclei

C Pulvinar

D Stratum zonale

Which thalamic nuclei influences the levels of consciousness and alertness?

A Intralaminar nuclei

B Ventral anterior

C Ventral Posteromedial

D Ventral Posterolateral

What is the function of the Ventral and Ventral lateral thalamic nuclei?

A Influences activity of motor cortex

B Relays common sensations

C Influences levels of consciousness

D Sends efferent fibers to other thalamic nuclei

B , A , A

Where does the Ventral Posteromedial thalamic nucleus relay sensations to?

A Primary Somatic sensory cortex

B Cerebellum

C Reticular formation

D Corpus striatum

Which thalamic nucleus relays common sensations for the Head & Neck region?

A Ventral Posteromedial

B Ventral Posterolateral

C Ventral anterior

D Intralaminar nuclei

Where are the Ventral anterior and Ventral lateral thalamic nuclei located?

A Lateral part

B Medial part

C Central part

D Posterior part

A , A , A

hypothalamus

Which part of the brain is the hypothalamus a part of?

A Cerebellum

B Diencephalon

C Brainstem

D Cerebrum

Which of the following hypothalamic nuclei is sexually dimorphic nucleus?

- Mammillary body
- Medial preoptic nucleus
- Lateral hypothalamic nucleus
- Tuberal nuclei
- Suprachiasmatic nucleus

Which of the following thalamic nuclei is responsible for maintenance of body temperature (cooling)?

- Dorsomedial nucleus
- Suprachiasmatic nucleus
- Anterior nucleus
- Arcuate nucleus
- Paraventricular nuclei

B , B, C

Which hypothalamic nucleus predominantly produces oxytocin?

A Arcuate nucleus of hypothalamus

B Lateral preoptic nucleus

C Paraventricular hypothalamic nucleus

D Tuberomammillary nucleus

E Supraoptic nucleus

Which nucleus in the preoptic area is responsible for manufacturing gonadotropin-releasing hormone (GnRH)?

A Medial preoptic nucleus

B Lateral preoptic nucleus

C Lateral hypothalamic nucleus

D Tuberal nuclei

What is the primary role of the lateral hypothalamic nucleus in the preoptic area?

A Serving as the feeding center

B Manufacturing gonadotropin-releasing hormone

C Causing the release of gonadotropins

D Influencing the release of growth hormone

C , A , A

Which nucleus in the medial zone receives direct input from the retina and is involved in circadian rhythms?

A Supraoptic

B Paraventricular

C Suprachiasmatic

D Anterior nuclei

Which region in the medial zone is responsible for aggressive behavior?

A Ventromedial

B Dorsomedial

C Arcuate nucleus

D Suprachiasmatic

cerebrum

Which sulcus separates the parietal lobe (lobus parietalis) from the frontal lobe (lobus frontalis)?

A Central sulcus

B Calcarine sulcus

C Cingulate sulcus

D Superior frontal sulcus

E Lateral sulcus

C , B , A

A 65-year-old female is admitted to your emergency department, reporting that she suddenly has been unable to move her right hand. She suffers from arterial hypertension and does not regularly take her prescribed medication. A CT scan of the brain is performed. Damage to which of the following cerebral gyri can most likely cause such a paralysis of the contralateral hand?

A Postcentral gyrus

B Inferior temporal gyrus

C Precentral gyrus

D Dentate gyrus

In which cerebral lobe is the primary auditory cortex located?

A Parietal lobe

B Occipital lobe

C Insular lobe

D Frontal lobe

E Temporal lobe

A 40-year-old male stroke patient is unable to speak fluently. His cognitive processes are intact, but he cannot express himself properly. This condition is diagnosed as motor aphasia (Broca's aphasia), caused by lesions in Broca's area. Which gyrus of the brain is mostly likely affected in this condition?

A Precentral gyrus

B Superior frontal gyrus

C Inferior frontal gyrus

D Superior temporal gyrus

E Postcentral gyrus

C, E , C

Which of the following Brodmann areas control motor functions involved in speech production?

A Brodmann area 43

B Brodmann area 47

C Brodmann area 44

D Brodmann area 45

E Brodmann area 40

Which of the following Brodmann areas is associated with the primary motor cortex?

A Brodmann area 2

B Brodmann area 1

C Brodmann area 4

D Brodmann area 3

E Brodmann area 6

Which part of the brain includes the primary gustatory cortex and is an important location for the projection of the viscerosensory pathway?

A Occipital lobe

B Temporal lobe

C Frontal lobe

D Parietal lobe

E Insular lobe

(C&D) , C , E

A 30-year-old patient is able to speak fluently, but his sentences do not make sense. He is unable to understand other people talking to him and has also trouble understanding written language. Which gyrus of the cerebrum is most likely affected in this condition, which is diagnosed as receptive sensory aphasia (Wernicke's aphasia)?

A Inferior frontal gyrus

B Triangular part of inferior frontal gyrus

C Postcentral gyrus

D Superior temporal gyrus

E Precentral gyrus

A 24-year-old man is unable to identify familiar objects by only holding them in his hands. He is diagnosed with astereognosis. Which part of the brain is affected in this condition?

A Postcentral gyrus

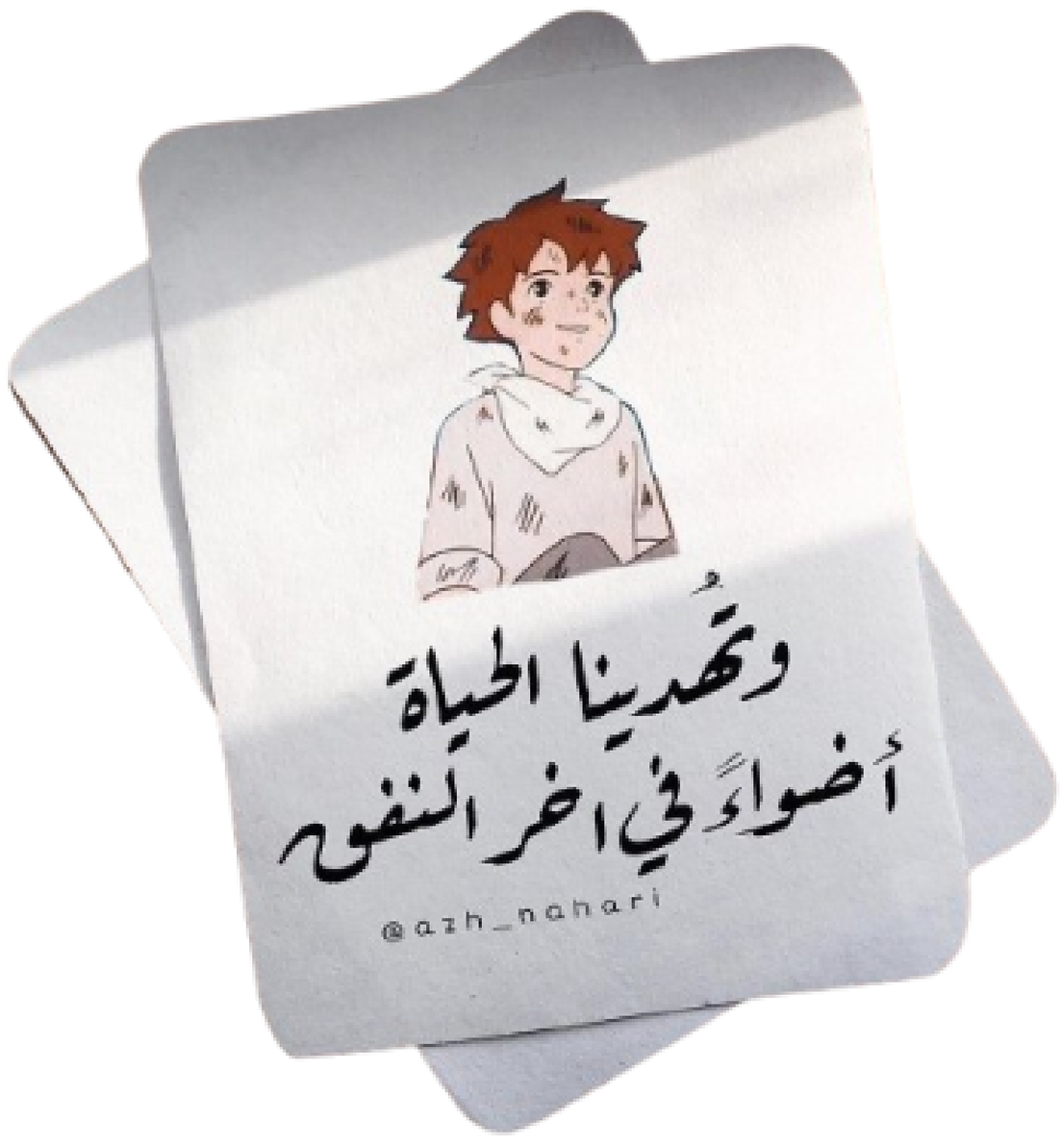
B Inferior frontal gyrus

C Superior temporal gyrus

D Triangular part of inferior frontal gyrus

E Superior parietal lobule

D , E



meninges and blood supply

Which of the following separates cerebrum from cerebellum?

- Falx cerebri
- Diaphragma sellae
- Meckel's cave
- Tentorium cerebelli
- Falx cerebelli

Which of the following arteries supplies all motor area except the leg area?

- Posterior inferior cerebellar artery
- Middle Cerebral Artery
- Anterior Cerebral Artery
- Posterior Cerebral Artery
- Anterior inferior cerebellar artery

A 57-year-old man presents to the emergency department after tripping and falling down the stairs. The patient exhibited an altered mental status and unresponsiveness to stimuli. Computed tomography (CT) imaging of the brain reveals an acute subdural hematoma over the right convexity of his brain. Which of the following structures is overlined by the subdural space?

A Tentorium cerebelli

B Arachnoid mater

C Dura mater

D Pia mater

E Epidural space

D , B , B

A 37-year-old man presents to the emergency department for evaluation of excruciating headaches. The headaches began three days ago and have progressively worsened. Temperature is 37.9°C (100.2°F), blood pressure is 152/90 mmHg, and pulse is 97/min. On physical examination, the headache is worsened with the Valsalva maneuver. No signs of trauma are present over the skull. CT imaging is obtained and reveals thrombosis within the portion of the superior sagittal sinus overlying the occipital lobe. The affected area of the dural venous system is primarily innervated by which of the following nerves?

Elimination tool

- Maxillary nerve (CN V2)
- Facial nerve (CN VII)
- Vagus nerve (CN X)
- Abducens nerve (CN VI)
- Ophthalmic nerve (CN V1)

Which of the following dural venous sinuses courses along the floor of the posterior cranial fossa as a continuation of the transverse sinus (sinus transversus)?

A Sphenoparietal sinus

B Occipital sinus

C Straight sinus

D Sigmoid sinus

E Inferior petrosal sinus

E , D

Ventricles and CSF

All of the following are located in the posterior wall of the third ventricle EXCEPT:

- ○ Pineal body
- ○ Lamina terminalis
- ○ Pineal recess
- ○ Opening of cerebral aqueduct
- ○ Posterior commissure

Which of the following represents the passageway between third and fourth ventricles?

- ○ Central canal
- ○ Lateral aperture
- ○ Cerebral aqueduct
- ○ Median aperture
- ○ Interventricular foramen

Which structure contains cerebrospinal fluid (liquor cerebrospinalis) and lies posterior of the medulla oblongata and the pons?

A Lateral ventricle

B Central canal of spinal cord

C Frontal horn of lateral ventricle

D Third ventricle

E Fourth ventricle

B , C , E

Which structure forms the roof of the central part of the lateral ventricle (pars centralis ventriculi lateralis)?

A Body of corpus callosum

B Genu of corpus callosum

C Thalamus

D Fornix

E Septum pellucidum

Which structure forms the floor of the central part of the lateral ventricle?

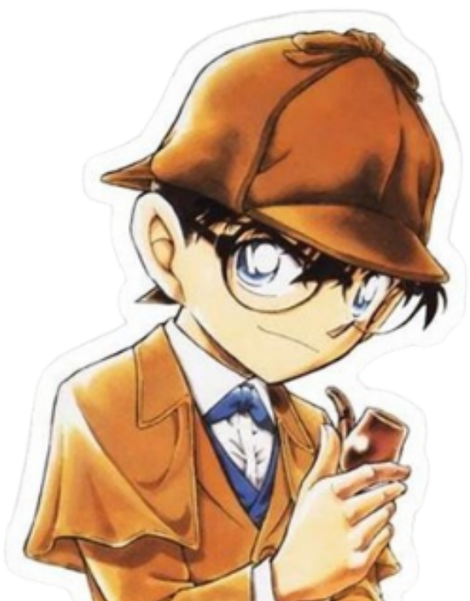
A Fornix

B Thalamus

C Septum pellucidum

D Cingulate gyrus

E Body of corpus callosum



A , B

pathology

Involving the hippocampus and cortex

1. Which type of neurofibrillary tangles are associated with Alzheimer's disease?

- A) Pick bodies
- B) Amyloid core plaques
- C) NEUROFIBRILLARY TANGLES
- D) TDP43 inclusions

2. Which region of the brain is typically spared in Alzheimer's disease at the beginning?

- A) Hippocampus
- B) Basal forebrain
- C) Frontal lobe
- D) Amygdala

3. Which disorder is characterized by the presence of Pick bodies?

- A) Frontotemporal Lobar Degeneration
- B) Amyotrophic Lateral Sclerosis
- C) Huntington's disease
- D) Alzheimer's disease

6. What distinguishes the onset of symptoms between Frontotemporal dementias and Alzheimer's disease?

- A) Temporal lobe atrophy in Alzheimer's disease
- B) Memory disturbances in Frontotemporal dementias
- C) Amyloid core plaques in Frontotemporal dementias
- D) Younger age in Frontotemporal dementias

B , C, A , D

8. Which of the following is the central component of neuritic plaques in Alzheimer's disease?

- A) Tau protein
- B) Prion protein
- C) Neurofibrillary tangles
- D) Amyloid-β (Aβ) protein

13. Which of the following is NOT a characteristic feature of Alzheimer's disease neuropathology?

- A) Neuritic plaques with amyloid-β cores
- B) Neurofibrillary tangles in neuronal cytoplasm
- C) Pronounced atrophy in the occipital lobe
- D) Widening of cerebral sulci and narrowed gyri

15. In familial Alzheimer's disease, when do the deposition of amyloid-β and the formation of neurofibrillary tangles typically occur relative to cognitive impairment?

- A) There is no consistent temporal relationship
- B) After cognitive impairment
- C) Concurrent with cognitive impairment
- D) Up to 15-20 years before cognitive impairment

16. Which of the following statements about the relationship between neuropathological changes and cognitive dysfunction in Alzheimer's disease is correct?

- A) Both neuritic plaques and neurofibrillary tangles correlate equally with the degree of dementia
- B) Neither neuritic plaques nor neurofibrillary tangles correlate with the degree of dementia
- C) The number of neuritic plaques correlates better with the degree of dementia than neurofibrillary tangles
- D) The number of neurofibrillary tangles correlates better with the degree of dementia than neuritic plaques

D , C , D , D

Involving the basal ganglia

2. Which of these motor symptoms is commonly seen in Parkinson's disease?

- A) Chorea
- B) Tremor at rest
- C) Myoclonic jerks
- D) Ataxia

B

4. Which of the following is a potential complication of advanced Parkinson's disease?

- A) Aspiration pneumonia
- B) Kidney failure
- C) Heart arrhythmias
- D) Liver cirrhosis

5. Which of the following treatments is commonly used for Parkinson's disease?

- A) Immunosuppressants
- B) Anticonvulsants
- C) Corticosteroids
- D) L-DOPA (levodopa)

9. Which of the following is a characteristic posture associated with Parkinson's disease?

- A) Stooped posture (leaning forward)
- B) Scoliotic posture
- C) Kyphotic posture
- D) Lordotic posture

'What is the pathological hallmark of Huntington Disease at the microscopic level

Aggregates of tau protein A

Intranuclear inclusions of ubiquitinated huntingtin protein B

Accumulation of amyloid plaques C

Loss of Purkinje cells D

Presence of Lewy bodies E

'Which part of the brain shows striking atrophy in Huntington Disease

Thalamus A

Hippocampus B

Frontal lobe C

Caudate nucleus and putamen D

A , D , A , B , D

Involving cerebellum &motor

1. Which disease is characterized by gait ataxia, hand clumsiness, dysarthria, pes cavus, and kyphoscoliosis, with high incidence of cardiac disease and diabetes?

- A) Amyotrophic lateral sclerosis (ALS)
- B) Friedreich ataxia
- C) Spinocerebellar ataxia
- D) Ataxia telangiectasia

2. In which of the following diseases does cognitive changes such as memory disturbances, behavior, and language issues lead to dementia and may manifest as Alzheimer's disease or frontotemporal dementia?

- A) Ataxia telangiectasia
- B) Friedreich ataxia
- C) Amyotrophic lateral sclerosis (ALS)
- D) Spinocerebellar ataxia

3. Which disease affects the cerebellar cortex, spinal cord, and other brain regions variably, leading to ataxia?

- A) Ataxia telangiectasia
- B) Friedreich ataxia
- C) Spinocerebellar ataxia
- D) Amyotrophic lateral sclerosis (ALS)

5. Which genetic abnormality involving GAA trinucleotide repeat expansion is associated with Frataxin protein and regulation of mitochondrial iron?

- A) Alzheimer's disease
- B) Friedreich ataxia
- C) Ataxia telangiectasia
- D) Huntington disease

7. What is the primary cause of mitochondrial dysfunction in Friedreich's ataxia?

- A) Protein deposition
- B) Decreased frataxin expression
- C) Loss of lower motor neurons
- D) Oxidative damage from ROS

B , B, C ,B , B

9. Which gene mutation is most commonly associated with familial forms of amyotrophic lateral sclerosis (ALS)?

- A) C9orf72
- B) SOD1
- C) TDP43
- D) FUS

12. Which of the following is a characteristic feature of ataxia telangiectasia?

- A) Cerebellar ataxia
- B) Telangiectasias (dilated blood vessels)
- C) Immunodeficiency
- D) All of the above

13. Which of the following is a characteristic feature of amyotrophic lateral sclerosis (ALS)?

- A) Degeneration of Purkinje cells in the cerebellum
- B) Loss of anterior horn neurons and reactive gliosis
- C) Accumulation of tau protein in neurofibrillary tangles
- D) Presence of Lewy bodies in the substantia nigra

17. Which of the following is a common cause of cerebellar ataxia due to thiamine deficiency?

- A) Parkinson's disease
- B) Chronic alcoholism
- C) Multiple sclerosis
- D) Huntington's disease

B , D , B , B

Physiology

Which of the following has the greatest area of representation in the primary motor cortex?
A) Hip
B) Knee
C) Thumb
D) Toes
E) Trunk

Afferent signals from the periphery of the body travel to the cerebellum in which of the following nerve tracts?
A) Ventral spinocerebellar tract
B) Fastigioreticular tract
C) Vestibulocerebellar tract
D) Reticulocerebellar tract

Neurologic disease associated with the globus pallidus produces which of the following symptoms?
A) Rigidity
B) Chorea
C) Hemiballismus
D) Athetosis

All the following structures are part of the basal ganglia EXCEPT one. Which one is this EXCEPTION?
A) Caudate nucleus
B) Red nucleus
C) Substantia nigra
D) Putamen

Hemiballismus is associated with damage or dysfunction of which of the following structures?
A) Thalamus
B) Caudate nucleus
C) Subthalamus
D) Red nucleus

C,A,D,B,C

Damage to Broca's area on the dominant side of the brain results in which of the following neurologic symptoms?
A) Anterograde amnesia
B) Intension tremor
C) Ataxia
D) Motor aphasia

The neurons located in the substantia nigra release which of the following neurotransmitters?
A) Norepinephrine
B) Serotonin
C) Dopamine
D) Acetylcholine

A 98-year-old woman has a stroke that severely impairs her speech. Which area of her brain is
most likely damaged?
A) Primary motor cortex
B) Premotor area
C) Broca's area
D) Cerebellum

A 23-year-old woman sustains serious head and neck trauma in a motorcycle accident.
Physical examination shows a positive Babinski sign. What part of the brain has most likely been
damaged in this woman?
A) Anterior motor neurons
B) Cerebellum
C) Corticospinal tract
D) Premotor cortex

As the axons of motor neurons leave the spinal cord and course peripherally to skeletal muscle, they must pass through which structure?
A) Posterior column
B) Posterior root
C) Ventral white commissure
D) Posterior horn
E) Anterior root

The fibers of the corticospinal tract pass through which structure?
A) Medial lemniscus
B) Medullary pyramid
C) Posterior funiculus
D) Medial longitudinal fasciculus
E) Anterior roots

D,C,C,C,E,B

Which of the following is the correct Brodmann number designation for the primary motor cortex?

A) 6
B) 5
C) 4
D) 3
E) 1

Which of the following body parts is represented most laterally and inferiorly within the primary motor cortex?

A) Face
B) Hand
C) Neck
D) Abdomen
E) Lower limb

A large portion of the cerebral cortex does not fit into the conventional definition of motor or sensory cortex. Which of the terms below is used to refer to the type of cortex that receives input primarily from several other regions of the cerebral cortex?

A) Cortex that is agranular
B) Secondary somatosensory cortex
C) Association cortex
D) Supplementary motor cortex
E) Secondary visual cortex

Which statement concerning the premotor cortex is correct?

A) The premotor cortex is located just posterior to the primary motor cortex
B) The lateral to medial sequence in the somatotopic organization of the premotor cortex is just the reverse of that seen in the primary motor cortex
C) Stimulation of a small discrete group of neurons in premotor cortex will produce contraction of an individual muscle
D) Stimulation of premotor cortex does not lead to any muscle activation
E) The premotor cortex sets the specific posture required for the limb to produce the desired Movement

C,A,C,E

Which of the following features is characteristic of the supplementary motor cortex?
A) It has no somatotopic representation of the body
B) Stimulation of the supplementary motor cortex leads to bilateral movements, typically
involving
both hands
C) It is located just anterior to the premotor cortex on the lateral surface of the hemisphere D) Like
the premotor cortex, stimulation in the supplementary motor cortex leads to discrete
movement of individual muscles
E) The supplementary cortex functions totally independent of the premotor and primary motor
cortex

B

pharma

Lec 1 & 2

1. What is the mechanism of action of morphine in the body?

a. Blocks NMDA receptors
b. Acts as a weak opioid agonist
c. Inhibits the release of histamine
d. Binds to opioid receptors in the brain

2. Which of the following statements is true regarding tolerance to opioids?

a. Tolerance is characterized by up-regulation of receptors
b. Tolerance leads to a decrease in drug efficacy with continued use
c. To combat tolerance, the dose of the drug needs to be decreased
d. Tolerance is only psychological and not physiological

D , B

3. What are the withdrawal signs associated with strong opioid agonists?

a. Acute hypertension
b. Excessive sweating
c. Seizures
d. Shivering and tremors

4. How does methadone differ from other opioids in terms of its action?

a. Short duration of action
b. Acts on serotonin receptors only
c. Causes immediate respiratory depression
d. Long duration of action and blocks NMDA receptors

5. Which of the following is a common side effect of opioids?

a. Hypertension
b. Constipation
c. Excessive salivation
d. Insomnia

6. What is the primary reason for not prescribing morphine to patients with urinary bradycardia?

a. It causes CNS hyper-excitability
b. It leads to severe mood swings
c. It can worsen constipation
d. It induces Torsades de pointes

7. Why is morphine preferred for patients with acute pulmonary hypertension?

a. It has a short half-life
b. It acts as a potent antipsychotic
c. It causes respiratory depression
d. It treats hypertension effectively

8. How does naloxone work in the presence of morphine overdose?

a. It decreases the heart rate
b. It reverses the effects of morphine by binding to opioid receptors
c. It enhances the sedative properties of morphine
d. It induces tolerance to morphine

D ,D ,B ,D ,C, B

9. What is the main reason for avoiding meperidine in clinical practice?

a. It has a short duration of action
b. It leads to CNS depression
c. Accumulation of a toxic metabolite

d. It lacks analgesic potency

10. Which opioid is commonly utilized as an antitussive agent?

a. Tramadol
b. Codeine
c. Methadone
d. Meperidine

11. How does long-term use of opioids affect NMDA receptors?

a. Increases their sensitivity
b. Blocks their function
c. Up-regulates their expression
d. Down-regulates their activity

12. Which medication is considered a prodrug of morphine?

a. Fentanyl
b. Meperidine
c. Heroin
d. Codeine

13. What is the key difference between agonists and antagonists in pharmacology

a. Agonists activate receptors while antagonists block them
b. Agonists induce tolerance while antagonists prevent addiction
c. Agonists have no therapeutic effects while antagonists treat diseases
d. Agonists are always safe to use while antagonists have side effects

14. What role do opioid receptors play in the body's pain modulation system?

a. Enhance the perception of pain
b. Inhibit the transmission of pain signals
c. Increase the pain threshold
d. Cause hyperalgesia

15. In what scenario would an opioid antagonist be most beneficial?

a. Postoperative pain management
b. Severe chronic pain
c. Opioid overdose reversal
d. Pediatric pain relief

C, B, D , C , A ,B, C

16. Which neurotransmitter is primarily affected by opioids in the brain?

a. Serotonin
b. Acetylcholine
c. Dopamine
d. Endorphins

17. What is the most critical factor contributing to opioid addiction?

a. Genetic predisposition
b. Overdose risk
c. Age of the patient
d. Length of treatment

18. What is the typical outcome of opioid overuse in terms of respiratory function?

a. Increased respiration
b. Hyperventilation
c. Respiratory depression
d. Normal breathing patterns

19. How do opioids exert their analgesic effects in the body?

a. By increasing heart rate
b. By decreasing blood pressure
c. By altering pain perception in the brain
d. By constricting blood vessels

20. Which of the following is a common side effect of long-term opioid use?

a. Weight loss
b. Hypertension
c. Opioid-induced hyperalgesia
d. Insomnia

C , A ,C ,C , C

Lec 3

1. What is the mechanism of action for Tramadol?
a. Direct activation of μ-opioid receptor
b. Inhibition of serotonin reuptake
c. Stimulation of dopamine receptors
d. Weak affinity for μ-opioid receptor and norepinephrine reuptake inhibition

2. Naloxone is used as an antidote for:
a. Amphetamines
b. Alcohol
c. Opioids
d. Benzodiazepines

3. Which of the following statements about Tramadol is true?
a. It is a pure opioid receptor agonist
b. It is only effective for severe pain treatment
c. It has no association with the NMDA receptors
d. It is used for various types of pain that may not respond to opioids

4. What is the role of GABA in stress regulation?
a. Increases stress levels
b. Activates sympathetic tone
c. Decreases serotonin levels
d. Controls sympathetic tone by decreasing

5. Benzodiazepines are primarily used for:
a. Antipsychotic effects
b. Analgesic effects
c. Reduction of anxiety
d. Stimulation of CNS

6. Which neurotransmitter is the major inhibitory neurotransmitter in the CNS?
a. Serotonin
b. Glutamate
c. Dopamine
d. GABA

D ,C ,C ,D , C,D

7. Apart from anxiety treatment, Benzodiazepines are also used for:
a. Anticonvulsant activity
b. Muscle building
c. Blood pressure regulation
d. Insulin production

8. What adverse effect is associated with Barbiturates overdose?
a. Increased heart rate
b. Hyperactivity
c. Respiratory depression
d. Enhanced cognitive function

9. Which Benzodiazepine is commonly used for treating muscle spasm?
a. Diazepam
b. Triazolam
c. Lorazepam
d. Alprazolam

10. What is the main reason for the replacement of Barbiturates by Benzodiazepines?
a. its Coma induction in toxic doses
b. Physical dependence
c. Severe withdrawal symptoms
d. Tolerance development

11. What is a key advantage of Tramadol compared to other opioids?
a. Causes severe respiratory depression
b. Leads to frequent nausea and vomiting
c. Results in severe constipation
d. Has less respiratory depression, nausea, and constipation

12. How does Naloxone work in cases of opioid overdose?
a. It increases opioid effects
b. It has a longer half-life than opioids
c. It targets p-opioid receptors
d. It causes respiratory depression

13. Which drugs are used to manage anxiety and sleep disorders?
a. Antipsychotics
b. Antidepressants
c. Anxiolytic and Hypnotic drugs
d. Antibiotics

A ,C , A ,A ,D ,C ,C

14. What is the main reason benzodiazepines should be used for short periods of time?

a. They have no side effects

b. They have no addiction potential

c. They have sedative properties

d. They have addiction potential and tolerance development

15. Why have benzodiazepines largely replaced barbiturates as anxiolytic drugs?

a. Barbiturates are more effective

b. Barbiturates have lower risk of toxicity

c. Barbiturates have less side effects

d. Barbiturates have higher risk of adverse effects and overdose

16. How do benzodiazepines promote inhibitory effects in the central nervous system?

a. By enhancing the affinity of GABA receptors for serotonin

b. By enhancing the affinity of GABA receptors for dopamine

c. By enhancing the affinity of GABA receptors for norepinephrine

d. By enhancing the affinity of GABA receptors for GABA itself

17. What do Benzodiazepines NOT cause?

a. Drowsiness

b. Confusion

c. Ataxia

d. Euphoria

18. Which drug is generally not recommended for long-term use?

a. Benzodiazepines

b. Barbiturates

c. Antidepressants

d. Antipsychotics

19. What is a key difference between barbiturates and benzodiazepines?

a. Barbiturates have a broader therapeutic index

b. Barbiturates have less risk of dependence

c. Barbiturates have less risk of overdose

d. Barbiturates are more dangerous due to a narrower therapeutic index

20. What is a common side effect associated with Benzodiazepine withdrawal syndrome?

a. Increased heart rate

b. Tremors

c. Euphoria

d. Nausea

D ,D ,D ,D ,A ,D ,B

Lec 4

1. What is the main inhibitory neurotransmitter in the CNS?
a. Serotonin
b. Dopamine
c. Acetylcholine
d. GABA

2. Which category of stress is NOT typically treated with benzodiazepines?
a. Chronic stress
b. Schizophrenic stress
c. Post traumatic stress
d. Everyday stress

3. Benzodiazepines are most commonly used as:
a. Antidepressants
b. Muscle relaxants
c. Anticonvulsants
d. Anxiolytics

4. What is the primary reason benzodiazepines should be used for only short periods of time?
a. Risk of seizures
b. Development of tolerance
c. Anti-anxiety effects
d. Risk of rebound anxiety

5. Benzodiazepines may cause which common side effect?
a. Weight loss
b. Increased energy levels
c. Cognitive impairment
d. Hypertension

6. What is the main function of Buspirone in the treatment of anxiety disorders?
a. Muscle relaxation
b. Anticonvulsant activity
c. Sedation
d. Anxiolysis

7. Which benzodiazepine is preferred for treating long term anxiety that may require prolonged treatment periods?
a. Lorazepam
b. Alprazolam
c. Triazolam
d. Diazepam

D ,B ,D,B ,C ,D ,D

8. In case of status epilepticus, which benzodiazepine is typically administered quickly?
a. Alprazolam
b. Clorazepate
c. Lorazepam
d. Estazolam

9. What adverse effect is associated with Triazolam?
a. Daytime anxiety
b. Hypotension
c. Insomnia
d. Cognitive impairment

10. Benzodiazepine withdrawal syndrome may result in:
a. Increased appetite
b. Improved memory
c. Confusion
d. Decreased anxiety

11. Mechanism of action of Benzodiazepines involves enhancing the affinity of GABA receptors for which neurotransmitter?
a. Serotonin
b. Dopamine
c. Acetylcholine
d. GABA

12. What is the action of GABA binding to its receptors triggered by?
a. Opening of sodium channels
b. Opening of chloride channels
c. Opening of potassium channels
d. Opening of calcium channels

13. Which use of benzodiazepines involves influencing the limbic system due to their high affinity to alpha1 subunit?
a. Muscle relaxation
b. Anticonvulsant
c. Induction of sleep
d. Reduction of anxiety

C,D ,C ,D ,B ,D

14. Which benzodiazepine is preferred for treating muscle spasticity from degenerative disorders such as multiple sclerosis?
a. Clorazepate
b. Chlordiazepoxide
c. Diazepam
d. Lorazepam

15. Why is Flumazenil used in benzodiazepine overdose?
a. To decrease appetite
b. To reverse sedation
c. To enhance memory
d. To induce sleep

16. Which benzodiazepine is useful for the treatment of febrile seizures in babies?
a. Triazolam
b. Alprazolam
c. Clonazepam
d. Diazepam

17. In what case is Buspirone not very effective in the management of anxiety disorders?
a. Panic disorders
b. Generalized anxiety disorders
c. Phobias
d. Insomnia

18. What physiological and physical dependence can develop with high doses of benzodiazepines over a prolonged period of time?
a. Dependence on caffeine
b. Dependence on antipsychotics
c. Dependence on GABA
d. Dependence on the drug

19. What is the main reason for using Buspirone in treating anxiety disorders over benzodiazepines?
a. Muscle relaxant properties
b. Anticonvulsant activity
c. Minimal sedation
d. Cognitive enhancement

20. Why should benzodiazepines be avoided in patients with acute narrow-angle glaucoma?
a. They reduce stress levels
b. They enhance memory
c. They worsen the condition
d. They improve vision

C ,B ,C ,D ,D ,C ,C

اللهم افتح عليّ فتوح العارفين وارزقني قوة الحفظ وقوة التذكر إنك على كل شيء قدير.
بالتوفيق