

CNS Anatomy Summer Notes

كل الشكر والتقدير لصاحبة هذا المجهود الرائع، ربنا يجعل تعبها في ميزان حسناتها ويباركها
في علمها ووقتها ويفك كربها 💖

طبعا دكتور فكري الله يبارك له لغة من علينا سبع محاضرات

Anatomy CNS notes dr fekry 📧💖

McQ cranial opening = anterior neuropore close at 25 th day

McQ caudal opening = posterior neuropore close at 27 th day

McQ caudal part of neural tube form spinal cord

McQ cranial part of neural tube form brain

SAQ enumerate 3 layers of neural tube

McQ stem cell of nervous system : ependymal layer of neural tube

McQ basal plate form motor horn cells

McQ alar plate form sensory horn cells

McQ / SAQ مهم جدا جدا جدا age related changes in position of spinal cord

SAQ mention / describe types of spina bifida (هنتب كل نوع و ايه)
(المميز فيه)

SAQ enumerate / list types of spinal bifida
(هنتب العناوين فقط)

McQ herniation of spinal cord and meninges >> spinal bifida with meningocele

McQ herniation of meninges >> spina bifida with meningocele

McQ diagnosis of rachischisis through serum alpha fetoprotein

spinal dermal sinus مش بتيجي كثير

McQ termination of spinal cord in adults at level of L1 , in newborn at level of L3 ,
in 3rd month intrauterine entire length

McQ filum terminale / denticulate ligament >> Pia matter

define denticulate ligament
ligament extend from Pia matter to Dural matter

McQ number of processes of denticulate ligament >> 21
number of denticulate ligament itself >> 2

McQ lumbar cystem present in subarachnoid space

function of luber cystem >> important for lumbar puncture

SAQ describe lumbar cystem 

جت قبل كده فمش احتمال كبير أنها تيجي (قول اللي تعرفه)

McQ segments of spinal cord

SAQ مهم جدا جدا جدا
enumerate blood supply of spinal cord

McQ origin of anterior spinal / posterior spinal artery

McQ main arterial supply of spinal cord is vertebral artery

McQ telencephalon form cerebral hemispheres

McQ diencephalon form thalami

McQ mesencephalon form mid brain

McQ metencephalon form cerebellum,pons

McQ myelencephalon form medulla

**SAQ list congenital anomalies of brain >>
anencephaly + hydrocephalus + encephalocele**

**SAQ mention ex . features of ventral surface of medulla >>
pyramid + olive + inferior cerebellar peduncle + last 4 cranial nerves**

McQ nerve exit in preolivary fissure >> hypoglossal

**McQ nerves exit in postolivary fissure >>
glossopharyngeal+ vagus + cranial accessory**

McQ / SAQ cranial nerves present in floor of 4 th ventricle >> 6,8,10,12

McQ area posterema >> vomiting center

**SAQ mention ex features in dorsal aspect of medulla >>
area posterema + stria medullaris + cranial nerves 6,8,10,12**

**ex features of ventral surface of pons >> basilar groove and basilar
artery + middle 4 cranial nerves { 5,6,7,8}**

ده اللي مطلوب فقط

**basilar artery originate from vertebral artery and ends as posterior
cerebral**

McQ ex features of dorsal aspect of pons>> medial eminence + facial colliculus

McQ facial colliculus formed of abducent nucleus + facial nerve

SAQ describe ex features dorsal aspect of midbrain / compare between superior colliculi and inferior colliculi

McQ substantia nigra secrete dopamine

SAQ mention components of cerebral peduncle >> crus cerebri + substantia nigra + tegmentum

**cranial nerve in ventral aspect of mid brain
>> oculomotor {3}**

cranial nerve in the dorsal aspect of mid brain >> trochlear {4}

McQ superior colliculi related to vision due to its connection with lateral geniculate body

McQ inferior colliculi related to hearing due to its connection with medial geniculate body

internal features of medulla

McQ which of the following responsible for kinesthesia / discriminative touch >> gracile and cuneate

McQ medial lemniscus related to which sensation >> kinesthesia / discriminative touch

cerebellar relay body :-

inferior cerebellum يتوصّل لل medulla اي حاجة اسمها كده في ال cerebellar peduncle

accessory cuneate >> inferior cerebellar peduncle

+ inferior olivary nucleus >> inferior cerebellar peduncle

+ reticular formation >> inferior cerebellar peduncle

cranial nerve nuclei :-

sensory :-

spinal trigeminal nucleus >> general sensation >> cranial nerves 5,7,9,10

nucleus solitaires >> mainly taste sensation >> cranial nerves 7,9,10

motor :- McQ مهم جدا جدا

hypoglossal nucleus >> cranial nerve 12

nucleus ambiguus >> cranial nerves 9,10,11

SAQ mention cranial nerves nuclei

2 sensory + 2 motor + 2 vestibular+

2 parasympathetic

SAQ mention motor only

hypoglossal + ambiguous

internal features in pons :-

basis pontis = anterior part / tegmentum = posterior part

McQ مهم جدا جدا medial 1/5 of crus cerebri contain frontopontine fibre

McQ مهم جدا جدا lateral 1/5 of crus cerebri contain non frontopontine fibre

SAQ مهم جدا جدا mention cranial nerve nuclei in pons >>

middle 4 cranial nerves 5,6,7,8

SAQ مش بنتیجی کثیر mention lemnisci present in pons >>

medial lemmiscus+ trigeminal lemmiscus+

spinal lemmiscus+ lateral lemmiscus

internal features of mid brain:-

SAQ mention cranial nerve nuclei in mid brain

>> oculomotor { anterior }

+ trochlear { posterior }

McQ only cranial nerve present posteriorly >> trochlear

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blood supply of CNS :-

aortic arch give 2 systems :-

1- vertebrobasilar system

supply spinal cord medulla + pons + midbrain + occipital lobe + cerebellum

2- internal carotid system

supply frontal lobe + parietal lobe + temporal lobe

SAQ مش بیچی کتیر summarize blood supply of brain and spinal cord
vertebrobasilar+ internal carotid system

McQ main blood supply of spinal cord >> vertebral artery

McQ main blood supply of medulla / pons / midbrain >> vertebrobasilar system

SAQ mention beginig and termination of the following:-

1- vertebral :-

beg :- subclavian

term :- basilar

2- internal carotid

beg :- common carotid

term :- anterior cerebral and middle cerebral

McQ smaller terminal branch of internal carotid :- anterior cerebral

anterior cerebral passes in a sulcus called callosal sulcus

anterior cerebral supply all medial surface + all corpus callosum except Splenium + upper inch of lateral surface

main blood supply of corpus callosum >> anterior cerebral

main blood supply of medial surface >> anterior cerebral

SAQ mention begin of middle cerebral artery

beg :- internal carotid

McQ مهم جدا middle cerebral pass in lateral sulcus

middle cerebral supply all lateral surface (except upper inch by ACA and lower inch by PCA)

mention beginning of posterior cerebral :-

basilar artery

posterior cerebral supply all occipital lobe , all temporal lobe (except temporal pole supplied by middle cerebral) , Splenium of corpus callosum

mention blood supply of corpus callosum

all corpus callosum except Splenium >> ACA

Splenium >> PCA

arterial supply of cerebral cortex

most of lateral surface >> MCA

upper inch of lateral surface >> ACA

lower inch of lateral surface >> PCA

most of medial surface >> ACA

occipital lobe >> PCA

blood supply of internal capsule internal carotid mainly

mention blood supply of anterior limb of internal capsule >> ACA , MCA

mention blood supply of posterior limb of internal capsule >> MCA , posterior communicating , anterior choroidal

McQ PICA begin from vertebral supply posterior part of inferior surface cerebellum

McQ AICA begin from basilar supply anterior part of inferior surface of cerebellum

blood supply of brain = circulus arteriosus = circle of wills { connection between carotid system and vertebral system } :- form collateral circulation

PCA + posterior communicating + internal carotid + ACA + anterior communication

ascending tract:-

mention pathway of ascending tract

first order neuron >> DRG

second order neuron >> SGR , nucleus dorsalis , gracile and cuneate tract

Third order neuron >> thalamus

McQ مهم lateral spinothalamic : pain and temperature

McQ مهم ventral spinothalamic : crude touch , pressure

McQ مهم gracile and cuneate : proprioception , fine touch

spinocerebellar pathway في الامتحان أن شاء الله :- no 3rd order neuron = subconscious

ventral spinocerebellar:- double cross

dorsal spinocerebellar:- same side

descending tract:-

pyramidal tracts :- SAQ

corticospinal >> AHC of spinal cord ,

corticobulbar >> cranial nerves nuclei in brain stem { 3,4,6,7,9,10,11,12 }

McQ 40% of fibers of corticospinal from upper 2/3 of primary motor area 4

McQ 40% of fibers of corticobulbar from lower 1/3 of primary motor area 4

extra pyramidal tract
motor pathway to cerebellum

descending autonomic pathway lesion
Horner syndrome حفظ
ptosis , miosis , anhidrosis , enophthalmos ,flushing

cranial nerves :-

olfactory >> smell

optic >> vision

oculomotor>> supply all eye muscles

{ levator palpebrae , inferior oblique , superior , middle , inferior rectus }

trochlear >> supply superior oblique

abducent >> supply lateral rectus

nerve supply of first arch >> mandibular of trigeminal

nerve supply of second arch >> facial

nerve supply of 3rd arch >> glossopharyngeal

nerve supply of 4th and 6th arch >> vagus

nuclei of any cranial nerve مهمة saq

effect of lesion of oculomotor >> squint + ptosis

lesion of trochlear >> inability of growing downstairs

lesion of abducent >> medial squint

saq mention cranial nerve nuclei of glossopharyngeal / vagus / accessory/ hypoglossal

nucleus ambiguous

CN9 >>> stylopharyngeous

CN10 >> all pharyngeal ms except stylopharyngeous+ all laryngeal ms

CN11

trigeminal system

nuclei مهم SAQ

divisions SAQ

ganglia associated with trigeminal nerve SAQ

ear , facial nerve , vestibulocochlear

vestibulocochlear:-

vestibular >> equilibrium>> lesion vertigo

Cochlear >> hearing >> lesion diffnes

facial nerve

nuclei SAQ

lesion >> mention 3 signs of LMNF palsy / bells palsy

drop of angle of mouth, dry mouth , dry eye

المطلوب دلوقتي نحفظ الاسئلة دي و نحل الاسئلة اللي في اخر الملف