

Introductory Clinical Appointment Faculty of Medicine Peradeniya

Examination of the Higher Functions, Cranial Nerves, Basal Ganglia & Cerebellar Functions

	What to do	What is expected	Not done	Mistakes +	Done correct
	Preparation – Torch, tape, ophthalmoscope, knee hammer, tooth pick, cotton wool, Tuning fork , Self introduction	Understand what is expected from you ...know the name, age, weight of the patient, develop rapport			
Higher functions	General observations	Dysmorphic child, Neurocutaneous manifestations, development stage , head size, mobility , behaviour			
	Talk to child and mother – orientation in time place and person	Understand higher functions, behavior , relationships ,Intelligence, amnesia, dress			
	Evaluate speech and language V,VII,X,XII & cortical functions	communication and speech - aphasia, dysphasia ,Dysarthria, and dysphonia			
	Agraphesthesia , extinction & Astereognosia	Sensory cortex of parietal lobe			
1	Testing smell – Patency of nostrils , use soap or coffee , patient close eyes	Test olfactory nerve (I)			
2. optic nerve	Visual acuity and color vision	Use Snellen chart or suitable alternative and Ishihara chart			
	Visual field by confrontation method	Detect visual field defects			
	Check pupils – size shape position and reaction to light and accommodation , swinging light test	Afferent pupillary defect (ADP) Sympathetic lesions constrict even in dark or parasympathetic lesions dilate even in light			
	Fundoscopy – optic disk, physiological cup, retinal vessels, fovea	Funds – atrophy, Papilloedema Retina – Hemorrhages, exudates, and blood vessels, Roth's spots,,			
III, IV, VI	Look for ptosis Sympathetic or parasympathetic (CN - III)	Sympathetic – mullers muscle Cranial nerve III – levator palpebrae			
	Eye movements - III,IV and VI, Gaze (conjugate) or disconjugate palsy	“H” movements ,squints, diplopia , nystagmus (vertical or horizontal)			
V	Muscles of mastication motor component of 5 th nerve and sensation ,Corneal reflex	Asymmetry of the prominence of muscles on one side, Absence of sensation			
VII	Facial nerve – Frowning forehead, closing eyes, blowing cheek, say eee, hyperacusis	Decide upper motor or lower motor, bells sign , look for corneal dryness			
VIII	Crude assessment of hearing - , Tuning fork - rinners & webers test -	Screen for hearing problem Decide conduction or neural defect			
IX & X	Ask the patient to swallow and say ahh and inspect Throat and palatal movements , gag reflex	Note quality of sound ‘gag for 9’ palatal movements for X			
XI	Shrug the shoulder, Neck movements	Peripheral Vs central (Central lesion causes ipsi lateral SCM and contra lateral trapezius weakness)			
XII	Ask the patient to stick out the tongue press the tongue against the cheek , check taste	Muscles of tongue, deviation (XII) Inspect for fasciculation and wasting.			
	Terminate help patient to dress , thanking	Examination was made possible because of patients cooperation			
	Presentation	Higher functions and cranial nerves What is the anatomical diagnosis			

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	Structure	symptoms	Signs	Investigation
CORTEX	Frontal lobe			
	Parietal lobe- domi			
	Parietal lobe -non d			
	Temporal lobe			
	Occipital lobe			
	Olfactory nerve			
	Optic nerve and tracts			
Mid brain	Cortico spinal and spino thalamic tracts			
	Cranial nerve III			
	Cranial nerve IV			
Pons	Cortico spinal and spino thalamic tracts			
	Cranial nerve V			
	Cranial nerve VI			
	Cranial nerve VII			
	Cranial nerve VIII			
Medulla	Cortico spinal and spino thalamic tracts			
	Cranial nerve - IX			
	Cranial nerve X			
	Cranial nerve XI			
	Cranial nerve XII			
	Cerebellum			
	Basal Ganglia			

Structure	Symptoms	Signs
Cortex		
Mid brain and nerves arising from mid brain		
Medulla And nerves arising from medulla		
Cerebellum		
Basal Ganglia		