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DEPARTMENT: Radiology 2nd

SECTIONS: A

SUBJECT: physiology

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Q1: (A) A post stroke patient come to clinic, during examination you found that patient is unable to speak nor understand, what you talking (global aphasia) in such case which lobes of brain could be involved?

Explain that lobe and write down its function.

Ans: - Frontal lobe:-

Explanation: It is one of the four paired lobe in the brain cerebral cortex. And it plays vital roles it is actually made up of two paired lobes. Together these comprise two third of the human brain.

Function:

- Consciousness
- Spoken language
- Memory
- Attention
- Motivation

(B) A post stroke patient come to clinic, during examination you found that patient have difficulty in walking including problem with balance and also have tremor. Which part of the brain could be involved? Explain that part and write down its function.

Ans:- cerebellum damage is involved in this patient.

Cerebellum:-

Explanation:- It is located in the inferior to the occipital lobe of the cerebrum. And also behind the brain stem. Cerebellum is an important part of the hind brain. At involved a lot of function in our body.

Function:

Maintain balance

Speech

Receives information from sensory system

Voluntary moments

Walking

Q2(A) During assessment of post stroke patient you found that patient have sensory loss over skin of forehead, eye lids and nose as well as teeth of upper jaw, moreover also have motor loss in mylohyoid muscles and in anterior belly of digastric which cranial nerve involved in this patient? Write down function and its different component.

Ans:- The damage of cranial nerve 5 i-e trigeminal nerve occur in this patient.

Trigeminal nerve function :-

It's supply is to skin of upper eye lid

Lacrimal glands

Forehead

Nasal part

Nose

Upper jaw

Lower jaw

Lower eye lid

Upper lips

Anterior 2/3rd of the tongue

Anterior belly of digastric

Nasal mucosa

Muscles of mastication.

Components:

1. Ophthalmic
2. Maxillary
3. Mandibular

(B) post stroke patient come to clinic, during assessment you found that patient have lost general taste sensations in posterior 1/3 of tongue. Which cranial nerve involved? Write down it's function and components.

Ans: -The damage of cranial nerve 9 i.e glossopharyngeal nerve occur and that patient.

Glossopharyngeal function:

It receives message from

- Posterior 1/3rd of the tongue
- Baroreceptor in carotid sinuses
- Muscles of mastication
- Parotid glands

Components:

- Tympanic nerve*
- Stylopharyngeal nerve*
- Nerve to carotid sinuses*
- Tonsillar*
- Lingual*

Q3: (A) What is accommodation in eye and explain its relation with lens of eye?

Ans:- Accommodation of eye;

It is the process by which eye change it's optical power to maintain a clear image as its distance varies.

It usually acts like a reflex but it can also consciously controlled. It varies the power by changing the distance between a rigid lens and the retina with muscles.

Relation with lens of eye:

For nearby objects; For nearby objects the lens become rounded and large in size

For far away object :-

For faraway objects the lens become flattened and small in size.

(B):How stimulus of light goes through eye ball and reach up to brain? Explain in detail

Ans:- Stimulus of light through eye ball reach to the brain.

The light rays enter the eye through pupil. The pupil transmits the rays to cornea behind the pupil there is lens which is similar to the camera lens. Lens and cornea adjust the focal length.

Then visual reception occurs at retina where photoreceptor cells called cones and rods give an image color and shadow.

This image is transduced into neural impulse and then transferred through the optic nerve to the brain.

The left Hemisphere of brain controls the right half of the body and vice versa right eye nerve is controlled by left optical lobe and left eye nerve is controlled by right optical lobe.

The end.