

Mediquiz



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Quiz Master

Series - 2

Clinical signs in Neurology

(1) We all know about dissociated sensory loss, ie, loss of pain and temperature sensations with preservation of light touch and vibration sense. But what may be the cause of dissociation between position and vibration senses (position sense severely impaired, vibratory sense preserved)?

- (A) Peripheral neuropathy
- (B) Spinal cord tumour
- (C) Dorsal root ganglion lesion
- (D) Thalamic lesion
- (E) Parietal lobe lesion

(2) A 23 year old woman came to the emergency with gradual onset loss of vision of left eye, impaired hearing in left ear, decreased olfaction and decreased sensation of left arm and legs. What may be the site of the lesion?

- (A) Non-organic symptoms
- (B) Base of skull
- (C) Temporal lobe
- (D) Lateral medulla
- (E) Diffuse cortical disease

(3) A 39 year old man came to the neurology clinic. His wife complained that he had recently developed deviation of face. However, on meticulous examination, the physician did not find any evidence of facial palsy. The wife was adamant in her description of the signs and said that when her husband was watching the TV and was laughing at a comedy show, she noticed this facial deviation. She also noticed this deviation during an argument. What may be the cause of this complaint?

- (A) Faulty observation by the wife
- (B) Thalamic lesion
- (C) Internal capsule lesion
- (D) Pontine lesion
- (E) Buccal cavity pathology

(4) A 67 year old man presented with difficulty in vision. He could not describe the defect properly. On visual field test, it was found that he had loss of visual field for a large area around macula in one eye along with some loss in the upper outer field of the other eye. What is this condition called?

- (A) Junctional scotoma
- (B) Tubular vision
- (C) Hemianopia
- (D) Cecocentral scotoma
- (E) Heteronymous scotoma

(5) Which of the following best describes the clinical sign of "pupillary escape"?

- (A) Light reflex absent; accommodation reflex present
- (B) Constriction of Horner syndrome pupil with cocaine
- (C) Dilatation of pupil after constriction on exposure to bright light
- (D) Preservation of pupillary reflex in occipital lobe disorders
- (E) Absence of pupil involvement in myasthenia gravis

(6) An 8 year old boy was brought to the doctor due to problems at school. He complained that his friends would tease him whenever he started to eat. But he did not know the reason. The doctor at first did not find any facial abnormality. But then, as the boy opened his mouth to speak, the doctor noticed that the left eyelid was falling down synchronously, as if he was winking. What is this condition called?

- (A) Marcus –Gunn phenomenon
- (B) Inverse Marcus Gunn phenomenon
- (C) Hemifacial spasm
- (D) Tics
- (E) Bell's phenomenon

(Answer : next page)

Answer : Mediquiz**(1) (E)**

Explanation : Generally, vibration and joint position senses are lost simultaneously due to lesions of dorsal column. Only rarely there is dissociation between the two. For example, demyelination of the lateral funiculus may cause loss of only vibration sense. The reverse, that is loss of position sense with preserved vibration, has been reported in lesions of the parietal lobe. It has also been reported in some lesions of the brainstem. This loss of position sense in parietal lobe lesions may cause athetosis like movements on eye closure.

(2) (A)

Explanation : This constellation of symptoms is not possible from an anatomical point of view. Thus, this is classical of non-organic sensory symptoms or malingering. This combination of symptoms is called SHOT (sight, hearing, olfaction, touch) Syndrome

(3) (B)

Explanation : The history of this patient is suggestive of emotional or mimetic facial palsy. The facial palsy is apparent only during emotional movements and not during volitional, wilful movements. This is a rare syndrome due to involvement of thalamus, usually infarction. This normal voluntary facial movement with palsy apparent only during emotions is called dissociated facial weakness. Of course, such weakness will always be of the UMN type.

(4) (A)

Explanation : This pattern of visual field loss is called junctional scotoma. This is due to compression of one optic nerve near the chiasma, which also affects the inferior nasal fibres from the opposite eye. That is why there is superior temporal field defect in the opposite eye. Heteronymous scotoma is scotoma on opposite sides in the two visual fields, like scotoma of temporal fields of both eyes.

(5) (C)

Explanation : On exposure to bright light, there is brisk constriction of pupil, followed by slight dilatation. This is said to be a normal phenomenon, but may be exaggerated in early optic nerve disorders.

(6) (B)

Explanation : This phenomenon of increasing eyelid closure with jaw opening is called Inverse Marcus –Gunn phenomenon. This is a very rare phenomenon and some congenital cases have been reported. The exact neural mechanism of this phenomenon is unknown. Some authors say this is a synkinesis between 5th and 3rd nerve (LPS) and others opine that the synkinesis is between 5th and 7th nerve (orbicularis oculi).

Marcus gunn phenomenon: elevation of eyelid (usually one side) with jaw opening

Marcus Gunn pupil: relative afferent pupillary defect

Gunn's sign: hypertensive changes in retinal vessels seen on ophthalmoscopy