SAQsTeam

CASE 9

Case scenario 1:
A 45 years old female presented in the clinic with complaints that she lost her smell sensation. There's no history of recent respiratory tract infection. Upon physical examination of respiratory mucosa, there are no signs of sinusitis.

Diagnosis: Lesion in 1st cranial nerve (olfactory nerve.)

What are the possible causes of this ? Trauma , viral infections and tumors

Case scenario 2 :
A 61-year-old male had problems with his vision while driving and was bothered by light. He couldn't see the vehicles on his right and left sides. These complaints started gradually several months ago. He saw a local ophthalmologist who found abnormal visual fields.

Diagnosis : Bitemporal hemianopia

What is the cranial nerve affected ? Optic nerve.
Where is the lesion located ? Optic chiasma.

Case Scenario 3:
A 40-years old man, he complains from **drooping of eyelid (ptosis)**, **Diplopia** and his right eye is depressed and abducted.

Diagnosis: Oculomotor nerve palsy.

Mention other possibles symptoms associated with this scenario ?
Papillary dilatation , loss of accommodation and lateral squint

What is the first sign of of compression of oculomotor nerve ?
Ipsilateral slowness of the pupillary response to light

Case Scenario 4:
A 54 years old man being treated for primary open-angle glaucoma reported occasionally experiencing double vision. Upon questioning, he said that the double vision was vertical and became worse when he was reading and/or tired and he has difficulty in walking downstairs. His pupil deviates **medially** and **superiorly**. He did not report any other physical problems. His recent physical examination was normal.

Diagnosis: Trochlear nerve palsy.

What is the muscle that can be affected ? Superior oblique

Mention 2 causes of this lesion ? Trauma and stroke

Case Scenario 5:
A 55 years old woman reported a four-month history of sharp, excruciating facial pain, which she compared to being touched by "an electric wire." The pain was localized to the right cheek, with radiation into the right eye. The episodes of pain lasted only seconds, occurred numerous times during the day, and were triggered by eating, brushing teeth or facial washing.

Q1 What is the most likely diagnosis?
Trigeminal Neuralgia or tic douloureux.

Q2 Mention the branches that are usually involved in this condition?
1-Maxillary.
2-Mandibular.
(Rarely in the ophthalmic division.)
Q3 Give two differential diagnosis.
1-Migraine.
2-Cluster headaches.
(Migraine and cluster headaches may produce severe unilateral pain, but unlike trigeminal neuralgia, these conditions are not triggered by movement or contact with the face nor do they respond promptly to carbamazepine.)
Q4 What are the characteristics of this condition?
Recurring episodes of intense stabbing excruciating pain radiating from the angle of the jaw along the branches of the trigeminal nerve.

Q5 What is the possible cause of this condition?
Compression, degeneration or inflammation of the 5th cranial nerve.

Case Scenario 6:
A 44 years old female patient presented to emergency room because of dull headaches for the past two months. Three weeks before she noticed double vision when looking to the right. Her past history was unremarkable. Her eyes had a medial squint. She developed dropping in her right cheek .MRI revealed that, there is a tumor on the pons.

Diagnosis: Abducens nerve palsy.

This nerve innervates which structure? Lateral rectus muscle.

what are the possible causes of this ? Tumor and trauma

Case Scenario 7:
A 47-year-old African-American man walked into the Emergency Department complaining of right-sided facial numbness and weakness. Before bed the previous night, the patient noted that fluid dripped out of the right side of his mouth while drinking. He then reawakened in the morning to right-sided facial droop, inability to close right eye and numbness to the right side of his face.

Q1 What is the most likely diagnosis?
Bell's Palsy.

Q2 What is the possible cause of this condition?
Lower motor neuron lesion affecting the ipsilateral side of the face.

Q3 What are the differences between upper facial motor neuron lesion and lower facial motor neuron lesion?
Upper facial motor neuron lesion:
1- Injury to the corticobulbar tract.
2-Paralysis of lower half of facial muscles of the contralateral side.

Lower facial motor neuron lesion:
1-Injury to facial nerve fibers.
2-Paralysis of the whole facial muscles of the ipsilateral side.

Q4 What is the site of emergence of facial nerve?
Cerebellopontine angle.

Q5 What are the fibers given by the facial nerve?
1- Motor fibers: to muscles of facial expression.
2- Secretory fibers: to submandibular, sublingual, palatine, nasal and lacrimal glands.
(receives taste fibers from the anterior ⅔ of tongue.)

Q6 If the lesion was slightly below the geniculate ganglion what will be the result?
The paralysis of facial muscles will be associated with:
1-hyperacusis. 2-loss of taste sensation from the anterior ⅔ of tongue.
(hyperacusis is due to paralysis of stapedius muscle.)
Q7 What is the term used to describe the hearing of sounds more acutely?
Hyperacusis.

Case Scenario 8:
A 30-years old man presented in the clinic with complaints of deafness, tinnitus and vertigo, nystagmus and loss of balance.
Diagnosis:
Vestibulocochlear nerve palsy (8th cranial nerve).

Mention the location of the lesion
Since it caused deafness then the lesion is located at a level below cochlear nuclei.

Mention a cause for this clinical condition?
Acoustic neuroma (Schwannoma).

Case Scenario 9:
A 65 years old man presented in the clinic with difficulty in swallowing, dry mouth, and impairment of taste sensation in a specific part of his tongue. On physical examination the patient depicted an absent gag reflex.

Diagnosis: Lesion of 9th cranial nerve (glossopharyngeal)

Mention the possible causes for lesions of this nerve?
1- Lateral medullary syndrome (thrombosis of inferior cerebellar artery.)
2-Tumors.

Case Scenario 10:
A 34 year old patient came to the doctor and complains of hoarseness, whispering and regurgitation of liquids through nose and abnormality in swallowing.

Diagnosis: Lesion of vagus nerve (10th cranial nerve.)

Mention other systemic abnormalities that can be associated with this condition? Autonomic dysfunction related to esophageal motility, gastric acid secretion, gallbladder emptying and heart rate.

Mention causes of vagus nerve lesions ?
1- Lateral medullary syndrome
2-Tumors

Case Scenario 11:
Patient complains of weakness of shoulder, difficulty of elevating the arm, and difficulty of swallowing and speech after removing a tumor from the posterior triangle.
examination shows: atrophy of trapezius and winging of scapula.

Diagnosis: Lesion of spinal root of accessory nerve.

Why is this nerve particularly injured due to surgery?
Because of its relatively superficial position in the posterior triangle.

An 8 years old boy presented in the clinic with loss of tongue movements and difficulty in chewing and speech. Upon physical examination the tongue is atrophied and shrunken. When they boy is asked to protrude his tongue, the tongue deviates to the right side.

Diagnosis: Lesion of the right 12 cranial nerve manifested on the right side of tongue.

If the two nerves on both sides are damaged, what is the most likely manifestation?
Patient can't protrude his tongue.

Further important information:

Brachial plexus injuries:

1- Upper lesion of brachial plexus (upper trunk C5,6): Erb-Duchenne Palsy commonly known as waiter's tip position (the arm hangs by the side and is rotated medially, the forearm is extended and pronated.)
Cause: excessive displacement of the head to the opposite side and depression of the shoulder on the same side (a blow or fall on shoulder.)

2- Lower lesion of brachial plexus (lower trunk C8,T1): Klumpke Palsy manifested by ape hand (due to median nerve injury.)
Cause: a person falling from a height then clutching to an object to save himself.

Femoral nerve lesions:

Motor effect:
1- Wasting of quadriceps femoris.
2- Loss of extension of knee.• Weak flexion of hip (psoas major is intact).

Sensory effect:

- Loss of sensation over the antero-medial aspect of thigh & medial side of leg & foot.

Sciatic nerve lesions:

The sciatic nerve is a branch of sacral plexus (L4,5, S1,2,3) Its injury will affect the flexion of knee, extension of hip, all movements of leg & foot, as well as loss of sensation of skin of leg & foot (except areas supplied by saphenous branch of femoral nerve)

Done By:

- ★ Abdulrahman AlKaff
- ★ Abdullah AlJomaiah
- ★ Hussain AlKaff
- ★ Omar AlRahbeeni
- ★ Moneera AlDraihem
- ★ Sarah N AlJasser