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CLINICAL-NEUROLOGICAL FEATURES AND DIFFERENTIAL DIAGNOSIS OF CENTRAL AND PERIPHERAL VESTIBULOPATHIES

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Annotation

Vestibulopathies are conditions caused by damage to the central or peripheral vestibular system. Determining their clinical and neurological characteristics is important for the correct choice of diagnosis and treatment. This article covers the clinical signs, diagnostic methods and distinguishing aspects of Central and peripheral vestibulopathies.

Keywords: Vestibulopathies, vestibular nuclei, nystagm, ischemic stroke, cerebellum, Dix-Holpayk test, Halmagi test.

The purpose of the study: currently,patients with vestibular pathology are increasing day by day,early diagnosis of the disease has a huge acuity, especially the early and accurate diagnosis of Central and peripheral vestibulopathies has a great deal in finding an early cure for the disease and preventing its complications.

Research methods: preliminary examination methods are carried out to identify the disease and establish treatment.In the first place, Anamnesis is collected: time of origin, causes, influencing factors, examination tests Dix-holpayk.The likes of halmagi are held. Then, if the patient has instructions for radiological examinations, MRI, MSKT, UZDG practices are performed

In communication with patients, it is very important to clearly distinguish whether they are sick with Central or peripheral vestibulopathies egadir.Ba ' at certain times, taking treatment measures for central vestibulopathies without collecting a complete Anamnesis or passing the necessary examinations can not only make the patient unable to cure the disease, but also pose a great danger to the patient's life.

Vestibulopathies are conditions associated with damage to the central or peripheral parts of the vestibular system. They are accompanied by dizziness, loss of balance and various neurological symptoms. Clinical and neurological differentiation of Central and peripheral vestibulopathies is important in the proper diagnosis and treatment.

Central vestibulopathy is disorders of the vestibular system caused by damage to the cerebral cortex, cerebellum, thalamus, or other part of the cerebral cortex. This disease is

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accompanied by complex clinical-neurological signs, loss of balance, dizziness and other neurological symptoms.

Peripheral vestibulopathy is a set of disorders caused by damage to the vestibular apparatus or vestibular nerve of the inner ear. These diseases are manifested by dizziness, loss of balance, hearing problems and other vestibular symptoms.

The main causes of Central and peripheral Vestibulopathies

Central vestibulopathies are mainly due to pathologies affecting the cranial and cerebral cortex.

1. Ischemic stroke:

* Vertebro-basilar pool strokes.

• Impaired blood supply to the cerebellum and cerebral cortex.

* Symptoms such as diplopia, dysarthria, ataxia.

2. Diffuse sclerosis:

* Demyelination of vestibular pathways.

* Persistent dysfunction of the vestibular system.

3. Neurodegenerative diseases:

* Parkinson's disease.

* Alzheimer's disease.

4. Traumatic injury to the cerebral cortex:

• Leads to dysfunction of the vestibular centers.

5. Tumor:

• Tumor located in the cerebellum, thalamus or cranium.

• Imbalance and coordination disorders caused by pressure in the vestibular system.

6. Neuroinfections:

* Encephalitis.

• Neuroposiphilis.

7. Neurotoxic effects of drugs:

• Some sedatives or antiepileptic agents can damage the vestibular system.

Peripheral vestibulopathies include disorders that occur at the level of the inner ear or vestibular nerve.

1. Vestibular neuronitis:

• Due to viral infections.

• Sudden onset dizziness and imbalance.

2. Menière's disease:

• Increased endolymph pressure in the inner ear.

• Paroxysmal dizziness, hearing loss, noise in the ear.

3. Labyrinthitis:

* Inflammation of the inner ear.

• Vestibular system and hearing disorders.

4. Peripheral trauma:

* Traumatic injury to the inner ear.

* Temporary or permanent dysfunction of the vestibular apparatus.

5. Ototoxic drugs:

• Aminoglycosides (e.g. gentamicin), chemotherapeutic agents.

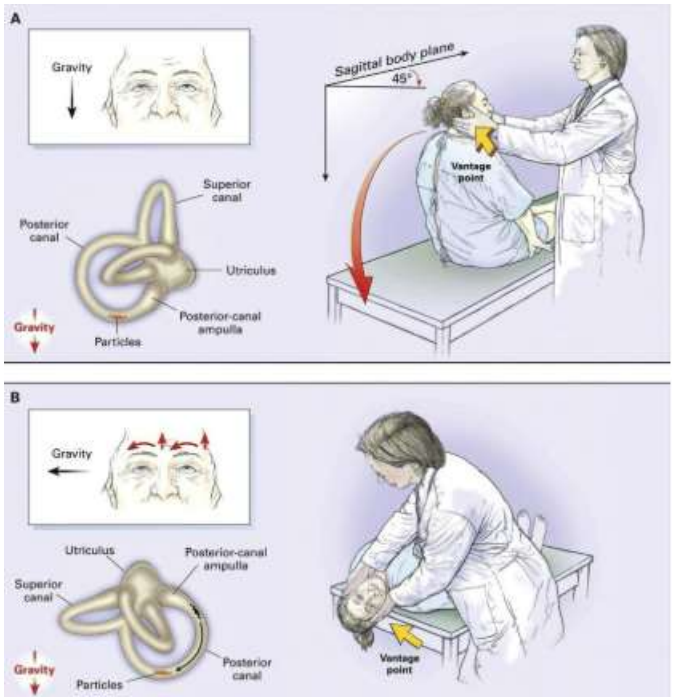
6. Head trauma:

• As a result of damage to the inner ear.

7. Paroxysmal positional dizziness (PPBA:

• As a result of otoliths falling into the polukruzny canal.

• Dizziness is associated with changes in movement or posture.



Diagnostic methods of Central and peripheral vestibulopathies

1. Clinical Trials

Dix-Holpeik Test:

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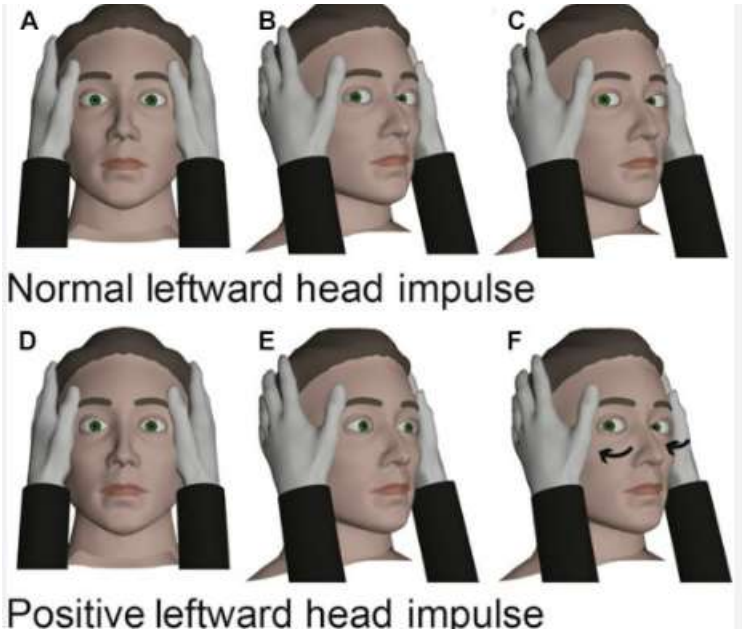
In central vestibulopathy: the Test is usually negative. With a change in position, dizziness or nystagm does not appear.

In peripheral vestibulopathy: the Test is positive. Dizziness and nystagm are observed with a change of State.

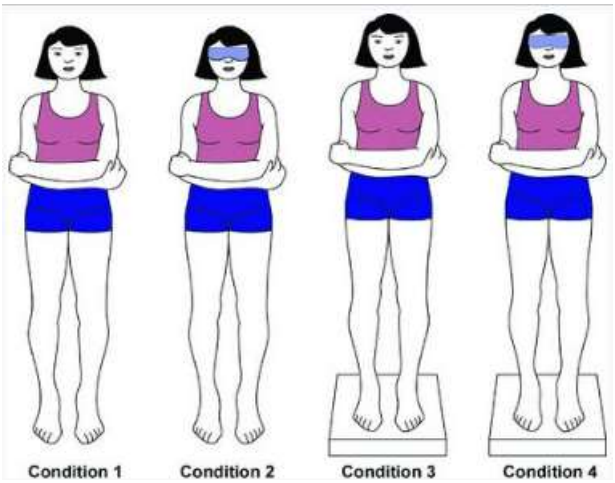
Halmagi Test:



In central vestibulopathy: the Test is negative. The Vestibulo-ocular reflex is maintained.

In peripheral vestibulopathy: the Test is positive. Movements of the saccade to the injured side are observed.

Romberg Test:



In central vestibulopathy: the balance is lost even when the eyes are open and closed.

In peripheral vestibulopathy: mild imbalance is observed when the eyes are closed.

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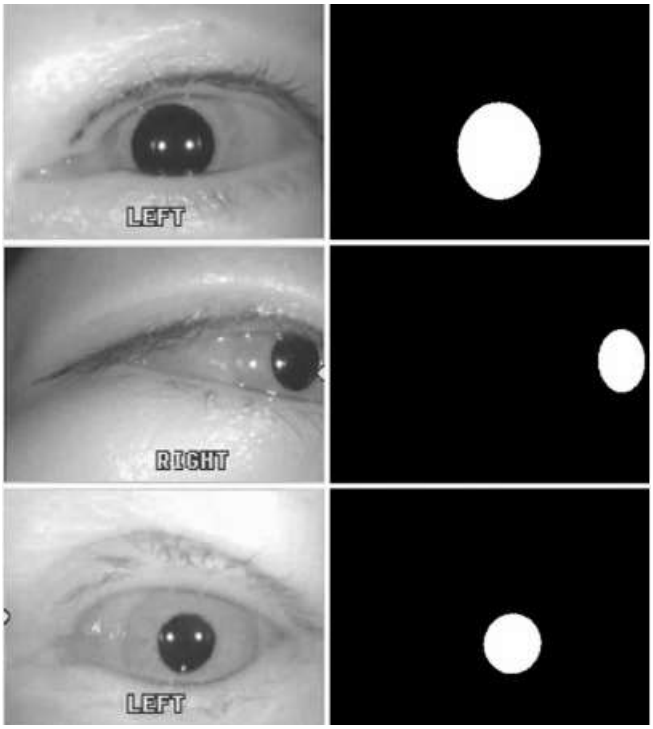
2. Instrumental diagnostics

Video-Nystagmography (VNG)using Frenzel eye mirrors:



In central vestibulopathy: a Nystagm with a vertical or variable orientation is observed.

In peripheral vestibulopathy: a nystagm is detected in a horizontal or rotational direction.

MRI or MSCT examination:

In central vestibulopathy: pathological changes in the cerebral cortex, cerebral cortex or cerebral cortex (ischemic foci, tumor, demyelinization) are observed.

In peripheral vestibulopathy: MRI is usually normal. It is used to rule out damage to the inner ear or vestibular nerve.

Audiometry:

In central vestibulopathy: hearing is usually normal.

In peripheral vestibulopathy: there is a decrease in hearing accompanied by ear symptoms (Meniere's disease, labyrinthitis).

UZDG (ultrasound Dopplerograph

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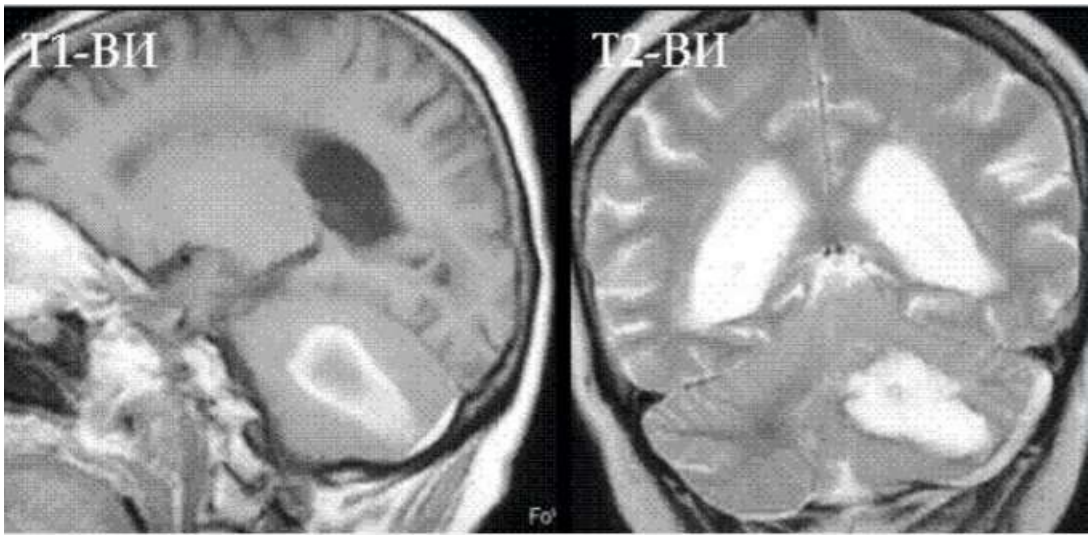

In central vestibulopathies :

Vertebrobazillary blood flow disorders are diagnosed.

The condition of the arteries (for example, the vertebral arteries) that provide blood flow to the brain is assessed.

Signs of asymmetry or stenosis in blood circulation can be detected.

In peripheral vestibulopathies

If the Vertebral arteries and their blood flow are normal, the likelihood of peripheral vestibulopathy increases.

External factors that trigger the vestibular apparatus (such as pressure or increased fluid in the inner ear) can be identified.

In summary, the clinical and diagnostic differentiation of Central and peripheral vestibulopathies is important for proper diagnosis and treatment planning. While central vestibulopathies are accompanied by complex neurological symptoms, dizziness and ear symptoms are central to peripheral vestibulopathies. In both cases, it is recommended to use modern diagnostic methods, such as MRI, VNG and clinical tests.

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