



Welcome - The agenda

9h00 -10h30: DIZZINESS and SYNCOPÉ, S.Gillain, Geriatrician
Break

10h45 -12h15 : OPHTHALMOLOGICAL DISORDERS, J.M. Rakic, Ophtalmologist

Lunch

13h00 - 14h30: EARS NOSE and THROAT disorders and VERTIGO, P. Lefebvre, ENT Specialist
Break

14h45 -16h15 ONCOLOGICAL CARES, J. Collignon, Oncologist

16h15-16h30 : Last QnA session



Lecturers

Professor Jean Marie Rakic

Head of the department of
ophthalmology in CHU Liège

Publications list available at:

[https://orbi.uliege.be/ph-
search?uid=U013922](https://orbi.uliege.be/ph-search?uid=U013922)



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Lecturers

Professor Philippe Lefebvre

Head of the department of Ear Nose
and Throat in CHU Liège

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Lecturers

Professor Joelle Collignon

Oncologist – Digestive pathologies
in CHU Liège

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DIZZINESS and SYNCOPÉ

BIUCGM - March 2022
S. GILLAIN
sgillain@chuliege.be

DIZZINESS and SYNCOPÉ

Symptoms

Frequent

Multiple causes

Decrease in Survival - Autonomy - QOL

Identified – Investigated - Integrated

Dizziness - Content

Definition and epidemiology

Clinical consequences

Physiopathology

Etiology and clinical presentations

Evaluation

Management

Take home messages

Learning objectives - « to be able to »

At the end of this lecture, you should be able to manage

- A goal-oriented anamnesis;
- A goal-oriented physical exam;
- A diagnostic algorithm ;
- A multidisciplinary management;
- A patient and caregivers education (if possible)

Dizziness - Definition

Dizziness is a **broad term**

→ « A various abnormal sensation arising from perception of the body's relation to space or of unsteadiness »

→ « A sensation of postural instability or imbalance »

« **Chronic** » if present for **> 2 months**

Dizziness - Epidemiology

About 15% to over 20% of adults yearly in large population-based studies.

3 ♀ / 1 ♂

Most frequent identified causes are

→ **25% Vestibular vertigo** (next lecture)

→ 75 % who are left

Benign positional paroxysmal vertigo (BPPV)

Vestibular migraine,

Comorbidities consequences, toxic effects...

Menière's disease

Dizziness – Clinical Consequences

- Fear of falling;
- Reduced spontaneous mobility;
- Falls and injuries;
- Mobility decline;
- Sarcopenia;
- Thymic disorders - behavioural disorders;
- Reduced energy incomes;
- Frailty

Dizziness – Clinical Consequences

- Fear of falling;
- Reduced spontaneous mobility;
- Falls and injuries;
- Mobility decline;
- Sarcopenia;
- Thymic disorders - behavioural disorders;
- Reduced energy incomes;
- Frailty

Add the clinical consequences of frailty

- Disability
- Increased risk of
 - Delirium
 - Hospitalisation
 - Longer inpatient after procedure
 - Institutionalisation
 - Death

Dizziness – Content

Definition and epidemiology

Clinical consequences

Physiopathology

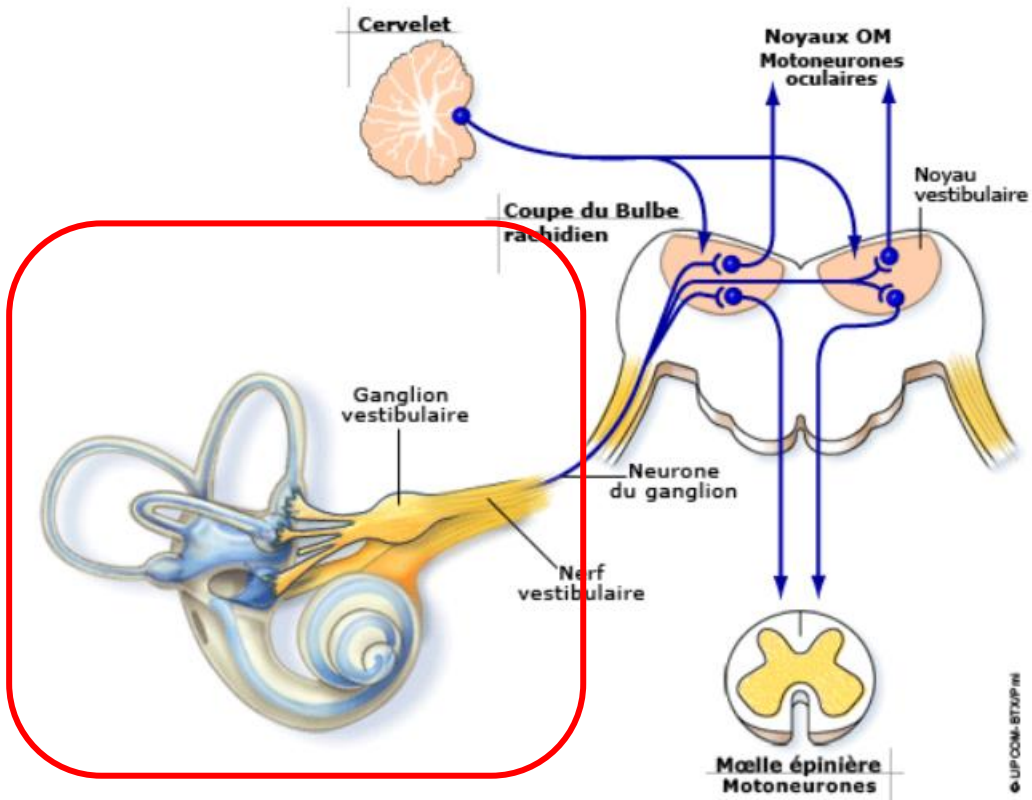
Etiology and clinical presentations

Evaluation

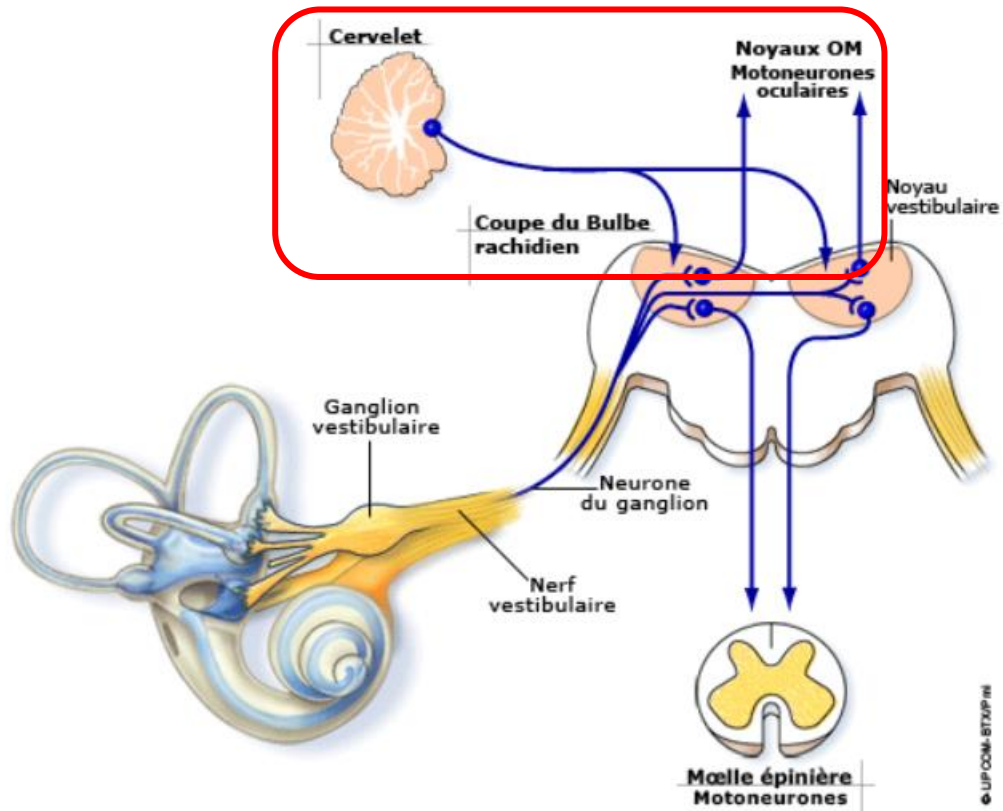
Management

Take home messages

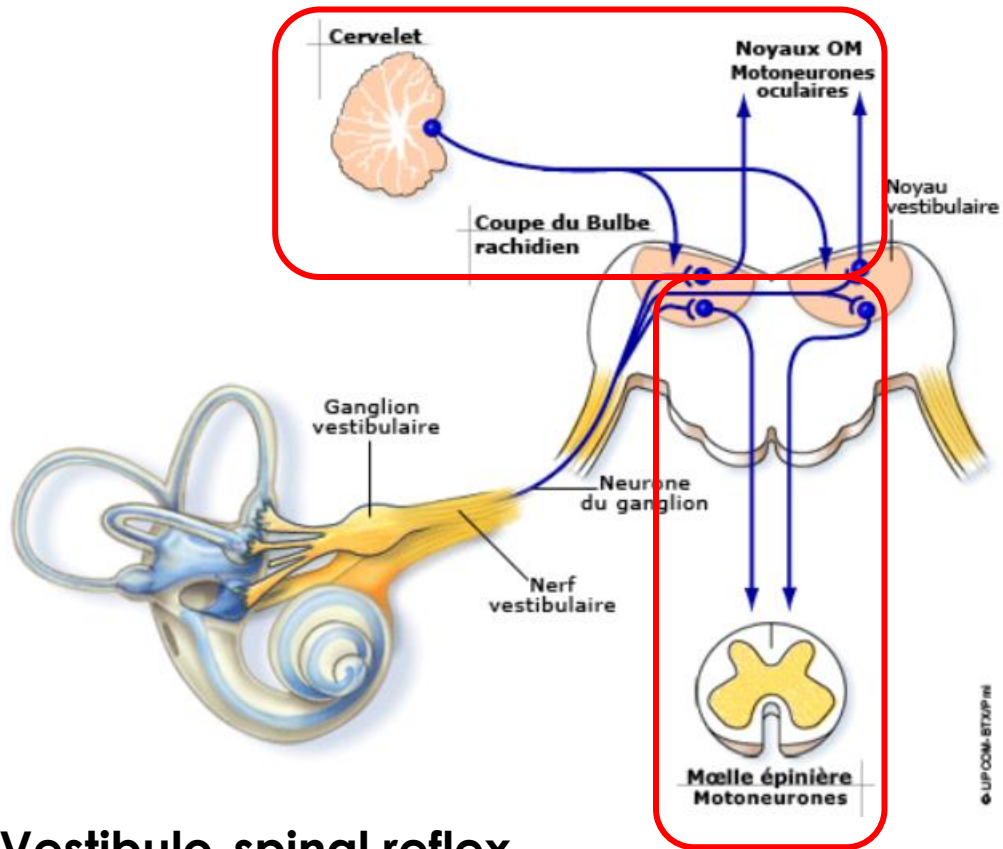
Vestibular and visual afferences, reflexes and integration



Vestibular and visual afferences, reflexes and integration



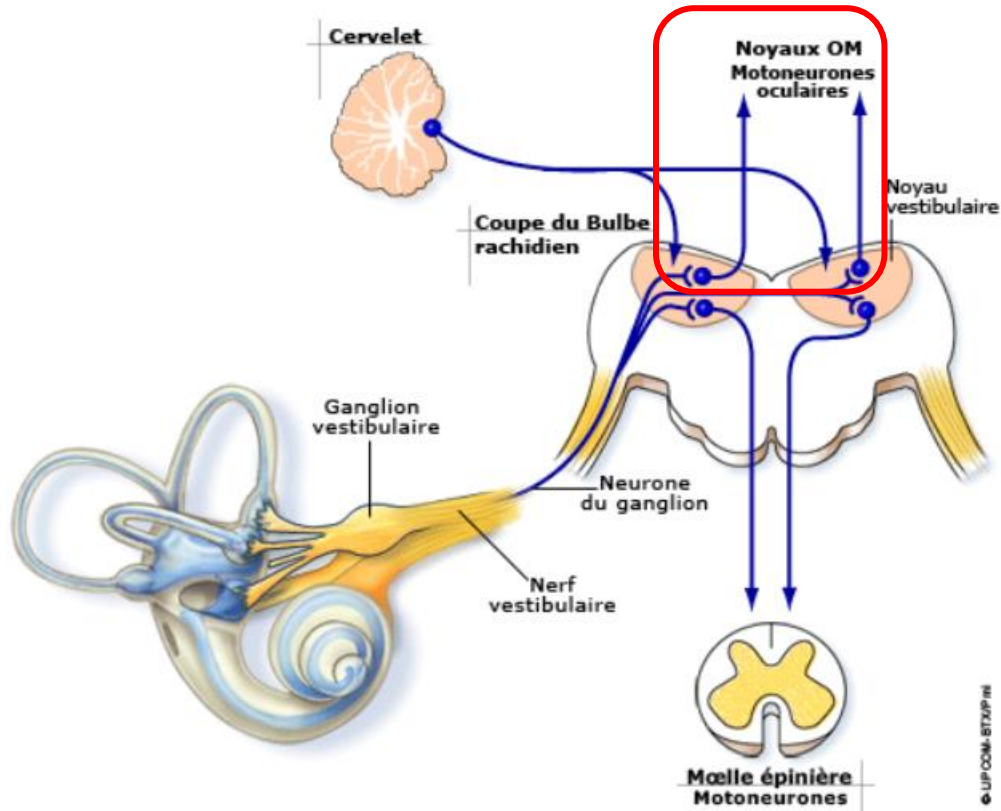
Vestibular and visual afferences, reflexes and integration



Vestibulo-spinal reflex

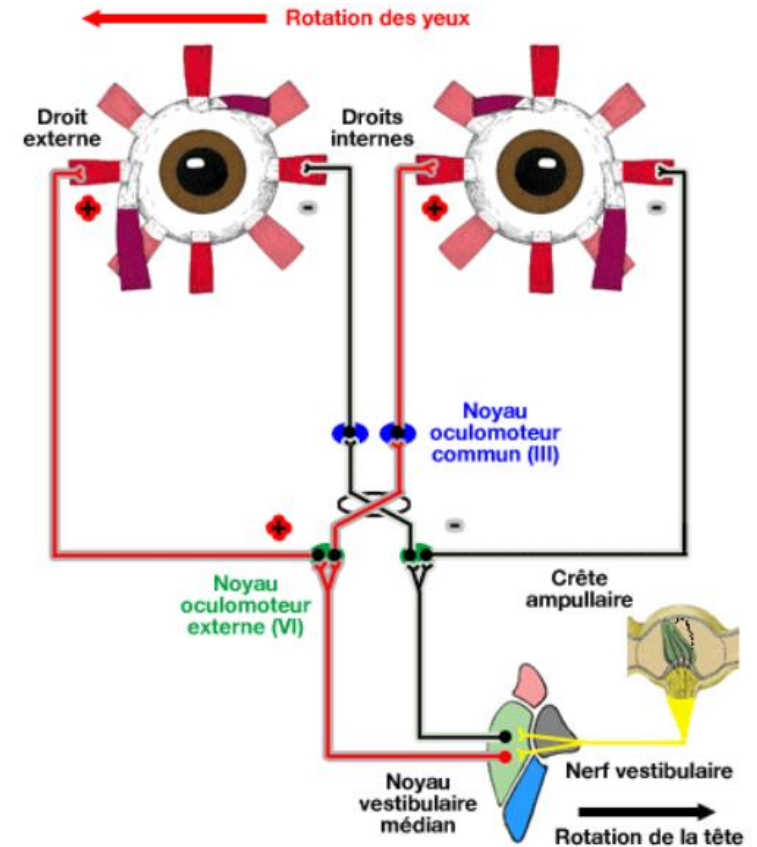
- keep face and shoulder
- anti-gravity muscles action

Vestibular and visual afferences, reflexes and integration



Vestibulo-spinal reflex

- keep face and shoulder
- anti-gravity muscles action



Vestibulo-ocular reflex

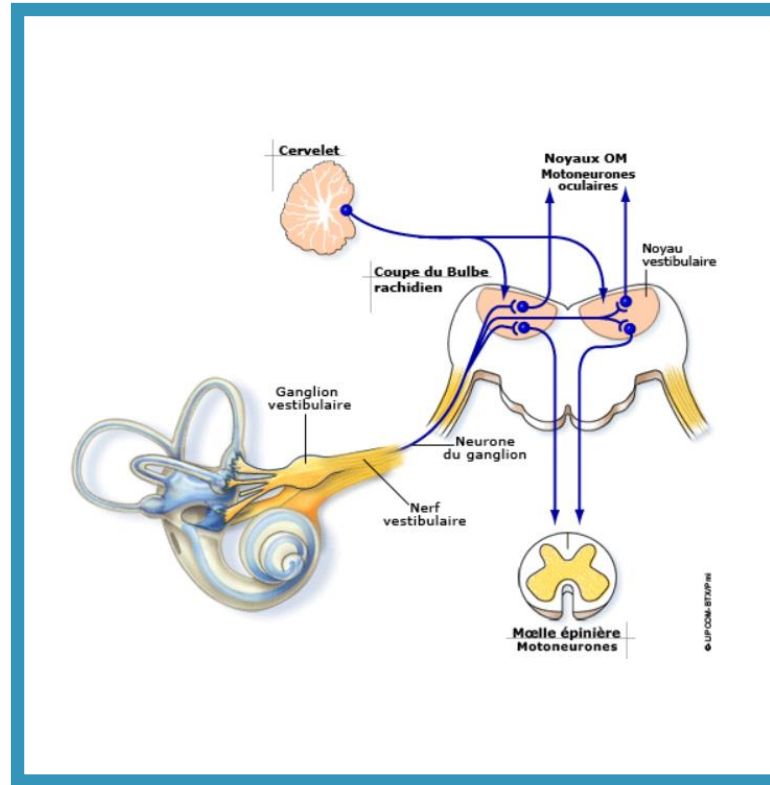
- keep eyes « focused on »

Vestibular system

Anamnesis / Clinical exam

Symptoms :Vertigo,
dizziness, nausea,
sudation, pallor and not
well-being,
Balance/walking
disorders

Clinical exam :
Nystagmus
Lateralised Romberg
Ataxic walking
Laterilazed walk in
place with closed eyes



Vestibular system

Anamnesis / clinical exam



To confirm:

→ Electronystagmography;

→ Inner Ear MRI;

→ Brain MRI → Brainstem lesion

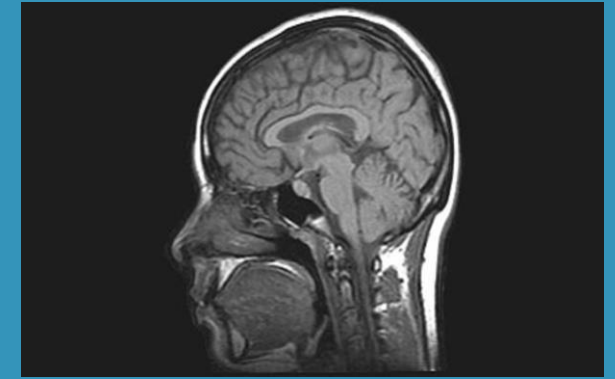
Cerebellum

Anamnesis / clinical exam

None vertigo,
Nystagmus could be

Wide base support
Oscillations during Romberg

Hypermetria
Tremor of intention
Tremor of attitude
A drunken gait
A dysarthria,
An hypotonia,
Pendular reflexes

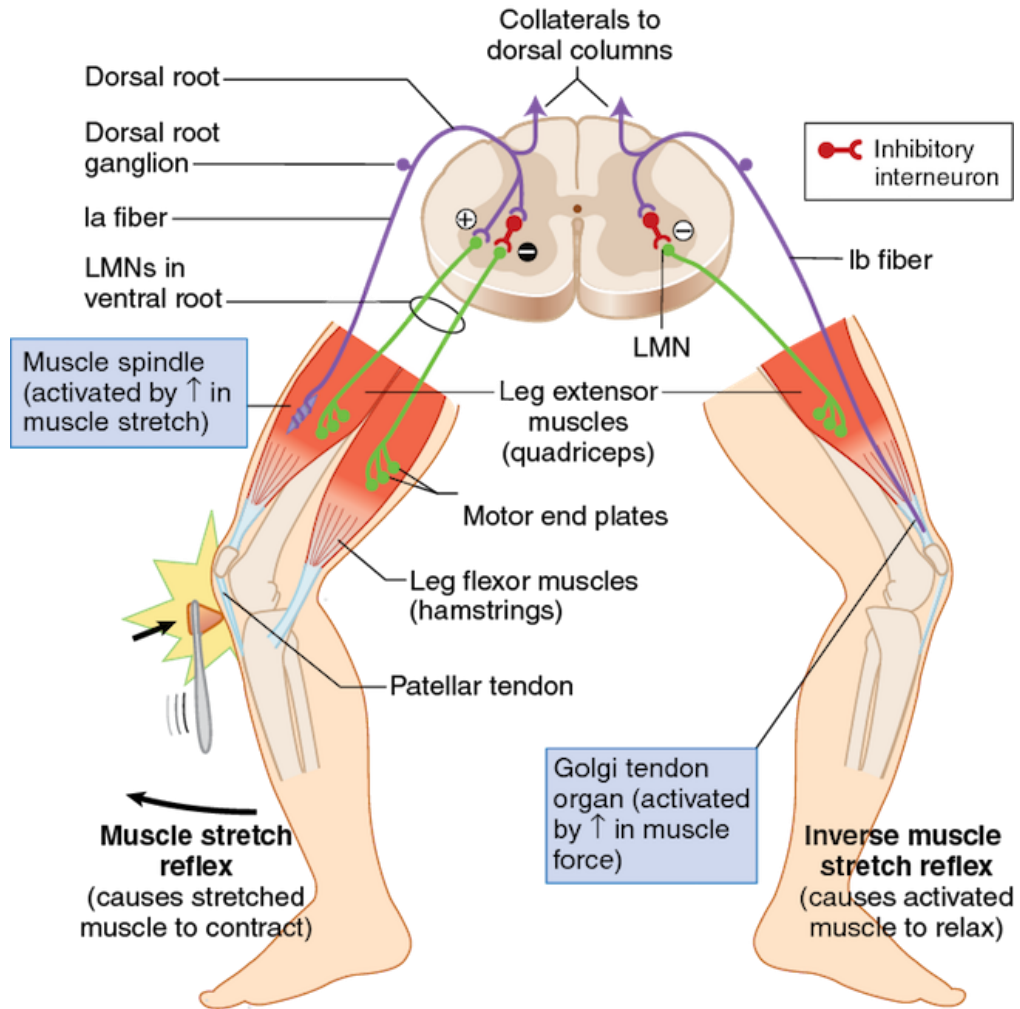


Vascular Lesion;

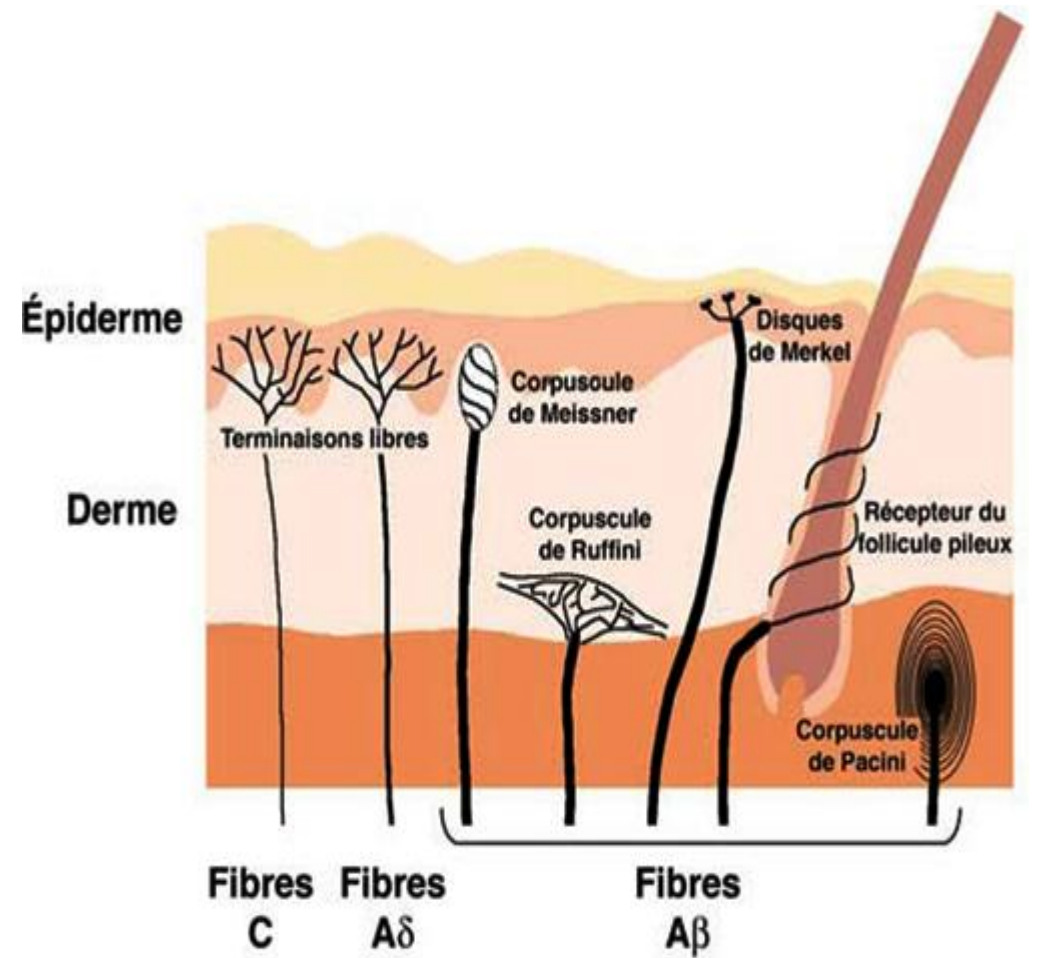
Meningioma,
medulloblastome, or
glioblastoma;

Secondary neoplastic lesions more frequent
: breast, pulmonary,
kidney, thyroid cancer
or melanoma.

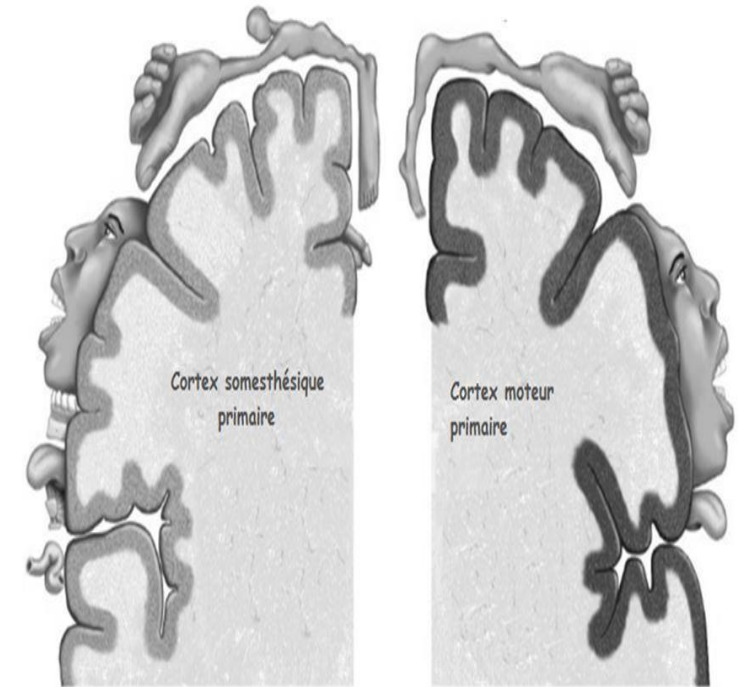
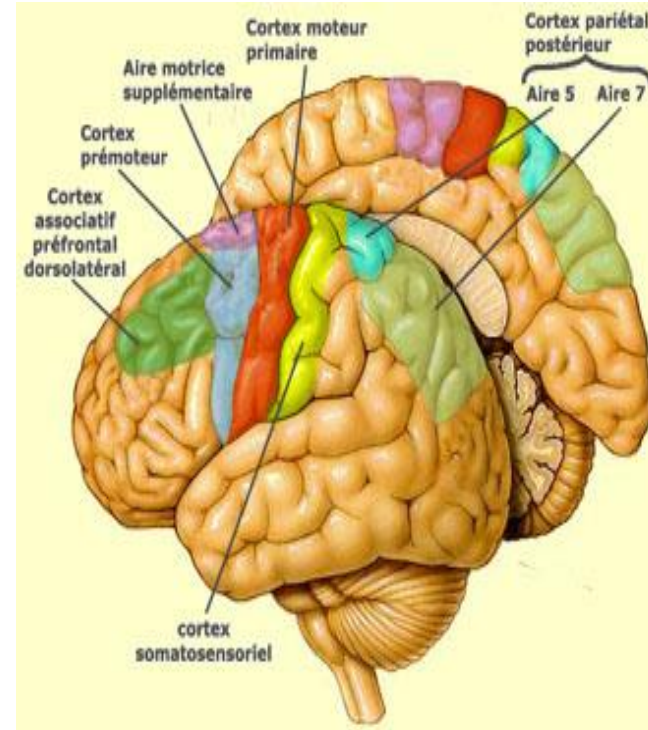
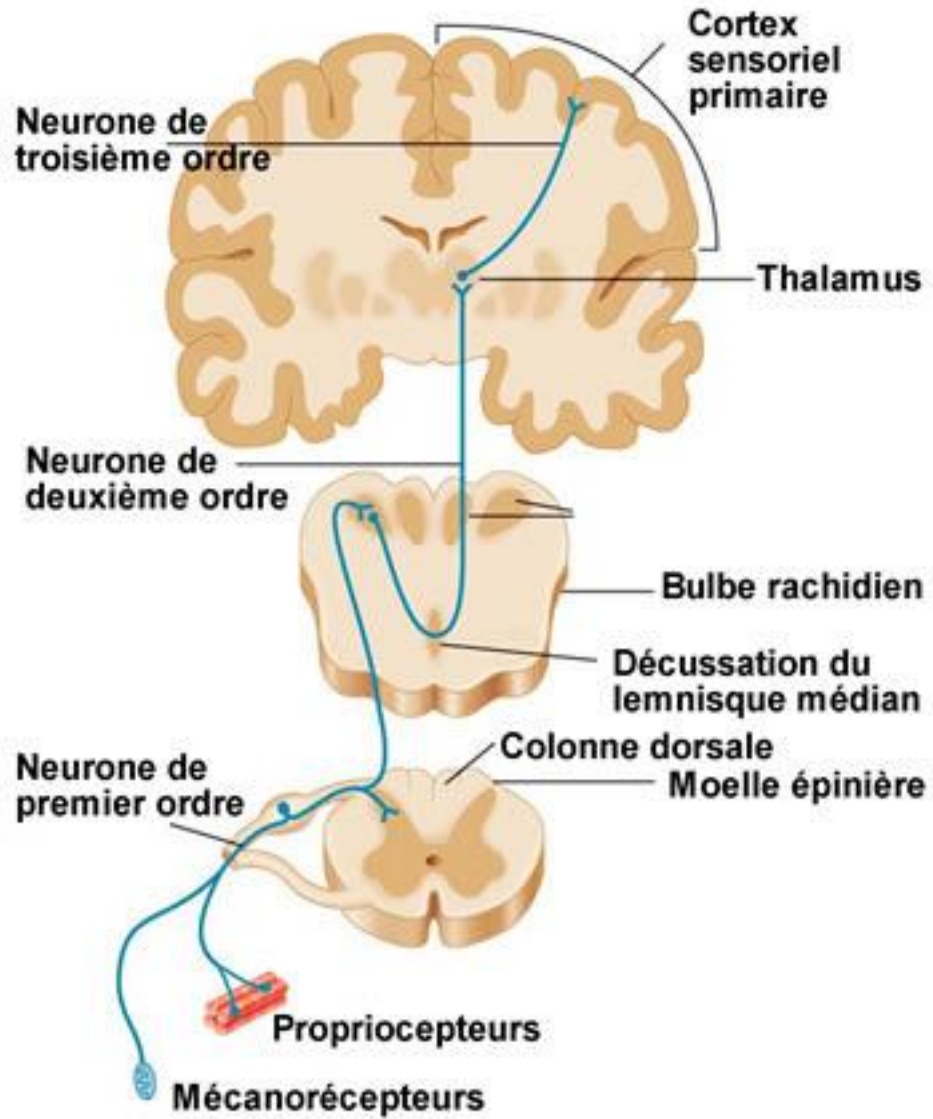
Proprioceptors



Mechanoreceptors



Sensitive Lemniscal Ascending Path

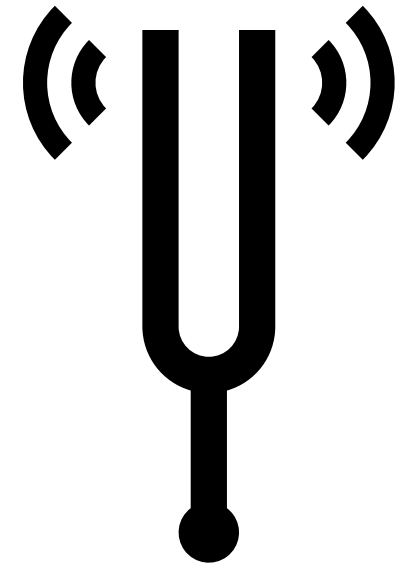
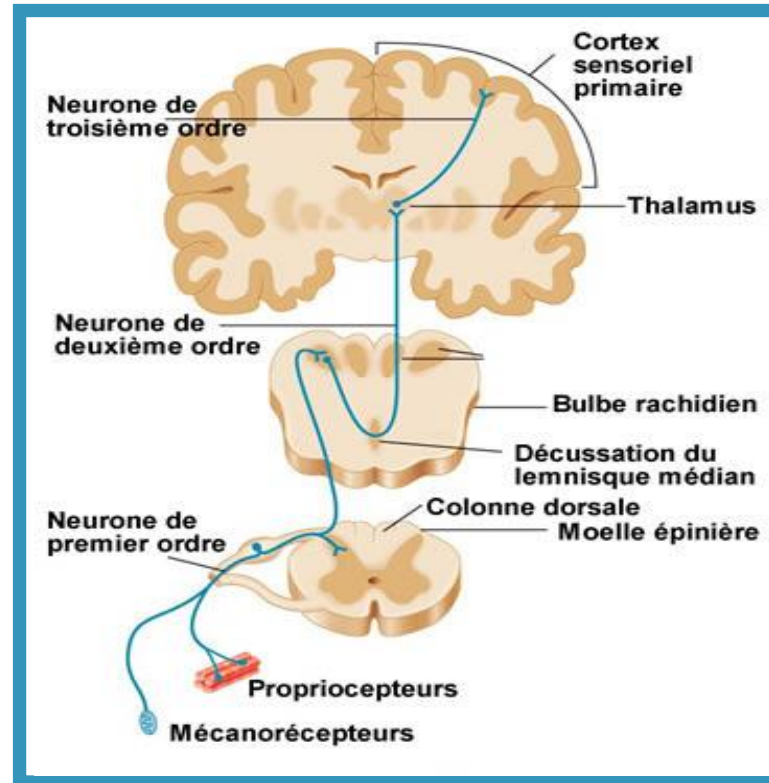


Proprioceptive system Anamnesis / clinical exam

Symptoms : dizziness and instability

Clinical exam:

- little oscillations when the eyes are closed (Romberg)
- Patient needs to look his feet when is asked to join them. In order not to fall he needs to put his feet apart.
- Walk: wide base of support, irregular steps and lateral deviations
- Vibration sensitivity



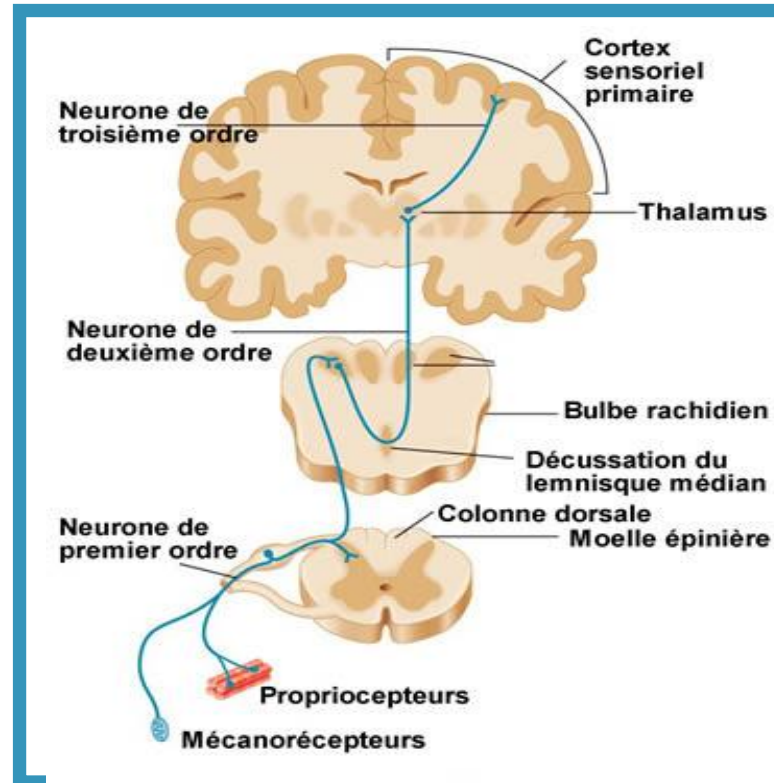
Proprioception Investigations

Medical history:

Diabetes, Chronic alcohol consumption, Cancer, Hypothyroid, Renal deficiency, Chronic hepatitis, Neurotoxic molecules and VIH

Electromyogram of lower limbs not systematically

(Spinal MRI)



Vincristine, cisplatine, vinblastine, doxyrobutine;

Antibiotics: isoniazide, métronidazole, éthambutol, nitrofurantoïne, colistine, dapsonne;

Anti-malaria

Antiretroviral

Lead and mercury

Investigating proprioception

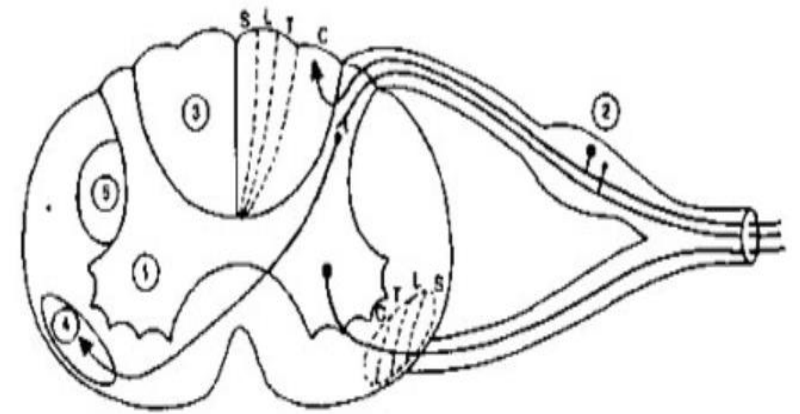
Electromyogram of lower limbs not systematically

Spinal MRI in case of spinal lesion suspected

As a reminder a compressive spinal lesion will be associated to

→ **A lesionel syndrome : radiculopathy**

→ **A sub-lesionel syndrome : homolateral pyramidal syndrome, posterior cord syndrome, heterolateral thermoalgescic anesthesia.**



- 1: Anterior Horn (second motor neuron)
- 2: Spinal nodes (sensitive neurone)
- 3: Lemniscal path (Goll et Burdach)
- 4: Spnio-thalamic bundle
- 5: Pyramidal bundle

Dizziness – Causes

Information from vestibular/ Visual/ Proprioceptive systems

Integrated in cerebellum and hemispheres → adapted motor order

Causes of failure could be

- Age-related
- Disease-related
- Drug-related
- Toxicant-related

Age-related changes

Vestibular system : Hair cell loss, Neuronal loss;

Visual system : Age related clouding of the lens, and macular degeneration, reduced visual acuity, reduced dark adaptation, reduced contrast sensitivity, reduced accommodation;

Proprioceptive system : Reduced mechanoreceptors sensitivity, slower peripheral conduction;

Central nervous system including cerebellum: neuronal loss, reduced synapsis plasticity, reduced neurotransmitter concentration;

Pathological processes

Vestibular system : peripheral failure

- Ménière disease,
- Benign paroxysmal positional vertigo,
- Acoustic neuroma,
- Recurrent vestibulopathy
 - attacks of vertigo without auditory or neurological symptoms, two-thirds of patients experienced a spontaneous resolution
- Viral vestibular/ labyrinthitis neuronitis,
- Drug toxicity (aminoglycosides)
- Head trauma

Pathological processes

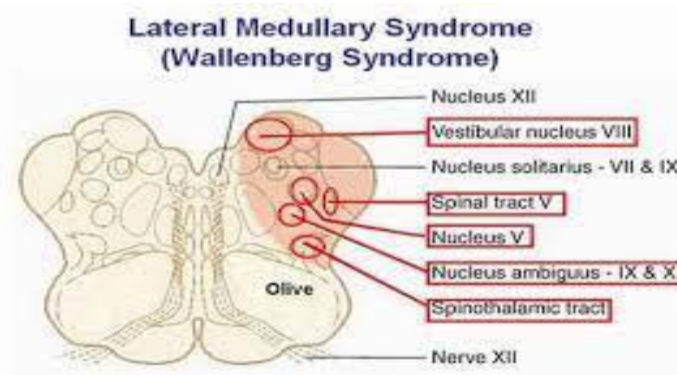
Vestibular system : central failure

Most often : Tumor of brainstem

Wallenberg syndrome

Rarely a multiple sclerosis lesion

Pathological processes



Side of PICA lesion

Thermo-algesic anesthesia of the hemiface (and the body of the opposite side)

Claude B. Horner

Vestibular S.

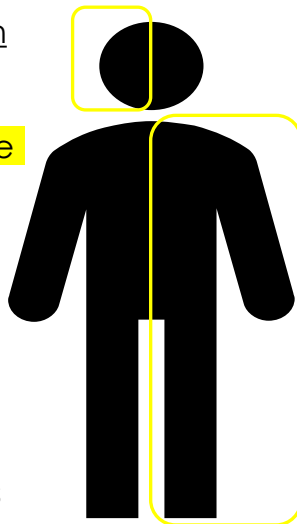
Cerebellar S.

/2 larynx,

/2 pharynx,

vocal cord

and velum paresis

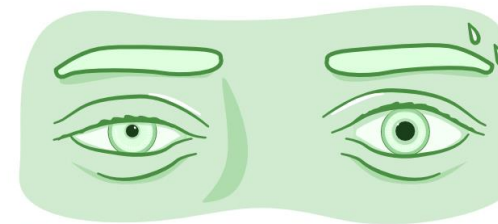


WALLENBERG SYNDROME

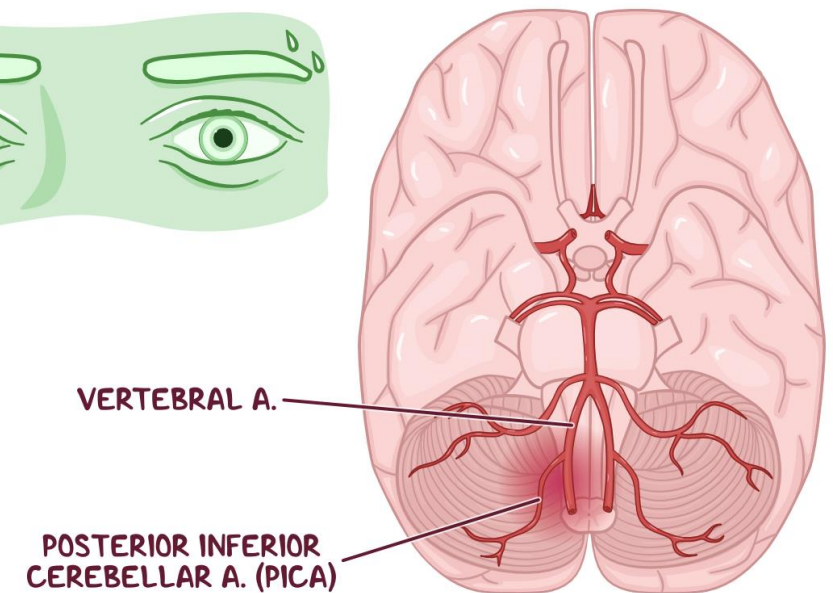
"LATERAL MEDULLARY SYNDROME" OR
"POSTERIOR INFERIOR CEREBELLAR ARTERY (PICA) SYNDROME"

SYMPTOMS:

- HORNER SYNDROME (DECREASED PUPIL SIZE, DROOPING EYELID, DECREASED SWEATING)
- DOUBLE VISION
- SLURRED SPEECH
- DIZZINESS



OSMOSIS.org



Dizziness - Pathological processes

Visual system : Cataract, glaucoma, stroke, diabetes ...

refer to Pr. Rakic's presentation.

Pathological processes

Cerebellum : more frequent

- Acute and/or chronic alcohol consumption
- Vitamine B1 or B12 deficiency
- TIA or stroke and hypoperfusion situation involving vertebrobasilar blood flow → cerebellar infarction, posterior lateral medullary infarction (Wallenberg),
- Leucoariosis, and Biswanger disease
- Tumor or paraneoplastic syndrome
- Drugs: benzodiazepines, antihistaminic, neuroleptic, morphinic, ...
- Chemotherapy

Pathological processes

Cerebellum : less frequent

- Hypothyroid
- Neurodegenerative disorders: multiple systemic atrophy, Friedreich
- Coeliac disease
- Infectious disease : Toxoplasma, Whipple disease
- Multiple sclerosis

Pathological processes

Proprioceptive system :

More frequent → diabetes, chronic alcohol consumption,

Neoplasm, Severe Hypothyroid, Renal deficiency, Chronic hepatitis,

Neurotoxic drugs as some chemotherapy or antibiotics or antimalarian and antiretroviral treatment

- e.i; vincristine, cisplatin, vinblastine, doxorubicin, isoniazide, metronidazole, éthambutol, nitrofurantoin, colistin, dapsone,

Neurotoxic agent exposure : lead, mercury

Dizziness – Content

Definition and epidemiology

Clinical consequences

Physiopathology

Etiology and clinical presentations

Evaluation

Management

Take home messages

Dizziness - Anamnesis

Whether attacks are **episodic or continuous**

Frequency and duration

Precipitating factors

- Alcohol, medications, changing head or neck position, standing from lying, bending forward to pick something up, meals

Symptoms associated with

- Tinnitus, fullness in ear, fluctuating hearing loss, nausea, vomiting (Menière, Neurinome)
- Double vision, dysarthria, sudden blackout (vertebro-basilar)
- Sensitive signs : dysesthesia, pain,
- Motor signs : weakness, loss of strength

Dizziness - Anamnesis

Comorbidities

- Cardio-vascular: ischemia, embolism, rythmic, arteriopathy, valvulopathy
- Diabetes
- Anxiety
- Anemia
- Dementia
- Hypothyroid
- Neoplams and treatment
- Infectious / Systemic disease

Dizziness - Physical exam

Spontaneous walk and turn

Motricity and reflexes

Tonicity, Parkinsonism, Tremor

Wide-based stance and Romberg test

Cerebellum testing : finger-nose testing, dysarthria, voice, walk on a line

Fukuda stepping test

Proprioceptive, Vibration, Thermo-algesic and Tactile sensitivity

Dizziness - Physical exam

Cranial nerves testing

- Especially 2; 3,4,6; 7; 8 (vision, oculomotricity, audition, facial motor/sensitive)
- Corneal reflex (+ unilateral hearing loss -> acoustic neuroma)

Otoscopic examination, Dix-Hallpike maneuver

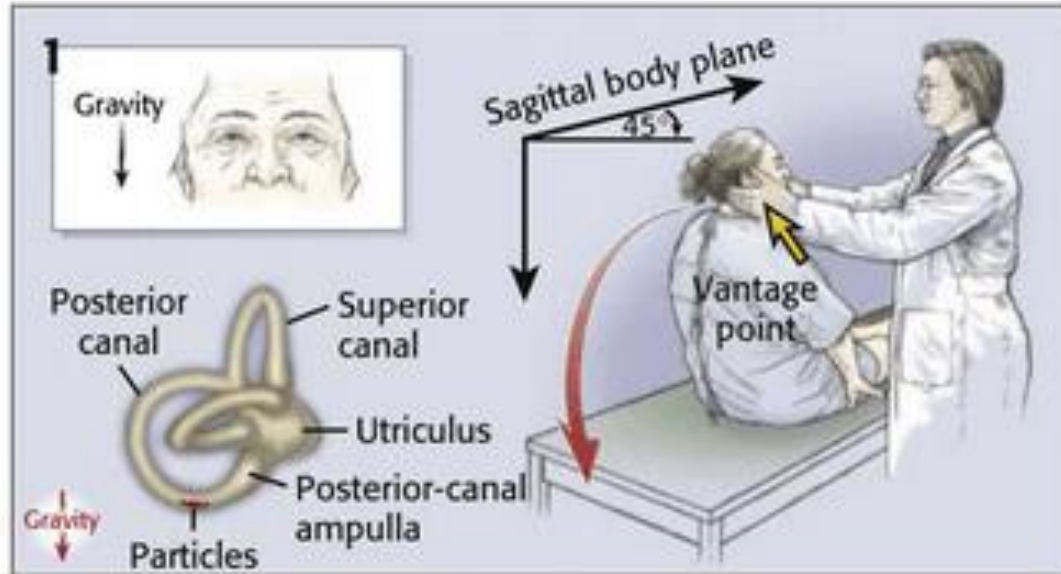
Neck : local tenderness or restriction in the range of movement

Congestive heart failure clinical signs : oedema

Carotid or heart murmur

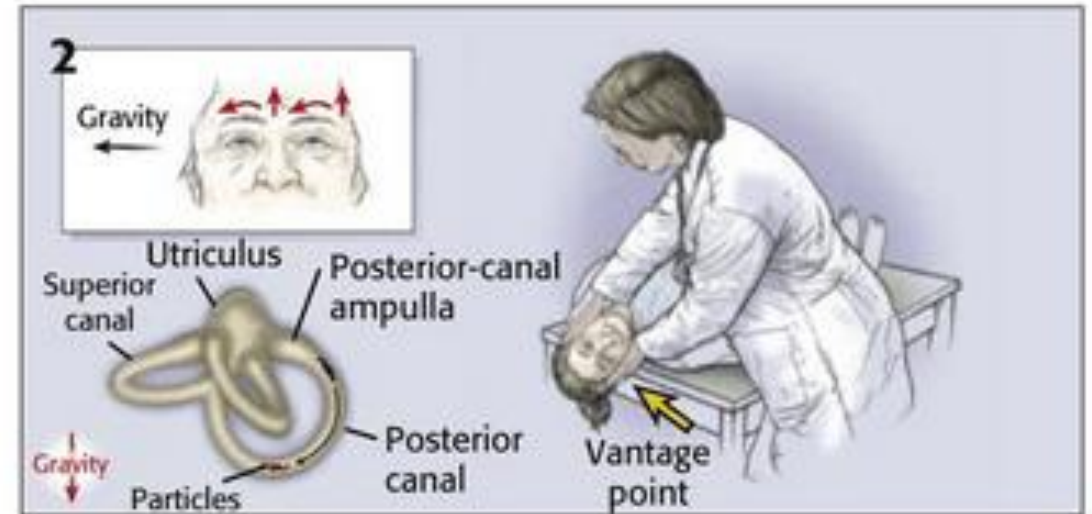
Peripheral vascularisation

DIX-HALLPIKE MANEUVER



The examiner stands at the patient's head, 45° to the right, to align the right posterior semicircular canal with the sagittal plane of the body.

The hear posted toward the ground is tested (the right hear in this picture). In case of Benign Positionel Paroxysmic Vertigo → vertigo + nystagmus → vertical, latency, short, fatigability, and inversion when the patient recovers sit position.



The examiner moves the patient, whose eyes are open, from the seated to the supine, right-ear-down position and then extends the patient's neck slightly so that the chin is pointed slightly upward. The latency, duration, and direction of nystagmus, if present, and the latency and duration of vertigo, if present, should be noted. *Inset:* The arrows over the eyes depict the direction of nystagmus in patients with typical BPPV. The presumed location in the labyrinth of the free-floating debris thought to cause the disorder is also shown.

A close-up, slightly blurred image of an electrocardiogram (ECG) trace. The trace is a black line on a grid of orange dots. The grid has vertical lines every 5 dots and horizontal lines every 10 dots. The trace shows a regular rhythm with a prominent QRS complex in the center.

Dizziness - Parameters

Blood pressure,

Heart rate

Orthostatic hypotension test

Glycemia

Dizziness - Investigations

Depending on

- medical history, anamnesis, physical exam
- supposed diagnosis
- patient's procare plan

→ « How this exam will be helpfull to take care of this patient ? »

→ « Is the treatment would be modified by the result of this Test ? »

Dizziness – Management

Dizziness could be secondary to several causes

Most often causes are not modifiable

Goal-oriented management

- **Apply disease-specific treatment**
- **Identify the modifiable causing or contributing factors**
- **Avoid negative clinical consequences**

Dizziness - Management

→ GOAL = **apply disease-specific treatment**

- Surgery and/or stereotaxy in case of neurinome (if in line with patient care plan)
- Vestibular rehabilitation
- Exercices combining movement of eyes, head and body

Dizziness - Management

→ GOAL = **Identify the modifiable causing or contributing factors**

- Anemia, metabolic disorders, vit B12 deficiency, thyroid abnormalities
- Correction of vision and hearing deficit
- Anxiety have to be considered as a cause and also a consequence of the dizziness → dilemma to manage anxiety with drugs able to cause dizziness → wich is the main cause of anxiety → wich could be the most adapted care

Dizziness – Management

→ GOAL = **Avoiding negative clinical outcomes**

Comprehensive Geriatric Assessment

- Including nutrition, cognitive, thymic, mobility assessment

Fall prevention program

- Including Physical therapy, behavioural and environmental review

Fall consequences prevention program

- vitD, calcium, osteodensitometry if needed and if estimated survival > 1 year.

Dizziness - Take Home Messages

Frequent with **several causes**

→ numerous **negative clinical consequences**,

→ Dizziness have to be **systematically screened** by anamnesis

Investigation, based on **anamnesis and physical exam**, has to

→ Deal with the patient plan care and wishes

→ Discuss target disease treatment if indicated

→ Identify the modifiable causing or contributing factors

→ Avoid negative clinical outcomes

Syncopa - Content

Definition and epidemiology

Clinical outcomes

Physiopathology

Etiology and clinical presentations

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Take home messages

Syncope - Definition and epidemiology

« Transient loss of consciousness due to transient global cerebral hypoperfusion »

- **rapid onset, short duration, spontaneous and complete recovery**

Experienced by up to **30 % of healthy adults at least once in their lifetime.**

- The seventh most common reason for emergency admission of patients over 65 years.

Mortality depends on **etiology, congestive heart failure history, male sex** and **clinical consequences** (brain injury, hip fracture...)

Syncope – Clinical consequences

- Falls
- Injuries related to falls
- Loss of self-esteem, self-confidence, QOL
- Hospitalisation and negative clinical/functional consequences
- Institutionalisation

Syncope - Physiopathology and etiology

Age related physiological changes

- Reduced baroreflex sensitivity, reduced blood flow, reduced blood volume

Atherosclerosis

Specific disorders

- orthostatic hypotension, postprandial hypotension,
- vasovagal syncope and carotid sinus hypersensitivity
- cardiac and cerebro-vascular syncope

Aspecific contributing factors

- Anemia, chronic lung disease, congestive heart failure, dehydration,
- Long standing, hot weather, alcohol, prolonged recumbency, large meals, ...

Syncope – Specific disorders

- Orthostatic hypotension
- Postprandial hypotension
- Reflex syncopal syndromes
 - Vasovagal syncope and carotid sinus hypersensitivity
- Cardiac syncope
- Cerebrovascular syncope

Orthostatic hypotension

Mechanism : Physiological responses are overloaded, not sufficient to maintain a minimal cerebral blood flow

Diagnostic criteria:

- A decrease ≥ 20 mm of systolic blood pressure
- OR a decrease ≥ 10 mm of diastolic blood pressure
- Measured 2- 3 minutes after standing up.
- Measure heart beat are not necessary but recommended
 - Bradycardics or autonomic system disorder

Orthostatic hypotension - Causes

- **Not only age-related**

- **Medications**

- **Autonomic failure.**

- Primary: multiple system atrophy, parkinson disease or pure autonomic failure
- Secondary: diabetic neuropathy or amyloid neuropathy

- **Volume depletion**

- hemorrhage, diarrhea, febrile illness, hot weather, extensive burn, third sector, mineralocorticoids deficiency

Orthostatic hypotension - Management

- Medications review: diuretics, vasodilators, antihypertensives, morphinics
- Avoid potential situation increasing reduced blood flow and correct anemia
- Secure the standing up
- If no lower limbs occlusive arteriopathy → compression stocks
- (Fludrocortisone): few EBM data available. Consider 0.1 mg 1-3/day by patients with Parkinson or severe diabète (Cochrane review). Pay attention to oedema and HTA (→ reduce à 0.05 mg 1-3/day)
- (Midodrine) : = $\alpha +$, but several contraindication including HTA, cardiomyopathy, artériopathy, retinopathy, glaucoma

Postprandial hypotension

Mechanism:

- An increase splanchnic and superior mesentery artery blood flow and a rise in plasma insulin level
- Without corresponding rises in sympathetic nervous system activity

Clinical presentation: similar to orthostatic hypotension with and a temporal relationship with the meal and without relation with orthostatisme.

Management:

- Small and frequent meals including complex carbohydrates
- Review of medications
- Avoidance reduced blood flow situations

Syncopa - Reflex syncopal syndromes

- Carotide sinus syncopa
- Vasovagal syncopa secondary to
 - Acute Pain : visceral pain, trigeminal neuralgia
 - Cough
 - Defecation
 - Micturition
 - Intensive exercise
 - Anxiety

Vasovagal syncope - Mechanism

Hypothese → abnormal Bezold-Jarish reflex.

In case of arterial pressure variability or decreased venous return as well in case of visual or nociceptive stimuli → abnormal Bezold-Jarish reflex

→ an abnormal vagal stimulus leading to a bradycardia AND a decrease in sympathetic vessels tonicity.

→ bradycardia and a blood pressure decrease → hypotension and/or bradycardia → sudden decrease of the cerebral blood flow.

Vasovagal syncope – Clinical presentation

A prodrome or aura / loss of consciousness / postsyncopal phases

Precipitating factor: extreme emotional stress, anxiety, physical pain, warm, environment, air travel, prolonged standing

Prodrome: weakness, nausea, visual defects, dizziness, visual or auditory hallucinations, dysarthria or paresthesias. Partial recall of prodromal period.

Syncopal period: brief, myoclonic jerk, or myoclonic movement.

Recovery is rapid (+/-) dizziness, nausea, headache, confusion, general sense of ill health

Vasovagal syncope - Diagnostic

Anamnesis and heteroanamnesis

Valsalva manoeuvre:

- symptoms are reproduced and/or,
- decrease in blood pressure > 50 mm Hg or less than 90 mm Hg and/or,
- asystole > 3 secondes or heart rate < 40 beats/min for at least 10 secondes.

Tilt test

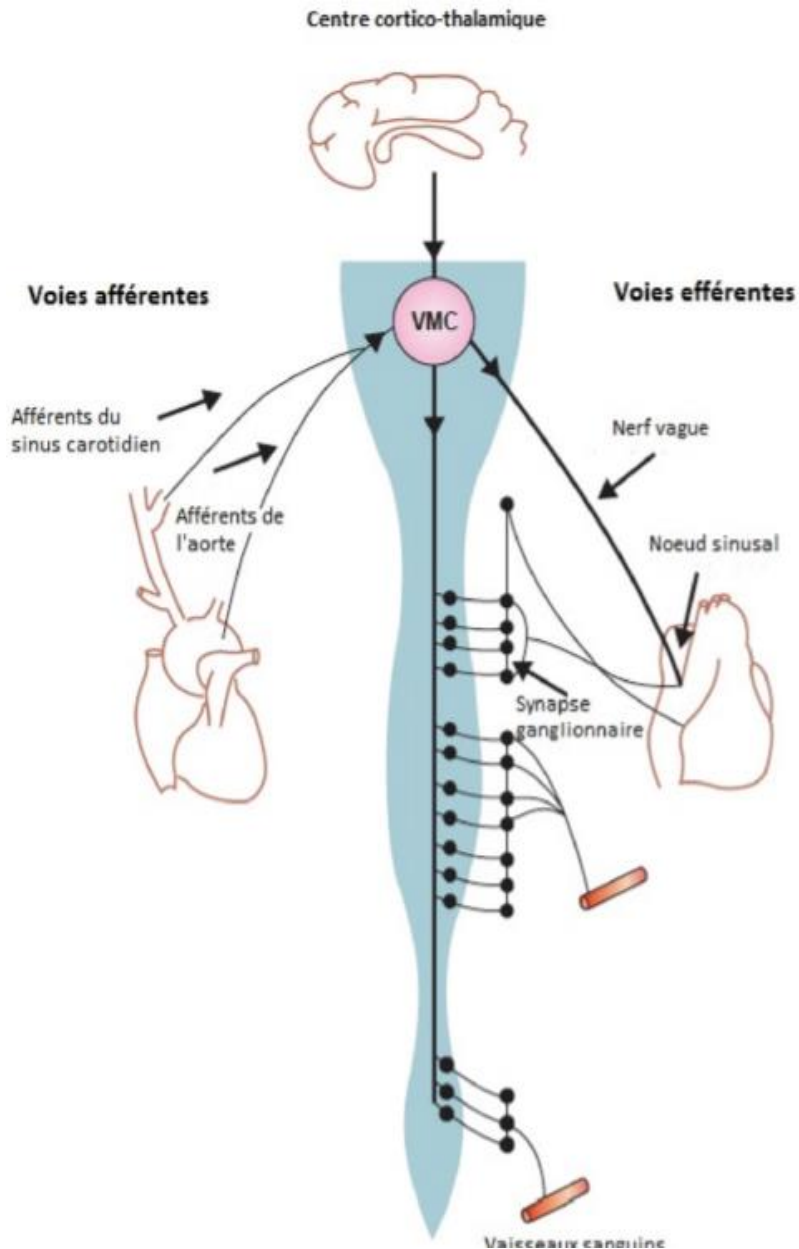
One-week external loop recording

(Implantable loop recorder)

Vasovagal syncope - Management

- Review medications : diuretics, vasodilators, antihypertensives, morphinics ...
- Avoid potential situation reducing blood flow
- Correct anemia, dehydration, any circumstances with volume depletion, ...
- If no occlusive arteriopathy, → compression stocks
- If at least three seconds asystole → permanent cardiac pacing

The carotid sinus syndrome or carotid sinus hypersensitivity



Mechanism: An episodic bradycardia and/or hypotension resulting from exaggerated baro-receptor-mediated reflexes secondary to a mechanical stimulation of the carotid sinus such as head turning, tight neckwear, neck pathology or vagal stimuli.

Carotid sinus hypersensitivity is divided in three forms :

- the cardio-inhibition form which is defined by an **at least three seconds asystole** (without PA decline),
- the vasopressive form defined by **a decrease of at least 50 mm Hg** (without asystole)
- the **mixt form** combining an asystole with a decline in arterial pressure.



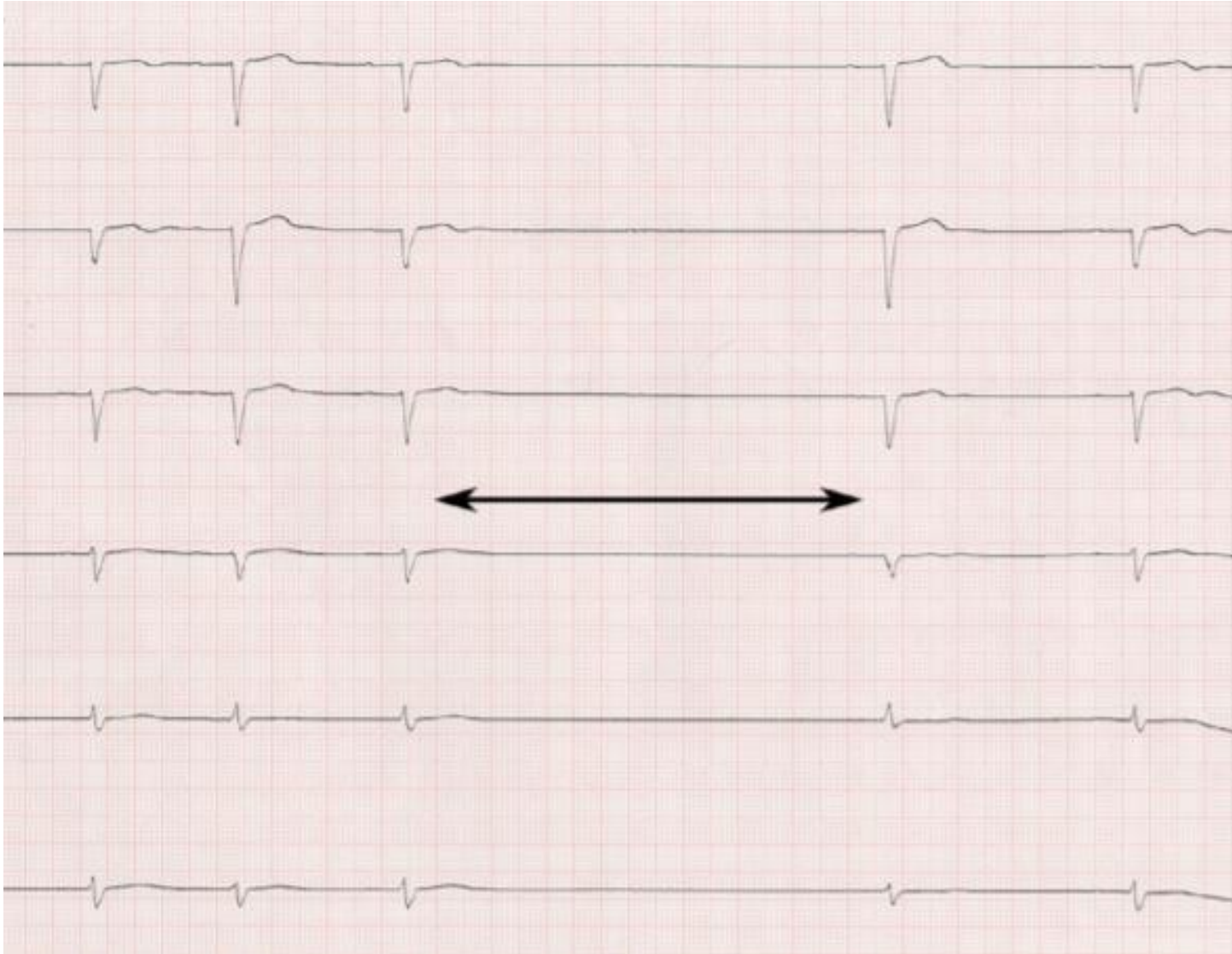
The carotid sinus syndrome or carotid sinus hypersensitivity

Diagnosis: Anamnesis and heteroanamnesis

Carotid sinus massage with a cardiac monitoring and physician able to manage severe bradycardia. The duration of carotid sinus massage is from 5 to 10 seconds.

Complications include cardiac arrhythmia and neurologic disorders

Carotid sinus should not be performed in patients who have had a recent cerebrovascular event or myocardial infarction (3 months), patient with a carotid stenosis history or patient who have a carotid murmur (American Heart Association). Caution should be taken in case of ventricular arrhythmia.



The carotid sinus syndrome or carotid sinus hypersensitivity

Dual-chamber cardiac pacing is the treatment of choice in patients with symptomatic cardioinhibitory carotid sinus syndrome.

Asymptomatic patient with hypersensitivity mustn't be treated by pacing.

Cardiac syncope

Frequent among older adults

Syncope caused by either cardiac disorders (rhythmic or ischemic or metabolic disorders) either mixed cardio-respiratory disorders.

Prodrome : palpitation, chest pain when supine or during exercises, dyspnea, dizziness, pre-syncopal feelings. Sometimes absent.

Causes : ischemic, rhythmic, valvulopathy, metabolic disorders

Cardiac syncope

Diagnosis : anamnesis and heteroanamnesis;

Electrocardiogram → conduction ? Ischemia ? long-lasting QT ? T waves?

One-week external cardiac rhythm recording → asystole > 3 seconds, rapide supraventricular or ventricular tachycardia;

An echocardiography;

An exercise stress test;

An electrophysiologic study.

Cardiac syncope, ESC recommendations

Recommendations of the European Society of Cardiology

- Mechanisms
- Classification
- Algorithm of investigation and management

➔ <https://www.heartrhythmalliance.org/files/files/stars/180320-dm-2018%20Syncope%20Guidelines.pdf>

Cardiac Syncope and medications

As reminder,

You can find there a list →
medications → a long QT
syndrome

DCI	Noms de spécialité
Amiodarone	Cordarone®, Corbionax®
Amisulpride	Solian®
Arsenic	Trisénox®
Bépridil	Unicordium®
Chlorpromazine	Largactil®
Clarithromycine	Naxy®, Mononaxy®, Zéclar®, Monozéclar®
Cyamémazine	Tercian®
Disopyramide	Rythmodan®, Iscorythm®
Dolasétron	Anzemet®
Dropéridol	Droleptan®
Ebastine	Kestin®, Kestin Lyo®
Érythromycine	
Fluphénazine	Modécate®, Moditen®
Halofantrine	Halfan®
Halopéridol	Haldol®
Indapamide	Preterax®, Fludex®, Bipreterax®
Lévofloxacin	Tavanic®
Lévomépromazine	Nozinan®
Méthadone	
Mizolastine	Mizollen®
Moxifloxacin	Izilox®
Penfluridol	Sémap®
Pentamidine	Pentacarinat®
Perphénazine	Trilifan®
Pimozide	Orap®
Pipampéron	Dipipéron®
Pipotiazine	Piportril®
Propéricazine	Neuleptil®
(hydro)quinidine	Sérécor®
Sotalol	Sotalex®
Spiramycine	Rovamycine®
Sulpiride	Dogmatil®, Synédil®
Sultopride	Barnétil®
Tiapride	Tiapridal®
Voriconazole	Vfend®

Cardiac syncope - Causes

Syncope secondary to a cardiopathy or a cardio-pulmonary disease include

Myocardial ischemic lesion, Valvulopathy (AO stenosis), Pulmonary embolism

Auricular myxoma or obstructive cardiomyopathy , pericarditis and cardiac tamponade

Diagnose : Myocardial enzymes, ECG, Echocardiography, Chest CT angiography

Management: Specific to the cause and according the patient profil

Cerebro-vascular syncope

Causes : Aortic/carotid dissection,

Subclavian derivation,

Transient ischemia, stroke,

Thrombo-embolic events

Diagnose : MRI with gadolinium / CT scan with contrast

Investigation and management are disease-specific

Syncope - A challenge for clinician

As for dizziness, the **anamnesis and physical exam are crucial**

Investigation and management have to

- Deal with the patient's profile
- Discuss target-disease treatment if indicated
- Identify the modifiable causing or contributing factors
- Avoid negative clinical consequences

Syncope - A challenge for clinician

Management should include

- Fear of falling
- Walk and balance abilities
- Physiotherapy
- Environnement
- Medications review : especially platelet aggregation inhibitors, anticoagulation therapy, sedative, diuretics....
- Ability to drive should be consider.
- **Minimal screening CGA** -> and more if needed

Take Home Messages

Syncope and dizziness are **frequent**, with potential **negative clinical consequences**.

Both should be **systematically screened**.

Investigation and management should be based on your hypotheses and the **patient's profile**.

Both are real **time-consuming challenge** for clinician.

However, both are opportunity to diagnose something which could be **curable**.

**In all cases, don't forget to prevent negative clinical consequences
and to plan a comprehensive geriatric assessment.**

Scientific supports used preparing this lecture

Hazzard's Geriatric Medicine and Gerontology, seventh edition, 2017

Oxford textbook of Geriatric Medicine, third edition, 2018

Handbook of Clinical Neurology, Vol. 137 (3rd series), 2016

Massage du sinus carotidien Carotid Sinus Massage, Ann. Fr. Med. Urgence (2018) 8:383-389

Pertes de connaissance brèves de l'adulte : prise en charge diagnostique et thérapeutique des syncopes, Haute Autorité de Santé, HAS, Mai 2008.

https://www.cochrane.org/fr/CD012868/NEUROMUSC_fludrocortisone-dans-le-traitement-de-lhypotension-orthostatique

<https://www.heartrhythmalliance.org/files/files/stars/180320-dm-2018%20Syncope%20Guidelines.pdf>