Supplementary materials

Bullet points

• Vertigo is a common reason for presentation to the Emergency Department; ‘benign’ peripheral forms are the most frequent causes, while central forms are rarer (1–2 out of 10).
• Benign paroxysmal positional vertigo (BPPV) is the most frequent form of vertigo, and posterior canal BPPV is more common than horizontal canal BPPV.
• Acute Peripheral Vestibular Dysfunction (APVD) represents the most frequent form of persistent spontaneous vertigo.
• Stroke may present as isolated persistent vertigo.
• It is recommended that clinical history investigate the duration of symptoms and triggering factors (‘timing’ and ‘triggers’).
• Based on these data, three forms can be defined, each pointing toward different groups of vestibular and non-vestibular disorders: -Acute vertiginous syndrome -Spontaneous episodic vertiginous syndrome -Triggered episodic vertiginous syndrome
• Nystagmus should be observed both with and without visual fixation, in the primary gaze position and then in the various gaze directions. It is important to detect: - the plane - the direction

- the temporal pattern
- whether the direction changes in different gaze positions

• Additional clinical tests that are important for the differential diagnosis between central and peripheral forms include:

- Head Impulse Test (HIT)
- cover test or test of skew
- assessment of standing balance

• The HINTS algorithm (Head Impulse test, Nystagmus direction, Test of Skew) should be applied to patients with Acute Vertiginous Syndrome and spontaneous nystagmus.

• The STANDING algorithm can also be useful for patients who report vertigo but do not present with nystagmus.

• The STANDING algorithm recommends assessing the patient’s ability to stand in all patients. Those who are unable to stand or walk without assistance have a high likelihood of central causes.

• BPPV is treated with repositioning maneuvers. For posterior semicircular canals, the Semont and Epley maneuvers can be used.

• For horizontal semicircular canals, the forced position of Vannucchi or the Gufoni maneuver are useful.

• Pharmacological therapy is beneficial for patients with vegetative symptoms and for those who experience persistent imbalance after the maneuvers.

• For AVPD, the only drugs with proven clinical efficacy are systemic corticosteroids, ideally administered within the first 24 hours.

• Vestibular suppressants are indicated in highly symptomatic patients for 1–5 days. Early mobilization promotes faster recovery.
• A patient with posterior ischemic stroke, or suspected posterior stroke, who presents within 4.5 hours of symptom onset should be treated with intravenous rtPA. • If a large vessel occlusion is present, mechanical thrombectomy should be performed following systemic thrombolysis.