Vestibular Migraine

Diagnostic Criteria and Treatment Options

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KEYWORDS

• Vestibular migraine • Vertigo • Anticonvulsants • Beta-blockers
• Tricyclic antidepressants • Dietary modification • Vestibular physical therapy

KEY POINTS

- Vertigo is defined as a false sensation of self-motion or a false sensation that the visual surrounding is spinning or flowing.
- The strict definition of dizziness is a sensation of disturbed spatial awareness.
- Diagnostic criteria for vestibular migraine and probable vestibular migraine have been established by the Bárány Society and the Migraine Classification Subcommittee of the International Headache Society (IHS).
- There is a need for well-designed randomized controls trials and a standardized outcomes measure tool to provide direction in the treatment of vestibular migraine.

INTRODUCTION

History of Vestibular Migraine

Among providers who treat migraine, vertigo has long-been a symptom present in a subset of their patients. Migraine and vertigo are described together throughout the medical literature canon. As long ago as the second century AD, Aretaeus, a Greek physician, describes a type of headache in which "the eyes may move to and fro and the patient is dizzy."[1] Later, a prominent nineteenth century neurologist, Dr Edward Liveing, defines in detail the varied clinical features of migraine, including "epileptic vertigo," in his famous text, *On Megrim, Sick-Headache and Some Allied Disorders: A Contribution to the Pathology of Nerve-Storms*.[2] Dr Liveing reported vertigo to be present in approximately 10% of his patients with migraines; this incidence rate was later confirmed in modern studies.[3] By the 1960s, pediatricians began to recognize the association between paroxysmal vertigo and migraine etiology in children.[4] The 1980s brought about collaboration between neurologists and

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otolaryngologists that led to published findings regarding large cohorts of patients with both migraine and vestibular symptoms[5–8] and successful treatment of these patients with migraine prophylaxis.[9] However, it would not be until 2012 that a gathering of specialists first defined the terminology and diagnostic criteria for vestibular migraine.[10]

A large swath of terminology (migraine equivalents, migraine-associated vertigo, migraine-associated dizziness, migraine-related vestibulopathy, and migrainous vertigo) has been used interchangeably to describe the same condition. Patients with this condition of many names often present with an unwieldy constellation of symptoms as well. Academic governing bodies recognized the need to provide clinicians with a criteria to accurately and consistently make the diagnosis of vestibular migraine. The Committee for Classification of Vestibular Disorders of the Bárány Society and the Migraine Classification Subcommittee of the International Headache Society (IHS), in a combined effort, established the diagnostic criteria for vestibular migraine.[10] Otologists, neurologists, and vestibular physiologists from the 2 groups convened in 2012 to outline the diagnosis that had been enigmatic to the medical community for centuries.

Diagnostic Criteria

Vestibular migraine and probable vestibular migraine are strictly clinical diagnoses. Making an accurate diagnosis requires attention to detail in history taking. The patient simply stating that he or she feels dizzy is inadequate. Oftentimes patients have difficulty finding the right words to describe their symptoms. True vertigo is defined as a false sensation of self-motion or a false sensation that the visual surrounding is spinning or flowing.[10] The strict definition of dizziness is a sensation of disturbed spatial awareness. Vertigo or dizziness episodes that are spontaneous, positionally triggered, visually induced, or head-motion induced can each be attributable to vestibular migraine or probable vestibular migraine. In addition to the type of vestibular symptoms and potential triggers, clinicians should take note of the duration and frequency of symptoms. The patient needs to have experienced at least 5 episodes of vertigo or dizziness lasting 5 minutes to 72 hours to meet diagnostic criteria. The vestibular symptoms must be either moderate (interfering but not prohibiting daily activities) or severe (inhibiting daily activities) in magnitude.

Vestibular symptoms alone are not sufficient to make the diagnosis of vestibular migraine or probable vestibular migraine. A patient also must present with migraine symptoms along with at least half of their vestibular episodes to have definite or probable vestibular migraine. The migraine features that may accompany vestibular episodes must include one or more of the following: headache, photophobia and phonophobia, and visual aura. The headaches must be consistent with migraine headache and include 2 of the following: unilateral location, pulsating quality, moderate to severe pain intensity, and aggravation with physical activity. Last and most importantly, the constellation of symptoms cannot be explained by another peripheral vestibular disorder or otherwise defined under the International Classification of Headache Disorders (ICHD).

Definite vestibular migraine is differentiated from probable vestibular migraine in that a current or previous diagnosis of migraine with or without aura is required for the former. It is worth noting that making the diagnosis of probable vestibular migraine does not require the presence of headache (**Tables 1** and **2**).