

# Epidemiological evidence for a link between vertigo and migraine

Michael von Brevern<sup>a,c,\*</sup> and Hannelore Neuhauser<sup>b,c</sup>

<sup>a</sup>*Department of Neurology, Park-Klinik Weissensee, Berlin, Germany*

<sup>b</sup>*Robert Koch Institut, Department of Epidemiology, Berlin, Germany*

<sup>c</sup>*Vestibular Research Group, Charité, Berlin, Germany*

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**Abstract.** Both migraine and dizziness/vertigo rank among the most common complaints in the general population. Worldwide, the lifetime prevalence of migraine is about 14%. Approximately 20% to 30% of the general population are affected by dizziness and vertigo.

Given the high prevalence of vertigo and migraine in the general population it is not surprising that many patients suffer from both symptoms. Nonetheless, in the last decade epidemiological arguments have progressively accumulated to strengthen the hypothesis that vertigo is linked to migraine beyond a mere chance concurrence. Several studies with selected patient groups have shown that the prevalence of vertigo is increased in patients with migraine. Vice versa, patients presenting to a dizziness clinic have a history of migraine more often than would be expected by chance. The epidemiological link between vertigo and migraine has recently been confirmed on the population level.

The relation between vertigo and migraine is intricate. In vestibular migraine, vertigo is conceptualized as a vestibular symptom caused by migraine. Vestibular migraine is the most common cause for recurrent spontaneous vertigo with a lifetime-prevalence in the general population of about 1%. Other vestibular disorders that display an increased prevalence of migraine are benign paroxysmal positional vertigo and Menière's disease. Furthermore, migraine is associated with motion sickness, rare ataxia disorders and psychiatric syndromes that can also manifest with vertigo and dizziness.

**Keywords:** Migraine, vestibular, vertigo, dizziness

## 1. Introduction

The clinical association between vestibular symptoms and migraine has gained increasing recognition during the last two decades. However, the interrelations between vertigo and migraine are complex. First, both migraine and vertigo are common complaints in the general population and may coexist in a patient just by coincidence. Second, some vertigo syndromes have been shown to be epidemiologically associated

with migraine. According to our current understanding, these disorders are linked to but not caused by migraine: Menière's disease, benign paroxysmal positional vertigo, motion sickness, rare cerebellar disorders and several psychiatric syndromes which may manifest with vertigo and dizziness. Finally, there is vestibular migraine that is conceptualized as episodic vertigo as a manifestation of migraine. In specialized dizziness clinics, vestibular migraine is one of the most common causes of recurrent vertigo, ranking before Menière's disease [7,39].

Thus far, our understanding of vestibular migraine is based on clinical and epidemiological observations, whereas the pathophysiology remains speculative. This article presents the epidemiological evidence for the

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\*Corresponding author: Michael von Brevern MD, Neurologische Abteilung, Park-Klinik Weissensee, Schönstrasse 80, 13086 Berlin, Germany. Tel.: +49 30 96283700; Fax: +49 30 96283705; E-mail: von.brevern@park-klinik.com.