Central Paroxysmal Positional Vertigo: Isolated Dizziness Caused by Small Cerebellar Hemorrhage

To the Editor:

Kerber et al report that the proportion of cerebrovascular events in patients presenting to the emergency department with dizziness, vertigo, or imbalance is very low (3.2%), and when these symptoms are not accompanied by any other neurological signs or symptoms, stroke/transient ischemic attack is diagnosed in only 0.7% of patients. They conclude that dizziness, vertigo, and/or imbalance in isolation is a strong indicator of a noncerebrovascular cause. We agree with their conclusion. However, there is a potentially serious pitfall.

We reported the diagnoses in consecutive patients presenting to the emergency department of our hospital between April 2002 and March 2004 with isolated acute-onset dizziness symptoms (n = 1332). The proportion of these patients shown to have cerebrovascular disease was only 1.7% (22 of 1332). As in the Kerber et al study, the percentage was very low. Among our patients, the most common diagnosis was benign paroxysmal positional vertigo (BPPV; 716 of 1332). BPPV has been recognized as the most common peripheral vestibular disorder, and it is diagnosed simply on the basis of the characteristic positional nystagmus. Interest in BPPV is increasing because its underlying pathophysiology was clarified recently.

Small cerebellar hemorrhage, especially around the vermis, sometimes causes isolated dizziness symptoms with positional nystagmus similar to that of BPPV. Although this “central paroxysmal positional vertigo” (CPPV) has long been recognized, it has been underdiagnosed recently with the influx of information on BPPV. In our above-mentioned study, CPPV caused by cerebellar hemorrhage (Figure), presenting with isolated dizziness symptoms and positional nystagmus, was ultimately diagnosed in 8 patients. However, in 4 of these patients, CPPV was incorrectly diagnosed in the emergency room as BPPV; cerebellar hemorrhage was not correctly diagnosed until CT was performed a few days later. In our study patients, ischemia in the posterior inferior cerebellar artery territory was diagnosed more frequently (12) than CPPV (8). However, in cases of posterior inferior cerebellar artery territory ischemia, nystagmus is rather obscure in comparison to imbalance, and thus, differentiation from BPPV is not difficult.

It is difficult to differentiate CPPV from BPPV, the more common peripheral vestibular disorder, on the basis of clinical presentation. We emphasize that we should re-recognize CPPV as a possible cause of acute-onset isolated dizziness symptoms and not hesitate to perform neuroradiologic examination even in patients previously diagnosed as having BPPV.

Disclosures

None.
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