Dizziness and Unstable Gait in Old Age—Etiology, Diagnosis and Treatment
by Prof. Dr. med. Klaus Jahn, Prof. Dr. med. Reto W. Kressig, Dr. med. Stephanie A. Bridenbaugh, Prof. Dr. med. Thomas Brandt, Dr. med. Roman Schniepp in issue 23/2015

Atlas-Occipital Joint Blockage not Mentioned
As so often when the subject of dizziness is concerned, this article too is lacking an important etiology of dizziness (1). A blockage of the atlanto-occipital joint causes unfocused dizziness, which in older people may well be accompanied by unstable gait, and, additionally, often headache and sensations of eye flashes on the affected side. This cause is not visible through radiography but is easily clinically palpable as a paramedian mostly painful induration on the occiput, which is different on both sides and is caused by the reflective increase in the tone of the muscles stabilizing the atlanto-occipital joint.

Using purely a movement technique of gentle chiropractic without applying strength or impulse can resolve any blockage of the atlanto-occipital joint at any age and in the presence of any comorbidity. In my practice, I treat patients on a daily basis who have experienced symptoms of dizziness for months or years, which apparative diagnostic evaluation was not able to confirm. Clinically, the cause is often a blockage of the atlanto-occipital joint. After successful treatment in one to three sessions, patients of all ages usually describe the improvement to their quality of life as tremendous.

I am happy to explain in detail and demonstrate the technique to interested colleagues.

REFERENCES

Hyponatremia Should Be Added
We read the excellent review article (1) with great interest. We wish to add a further factor to the already explained causes of dizziness and unstable gait in old age: in our opinion, hyponatremia is a clinically relevant cause of unstable gait in older patients.

Degenerative Changes of the Vestibular Receptors as Underlying Mechanism
The authors mention the occurrence of specific balance disorders in the elderly (for example, Menière’s disease, which has a prevalence of 0.1% in the general population) (1), but they do not sufficiently explain the sequential degeneration of the vestibular receptor (hair) cells (in that order: semicircular canal receptors → saccule → utricle) (2), which determines the clinical picture of vestibular disorders in the elderly—which the Berlin Aging Study (3) has demonstrated for the first time over a time period of 30 years (first longitudinal study so far). This study also showed that the determinants correlating the most with psychosocial well-being, social interactions, and cognitive-motor functions are primarily the sensory systems hearing and balance/equilibrium. Since falls usually occur out of a movement, the tests for balance assessment suggested by the authors (Romberg’s test, for instance, has a sensitivity of only 30% for detecting vestibular deficits) are possibly suitable for screening, but not to determine the extent and quality of a vestibular deficit and/or the need for therapy. Modern posturographic approaches (4) using standardized standing and walking tests that reflect the everyday life conditions of the elderly can be quickly and easily used to assess the postural stability and the risk of falls, which in turn can then be used to decide on a specific intervention (for example, the so-called neurofeedback balance training). A further important aspect is optimizing a patient’s hearing by means of hearing aids/implants, because fewer falls occur in those with good spatio-temporal orientation as supported by optimized hearing. Substituting all sensory functions is of crucial importance for a self-sustained life at old age—which the authors explicitly stressed for vision.

REFERENCES

Conflict of interest statement
The author declares that no conflict of interest exists.

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A recent prospective observational study from Switzerland showed that 31% of patients with severe hyponatremia <125 mmol/L experienced unstable gait (2).

Patients with mild chronic hyponatremia also fall notably more often than patients with normal serum sodium concentrations. Hyponatremia affects the gait pattern even more than a blood alcohol concentration of 0.6 g/L. However, an unstable gait is reversible by balancing out the hyponatremia (3). In a consecutive series over 15 months in 1659 patients at the geriatric hospital of the first author of this letter, a hyponatremia of <135 mmol/L was found in 30.0% of patients and one of <130 mmol/L in 10.1% of patients during the entire inpatient stay (authors’ own data). Older patients with hyponatremia are also more prone to developing ADH-induced osteoporosis and clinically relevant fractures (4).

Medication often plays a part; hyponatremia can develop during treatment with hydrochlorothiazide (HCT) and after consumption of medications affecting the central nervous system (antidepressants) and carbamazepine. For this reason, the diagnostic evaluation of dizziness and unstable gait in old age should always include laboratory tests for electrolytes, so as not to overlook hyponatremia. It is likely that the number of falls could be reduced if our awareness of and attention towards hyponatremia in geriatric patients were to increase further.

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The authors have received honoraria for lectures on the subject of hyponatremia from Otsuka.

Not Trivial
A detailed explanation of the causes and treatment options for dizziness in old age was long overdue and very clearly shows the complexities of an interdisciplinary approach (1). Because the problem is so common it is often regarded as trivial and as a “normal” movement disorder in old age—and all this when the risk of secondary complications, such as falls and psychological comorbidities, is extremely high. However, what would have been worth adding to the review article is the option of administering non-sedative medications that act on the symptoms and of betahistine as the medical of choice in endolymphatic hydrops. Adjusting people’s living environment and residences can also contribute crucially to avoiding falls as the most common complication.

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REFERENCES

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Dr Walter has received honoraria for lectures from Henning AM.

In Reply:
Dr Gorris-Vollmer describes successfully treating dizziness in patients with blockades of the upper cervical spine. There is no doubt that many patients with dizziness have symptoms and findings in the neck and the back of the neck areas and that this association exists in individual cases. However, the association is often assumed for no reason, especially since established clinical tests or apparatus-based diagnostics are not available to confirm this. This dilemma is also highlighted in a review article published in 2015 (1). Nothing has changed: if after a thorough medical history and examination of patients with dizziness problems these patients also have symptoms affecting their cervical spine that require treatment, then these should be treated independently of the dizziness. If the dizziness reduces in tandem with the cervical spine problems, even better. However, we can report from our supra-regional center that many patients have received treatment on their atlanto-occipital joint and cervical spine that did not result in any improvement of their dizziness.

Dr Walter rightly points out that in patients with dizziness, the option exists even in old age to treat causes and symptoms with medication. In our view, symptomatic treatments should be given with a clearly agreed treatment objective for a defined period of time. Non-sedating medications are preferable. In our clinical experience the treatment with betahistine as the medication of choice for endolymphatic hydrops is effective, even though high-quality clinical evidence for this treatment is still lacking (2). Adapting and adjusting the environment in order to avoid falls in patients with dizziness, as mentioned by Dr Walter, is extremely important.

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