Balance Disorders in Older Adults

David Eibling, MD

KEYWORDS

• Falls • Balance disorders • Presbystasis • Dizziness • Vestibular disorders • Frailty • Polypharmacy

KEY POINTS

- Vestibular function begins to decrease in middle age.
- Benign paroxysmal positional vertigo (BPPV) is the most common cause of vertigo in elderly.
- Balance disorders in the elderly are rarely caused by vestibular disease.
- Many medications affect balance and contribute to falls.
- Intervention for balance disorders should focus on reducing the number of medications, environmental enhancements, and vestibular rehabilitation.

INTRODUCTION

Balance disorders are common in older adults, and may lead to substantial morbidity by increasing the risk for falls (**Box 1**). It has been estimated that as many as one-third of older adults may suffer some complaint interpreted as dizziness in a typical year. Lin and Bhattacharyya reported on data on 37 million surveyed individuals 65 years of age or older derived from the 2008 National Health Interview.[1] Nineteen percent reported they had experienced dizziness or balance disorders in the past year. Of this subset, 68% had suffered imbalance, 30% true vertigo, and nearly 30% complained of faintness. A little more than a quarter of the affected individuals (27%) had limited their activities because of their dizziness or imbalance.

Those individuals with true vertigo can be assumed to suffer from true vestibular diseases such as benign paroxysmal positional vertigo (BPPV), which will be discussed later. Those who experience faintness may have postural hypotension, which patients often report as dizziness. The majority, 68% in this cohort, can be assumed to have disorders of balance, or disequilibrium.

Agrawal and colleagues reported findings from a simple screening test performed on more than 5000 adults older than 40 who participated in the 2001 to 2004 National Health and Nutrition Examination Survey.[2] Subjects were asked to

The author has nothing to disclose.
Department of Otolaryngology–Head and Neck Surgery, VA Pittsburgh Healthcare System, University Drive C, Pittsburgh, PA 15240, USA
E-mail address: eiblingde@upmc.edu

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Box 1
Causes of balance disorders

Vestibular
- Presbystasis
- Benign paroxysmal positional vertigo
- Meniere disease
- Vestibular neuronitis
- Vertibro-basilar insufficiency
- Postlabrynthitis vestibulopathy
- Migranous vertigo

Nonvestibular
- Frailty
- Multisensory disequilibrium
- Medications
  - Sedative
  - Psychoactive
  - Anticholinergics
  - Antihypertensives

stand on foam rubber with their eyes closed (modified Rhomberg on a compliant surface). More than a third (35%) had objective evidence of imbalance, and nearly one-half of adults in their 60s failed the test. Nearly 85% of the cohort 80 and older failed.

The figures quoted from Lin and Bhattacharyya add up to more than 100%, which is not surprising, since the complaint of dizziness can be attributed to a single diagnosis in less than one-half of affected patients. As in many other ailments affecting older adults, dizziness is typically multifactorial when encountered in the elderly. It is not uncommon to identify older adult patients presenting to an otolaryngologist with complaints of dizziness who have baseline presbystasis, episodic BPPV, orthostatic hypotension caused by antihypertensive medications, and exacerbation of their baseline presbystasis due to medications.

Despite the prevalence of balance disorders, affected individuals benefit from a comprehensive search for modifiable underlying etiologies. Many of these etiologies are well recognized by the readers of this article, but are often not apparent to practitioners without the benefit of training in gerontology. The role of the geriatric specialist in the education of primary care providers (PCPs) and other nongeriatricians is clear, particularly when sharing in the management of older adults who have balance disorders.

FALLS

The readers of this article need no reminding of the morbidity associated with balance disorders in older adults. The risk of falls in older adults is substantial, and increases dramatically with age and comorbidities. Recognition of the morbidity inherent in falls is not restricted to those who manage geriatric patients, or even to general health care workers. In fact, most individuals without medical training are aware of an older adult in their social circle who suffered a serious fall due to a balance disorder. An older family member of the author succumbed to a fall-induced closed head injury the day prior to starting this article, placing the significance of the issue in sharp focus.

The 2010 American Geriatric Society/British Geriatric Society (AGS/BGS) Clinical Practice Guideline (CPG) on fall prevention addresses the issue of falls in some