

Why benign paroxysmal positional vertigo remains undertreated despite quick fixes

Written by The Life Science Feed Editorial Team · Edited by Mara Voss

Benign paroxysmal positional vertigo (BPPV) is the most common cause of peripheral vertigo, a condition that can be debilitating for patients but is often treatable within minutes. Despite established, highly effective physical manoeuvres, many patients experience prolonged symptoms, repeated emergency department visits, and unnecessary investigations. This persistent gap between known efficacy and real-world application highlights a systemic failure in diagnosis and management.

KEY TAKEAWAYS

- **The Pivot:** BPPV is a mechanical problem with a mechanical solution, yet it is frequently misdiagnosed or mistreated with pharmacotherapy.
- **The Data:** Canalith repositioning manoeuvres, like the Epley, resolve BPPV symptoms in a high percentage of patients after one or two sessions.
- **The Action:** Clinicians should routinely screen for BPPV in patients presenting with positional vertigo and be proficient in performing or referring for repositioning manoeuvres.

Benign paroxysmal positional vertigo (BPPV) is a disorder of the inner ear characterised by brief episodes of vertigo triggered by specific head movements. These episodes typically last less than one minute and are often accompanied by nystagmus. The underlying mechanism involves otoconia, small calcium carbonate crystals normally embedded in the gelatinous layer of the utricle and saccule, becoming dislodged and migrating into one of the semicircular canals, most commonly the posterior canal. When the head moves into certain positions, these free-floating otoconia cause abnormal fluid movement (endolymph displacement) within the affected canal, leading to a sensation of spinning.

Patients often describe their vertigo as a sudden onset of spinning, tilting, or swaying, frequently provoked by looking up, lying down, turning over in bed, or bending forward. The condition can significantly impair quality of life, leading to falls, anxiety, and avoidance of activities. The diagnosis of BPPV is primarily clinical, relying on a detailed history and the characteristic nystagmus elicited by the Dix-Hallpike manoeuvre. This diagnostic test involves rapidly moving the patient from a sitting position to a supine position with the head turned 45 degrees to one side and extended 20 degrees. A positive test is indicated by the onset of vertigo and torsional nystagmus, typically after a latency of a few seconds, which then fatigues within 30 to 60 seconds.

The Diagnostic Challenge

The challenge in BPPV management often begins with diagnosis. Many clinicians, particularly in primary care or emergency settings, may not be familiar enough with the Dix-Hallpike manoeuvre or its interpretation. This can lead to

misdiagnosis, with patients being treated for other forms of dizziness, such as vestibular migraine or Meniere's disease, or even central causes of vertigo, which require entirely different approaches. The lack of a definitive, objective biomarker for BPPV means that clinical acumen remains paramount, but this acumen is not universally present. It is a common reason why recurrent vertigo often goes undiagnosed, despite clear patterns.

The symptoms of BPPV can also mimic more serious neurological conditions, prompting unnecessary neuroimaging or specialist referrals. While a thorough neurological examination is always warranted to rule out central causes, the characteristic features of BPPV, including its positional triggers, brief duration, and fatigability of nystagmus, should guide the diagnostic process. A careful history can often differentiate BPPV from other vestibular disorders, which may present with longer-lasting episodes, auditory symptoms, or continuous imbalance.

The Mechanical Solution

The treatment for BPPV is remarkably straightforward and effective: canalith repositioning manoeuvres. These physical therapies aim to move the dislodged otoconia out of the semicircular canal and back into the utricle, where they no longer cause symptoms. The most widely known and effective manoeuvre is the Epley manoeuvre, designed for posterior canal BPPV, which accounts for approximately 80-90% of all BPPV cases. This manoeuvre involves a series of specific head and body positions, held for about 30-60 seconds each, to guide the otoconia through the canal and into the utricle. The entire procedure typically takes less than 15 minutes.

Variations exist for other canal involvement, such as the Semont manoeuvre or liberatory manoeuvre for cupulolithiasis (otoconia adhering to the cupula) and various roll manoeuvres for horizontal canal BPPV. The success rate of these manoeuvres is high, with many patients achieving complete resolution of symptoms after one or two treatments. Some studies indicate success rates exceeding 80% after a single manoeuvre and over 90% after multiple sessions. This makes BPPV one of the most treatable causes of dizziness, offering immediate and profound relief to patients.

Why Treatment Falls Short

Despite the high efficacy and simplicity of these manoeuvres, BPPV remains undertreated. Several factors contribute to this persistent gap. A primary issue is a lack of training and confidence among general practitioners and even some specialists in performing the diagnostic Dix-Hallpike manoeuvre and subsequent repositioning manoeuvres. Medical school curricula and postgraduate training often provide insufficient emphasis on vestibular disorders, leaving many clinicians unprepared to manage BPPV effectively. This knowledge deficit means that patients may not receive the correct diagnosis or treatment in a timely manner, leading to prolonged suffering and unnecessary healthcare utilisation. Another contributing factor is the reliance on pharmacological treatments, such as vestibular suppressants (e.g., antihistamines, benzodiazepines), which only mask symptoms and do not address the underlying mechanical problem. While these medications can provide temporary relief, they can also cause side effects like drowsiness and sedation, further impairing balance and potentially increasing the risk of falls. Long-term use of vestibular suppressants can also hinder central compensation, prolonging recovery. The Oxford Handbook of Neurology provides a concise overview of these and other neurological conditions, but practical application of physical manoeuvres requires hands-on training. Patient education also plays a role. Many patients are unaware that their vertigo is caused by a mechanical issue that can be fixed with physical therapy. They may not know to ask for specific diagnostic tests or treatments, relying instead on their clinician to guide them. When clinicians are not equipped to provide this guidance, patients can become frustrated

and disillusioned with the healthcare system. This is a common theme in healthcare, where compelling health claims often fail patients due to implementation gaps.

The Path Forward

Improving the management of BPPV requires a multi-pronged approach. Enhanced education and training for healthcare professionals are critical. This includes incorporating more comprehensive modules on vestibular disorders into medical school curricula, offering practical workshops on diagnostic and repositioning manoeuvres for primary care physicians, and encouraging specialists to routinely screen for BPPV. Simulation-based training could be particularly valuable, allowing clinicians to practice these manoeuvres in a controlled environment.

Developing clear, accessible clinical guidelines for BPPV diagnosis and management could also help standardise care. These guidelines should emphasise the importance of the Dix-Hallpike manoeuvre and the Epley manoeuvre as first-line interventions, discouraging the overuse of pharmacological agents. Promoting interdisciplinary collaboration between primary care, emergency medicine, and audiology or otolaryngology specialists could also facilitate timely referrals and appropriate treatment. For instance, a patient presenting to the emergency department with acute vertigo could be screened for BPPV and, if positive, referred directly to a physical therapist or audiologist trained in vestibular rehabilitation.

Public awareness campaigns could also empower patients to seek appropriate care. Informing the public about the symptoms of BPPV and the availability of effective treatments could encourage them to advocate for themselves and ask their doctors about specific diagnostic tests and manoeuvres. Bridging the gap between evidence-based treatment and clinical practice for BPPV is not just about knowledge, but about systemic changes in education, guidelines, and healthcare delivery.

CLINICAL IMPLICATIONS

The persistent undertreatment of benign paroxysmal positional vertigo is a stark reminder that even simple, highly effective interventions can be overlooked in a complex healthcare system. Clinicians in primary care and emergency departments are often the first point of contact for these patients, yet many remain uncomfortable or untrained in performing the basic diagnostic and therapeutic manoeuvres. This leads to unnecessary suffering, repeated visits, and the inappropriate use of medications that only mask symptoms.

The solution is not a new drug or a complex surgical procedure, but rather a renewed focus on fundamental clinical skills. Integrating practical training on vestibular assessment and repositioning manoeuvres into medical education and continuing professional development is essential. It is a low-cost, high-impact intervention that could significantly improve patient outcomes and reduce healthcare burden.

For patients, the implications are profound. A condition that can be resolved in minutes often becomes a chronic source of anxiety and disability. Empowering patients with knowledge about BPPV and its treatability could help them navigate the healthcare system more effectively, advocating for the specific physical therapies that offer genuine relief rather than symptomatic management.

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