Assessment and management of patients presenting to the Emergency Department (ED) with dizziness, vertigo or imbalance

Western Health

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Introduction

Age-related peripheral vestibular conditions are highly prevalent and under-diagnosed. Benign Paroxysmal Positional Vertigo (BPPV) is the most common vestibular disorder in adults, and has been estimated to be an underlying contributing factor in 20-35% of patients presenting with dizziness.

Clinical practice consensus guidelines were published in 2008 to provide evidence-based recommendations for the assessment, diagnosis and treatment of BPPV[1]. Despite this, a significant evidence-practice gap has been demonstrated in multiple international studies.

In Australia, peripheral vestibular conditions may be diagnosed and managed by both medical doctors and physiotherapists. No information has been published relating to the current management of patients with BPPV in Australian EDs, or more broadly, the role of physiotherapists in the management of peripheral vestibular dysfunction in the Australian acute hospital setting.

Aims

To determine the proportion of patients:

1) Presenting with symptoms of dizziness, vertigo or imbalance, who were assessed and managed in accordance with published clinical practice guidelines for BPPV,
2) With a positive diagnostic test for BPPV,
3) Discharged without a clear cause for symptoms identified.

Methods

Retrospective audit of the electronic medical records of 96 patients presenting to three emergency departments with symptoms of dizziness, vertigo or imbalance at triage.

Results

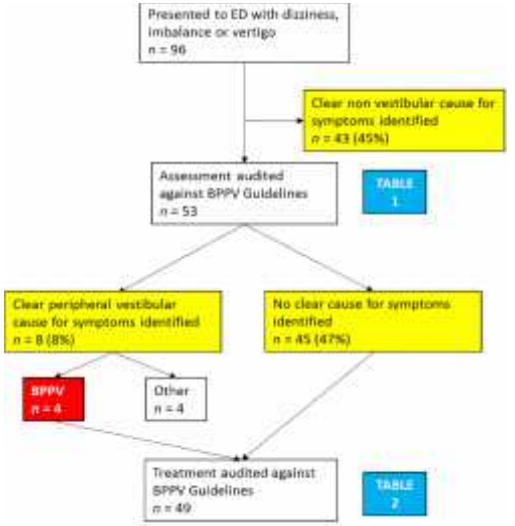
Table 1 Adherence to evidence-based practice - Diagnostics

Assessment component	Consensus guideline statement[1]	Doctors n (%)	Physios n (%)	Difference between clinical specialties (p)
Patient interview				
Pattern of dizziness	Recommendation	27 (51)	3 (23)	0.12
Hearing loss and tinnitus	Recommendation	17 (32)	2 (15)	0.49
Mobility and falls history	Recommendation	33 (62)	12 (92)	0.05
Physical assessment				
Nystagmus	Recommendation	26 (49)	2 (15)	0.03
Occulomotor dysfunction	Recommendation	13 (25)	2 (15)	0.72
Central neurological signs	Recommendation	41 (77)	1 (8)	<0.01
Hallpike-Dix Manoeuvre	Strong Recommendation	15 (28)	2 (15)	0.49
Roll test	Recommendation	0 (0)	0 (0)	1.00
Radiological investigations				
CT / MRI Brain	Recommendation against	20 (37)	n/a	n/a

Table 2 Adherence to evidence-based practice - Intervention

Canalith repositioning technique	Recommendation	3 (6)	1 (8)	0.99
Vestibular suppressant medication	Recommendation against	30 (61)	n/a	n/a
Referral for follow-up	Recommendation	6 (12)	5 (42)	0.03
Education	Recommendation	8 (16)	6 (50)	0.02

Figure 1 Audit Flowchart



Conclusions

- Diagnosis of BPPV is usually arrived at through a process of elimination, rather than during initial physical assessment via the gold-standard clinical test. This represents a significant gap between evidence and clinical practice.
- Only 4% of patients had a positive diagnostic test for BPPV.
- Improved adherence to clinical practice guidelines has the potential to reduce health costs, through reduction of unnecessary diagnostic tests and expediting appropriate interventions for patients with BPPV.
- Novel methods should be sought to address this evidence-practice gap.

Reference

Bhattacharyya et al. (2008) Clinical Practice Guideline: BPPV, Otolaryngology – Head and Neck Surgery 139:5, S47-S81.