The Causes, Diagnosis and Treatment of Benign Paroxysmal Positional Vertigo (BPPV)

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DIZZINESS AND VERTIGO

5 -10% of all general practice consultations

10 -20% of all patients seen by otolaryngologists and neurologists

(Thomas Brandt. Vertigo: It’s Multisensory Syndromes. 2nd ed. Springer 1991)
DIZZINESS AND VERTIGO

DIZZINESS: “a sensation of disturbed or impaired spacial disorientation without a false or distorted sensation of motion (vertigo)”

VERTIGO: “an hallucination of motion [usually spinning] when no motion is occurring”

Causes of Dizziness

High blood pressure
Low blood pressure (postural drop)
Low blood sugar
Cardiac arrhythmias (atrial fibrillation)
Hyperventilation
Medication side-effects
COMPONENTS OF THE BALANCE SYSTEM
Gravity detectors which project through vestibular nuclei to the postural muscles
INNER EAR: SEMICIRCULAR CANALS
which project through the vestibular nuclei to the extra-ocular muscles

A free teaching app. from the iTunes store
THE VESTIBULAR CORTEX

Asymmetrical response or abrupt loss of input $\rightarrow$ VERTIGO
VERTIGO

• Spinning/whirling sensation (hallucination)
• Nystagmus (rhythmical beating of the eyes)
• Loss of postural reflexes (fall down or lie down)
• Nausea → vomiting

There MUST be nystagmus
If NOT do a positional test
The Most Common Causes of Vertigo

Benign paroxysmal vertigo (BPPV) (50%)

Vestibular neuritis

Meniere’s disease

Vestibular migraine
Dix and Hallpike in London 1952

Dix-Hallpike Provocative Positional Test
Right Dix-Hallpike Test
John Epley: Free Otoconia in posterior canal
The Proof: Otoconia in Canal Photographed

Think of it like an apple in a stocking
Right Dix-Hallpike Test
Epley “Repositioning” Procedure for BPPV

About 70% first; 80% second 90% third
Other Treatments for Posterior Canal BPPV
Brandt-Daroff Exercises
Other Treatments for Posterior Canal BPPV
Semont Manoeuvre
“Dizzyfix”: An Epley CRP Teaching Tool
Not Always So Simple: Horizontal Canal BPPV

Direction-changing horizontal nystagmus. Often wakes a patient whose partner calls an ambulance.
Treatment of Horizontal Canal BPPV

Turning over and over in the horizontal plane
BPPV: 50% Of All Vertigo

Brief vertigo on change of head position
Usually 50+ years
Often follows mild head trauma
Can follow dental treatment, an operation or the hairdresser
Likely a cause of accidents and falls in the elderly

Spontaneous remissions and recurrences

No place for vestibular suppressant drugs!!
When All Else Fails
A Caution

If BPPV signs are

* Non-typical
* Persisting

Must exclude CENTRAL PATHOLOGY which includes MIGRAINE.
New Zealand Society For Balance, Dizziness and Vertigo Inc.

“In God We Trust; All Others Must Bring Data”

Website: http://darith.co/nzbdv
Vertigo: Yes it usually is (BPPV 50%)

"It may be his inner ear."
Review Article

Benign Paroxysmal Positional Vertigo (BPPV): History, Pathophysiology, Office Treatment and Future Directions

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BPPV is the most common cause of vertigo. It most often occurs spontaneously in the 50 to 70 year age group. In younger individuals it is the commonest cause of vertigo following head injury. There is a wide spectrum of severity from inconsistent positional vertigo to continuous vertigo provoked by any head movement. It is likely to be a cause of falls and other morbidity in the elderly. Misdiagnosis can result in unnecessary tests. The cardinal features and a diagnostic test were clarified in 1952 by Dix and