Dizziness: An Update in Diagnosis and Treatment

BalanceMD & Indiana Hearing Specialists
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Vestibular System Disorders: Gaps in Knowledge

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Speaker Disclosure

Indiana Hearing Specialists offer the sale of hearing aids manufactured by Oticon, Phonak, Starkey and Resound. Please note all relevant financial relationships have been mitigated.

The Dizzy Patient

There can be few physicians so dedicated to their art that they do not experience a slight decline in spirits on learning that the patient's complaint is of 'dizziness'

- WB Matthews, 1975, British Neurologist

Survey of IN Physicians

- In 2012, while filling out the abstract submission form to speak for the IAFP convention, there was a "gaps in knowledge" section that led to sending out a survey regarding 'dizziness' to IN physicians
- The results are as follows:

Survey of IN Physicians

General Questions

- 72% NOT excited when their patient reports 'dizziness'
- 16% consider themselves 'skilled' in the diagnosis and treatment of 'dizziness'

Survey of IN Physicians

Diagnostic testing preferences

- 50% would order blood tests, carotid doppler AND a neuro-imaging study BEFORE Vestibular Testing (ENG/ VNG)

Survey of IN Physicians

BPPV

- 41% would prescribe meclizine and 36% would order a neuro-imaging study before placing the patient in Dix-Hallpike position to check for BPPV
- 20% felt confident in diagnosing and treating BPPV

Survey of IN Physicians

BPPV (cont'd)

- 60% unaware there is more than one type of BPPV
- In matching BPPV with the type of nystagmus seen in posterior canal BPPV and horizontal canal BPPV, 44% did not even attempt to answer

Otology & Neurotology Survey 2016

These results are in keeping with our experience over the past decade

- 25% reported being diagnosed with Meniere's
  - actual number is < 5%
- 18% reported being diagnosed with vestibular migraine
  - actual number is closer to 50%
- Nearly half reported being treated with the Epley maneuver (for BPPV), but only 15% reported being diagnosed with BPPV
  - So, 2/3 patients received treatment for a condition they did not have
- 9% were diagnosed with bilateral vestibular nerve loss
  - actual number is < 1% - this is due to inadequate testing (no rotary chair)

BalanceMD 2014

- Over 900 new patient charts reviewed
  - 50% vestibular migraine
  - 15% BPPV
  - 12% vestibular neuritis / labyrinthitis
  - 3% Meniere's disease

Incorrect Diagnoses

<u>Over-diagnosed</u>

- BPPV
- Meniere's

<u>Under-diagnosed</u>

- vestibular migraine
- 3PD

"Gaps in Knowledge"

To Diagnose AND Treat Effectively

- Our abilities to diagnosis and treat dizziness and vertigo have changed markedly over the past 2-3 decades
- We can now recognize WHY someone is dizzy and have figured out how to treat and often CURE them

What 'We' (Used To) Say

- You'll just have to learn to live with it.
- You're old.
- You have vertigo. Take meclizine and hopefully it will eventually go away.
- Drink more water.

What 'We' (Should) Say Now

- Oh, your positional vertigo symptoms sound like BPPV, let's fix this problem right now
- You have a weakness of one of the nerves that affects your balance. Physical therapy (vestibular rehabilitation) can improve your dizziness / imbalance symptoms significantly.
- The migraines you used to have are back, but instead of causing painful headaches, you are just feeling dizzy. We have an inexpensive generic medication that can take care of that.

So What's Changed?

- Advancements in Knowledge
- Advancements in Technology

New Knowledge

- Recognizing 'Migraine-associated Dizziness'
- Benign Paroxysmal Positional Vertigo (BPPV) aka the 'crystal' problem - multiple variants of BPPV
- Vestibular Rehabilitation Therapy (PT)
  - no longer use just Cawthorne-Cooksey or Brandt-Daroff exercises
- Discovering Superior Canal Dehiscence Syndrome
- Defining 3PD (Persistent Postural-Perceptual Dizziness) - formerly 'chronic subjective dizziness'

New Technology

- Infrared Video-oculography (video goggles rather than electrodes)
- Air Caloric Testing (rather than water)
- Rotational chair technology advancements
- Vestibular Evoked Myogenic Potential (VEMP) to analyze the inferior division of the vestibular nerve

What We Should No Longer Be Doing

We should no longer be:

- blindly ordering **non-useful** diagnostic tests
  - CT or MRI brain
  - carotid doppler, ECHO
  - EEG
- prescribing meclizine for more than 3 days at a time
- instructing all 'dizzy' patients on "Cawthorne-Cooksey" or "Brandt-Daroff" exercises or having them do the Epley maneuver on themselves 10x/day at home
- referring all 'dizzy' patients to Physical Therapy

What We Should Be Doing

- Performing a thorough history and physical examination, including checking for nystagmus, abnormal eye movements, neurologic abnormalities and hearing loss
- In patients with positional dizziness symptoms, check for and treat Benign Paroxysmal Positional Vertigo - **BPPV (#2)**
- Prescribe meclizine ONLY short-term for acute vestibular syndromes (ie, vestibular neuritis, Meniere's)
- Proceed with **Vestibular Function Testing and Audiogram** (*the best tests for 'dizziness'*) in select patients in whom the diagnosis is not obvious
- Recognizing dizziness due to a tendency (or past history) for having **MIGRAINE (#1)** headaches (Vestibular Function Testing usually normal)
- Physical therapy in select patients based on underlying cause of dizziness/imbalance and only to therapists skilled in vestibular rehabilitation therapy

Vertigo is a Symptom

Patient: "I was diagnosed with vertigo"

- "Vertigo" is not a diagnosis, it is a symptom
  - analogy to "chest pain"
- There are now many identifiable and treatable conditions that cause 'dizziness' and are recognized easily by physical examination and/or **vestibular function testing**
- We need to identify the CAUSE of the dizziness or vertigo in order to apply an effective treatment