Vestibular Migraine Panel Session

David R. Friedland MD, PhD
Professor and Vice-Chair
Chief, Division of Otology and Neuro-Otologic Skull Base Surgery

Panelists

• Steven Harvey MD
  – Neuro-otologist
• Fallon Schloemer MD
  – Migraine specialist
• Michael Harris MD
  – Neuro-otologist

Learner Objectives

• After this presentation you should:
  – 1) recognize vestibular migraine as the most common cause of episodic vertigo
  – 2) understand similarities and overlap with Meniere’s disease
  – 3) understand other considerations for chronic dizziness
Case # 1

- 45 year old female presents with episodes of dizziness
- What do you ask about dizziness?

Case #1: Dizziness

- Duration and Recurrence
  - 6-8 hours; 8 attacks in past 5 months; 2 attacks last week
- Nature
  - Intense, can’t walk, crawls to bathroom
  - Is this vertigo?
- Associated symptoms
  - N/V, left ear/head pain; loud fluctuating static in left ear
  - Thinks may have some left hearing loss

Case #1: History

- What further information do you need?
Case #1: History

• What further information do you need?
  – Migraines with 1st pregnancy 15 years ago
  – Occasional retinal migraines
  – Gets “sinus headaches” 1-2x per month
  – Regular menstrual cycle
  – No medications
  – No prior otologic history; no head trauma

Case #1: Physical Exam

• What do you do?
• What are you looking for?

Case #1: Physical Exam

• Normal ear exam
• Weber to the right
• Head thrust normal
• Head shake: mild right beating
Case #1: Testing

- What testing do you request?

Case #1: Testing

- Is there a role for VNG in this case?
- Is there a role for rotary chair in this case?
- Do you use ECoG? What is the role?
- Do you use VEMPs? What is the role?
- Is there a role for MRI?
Case #1: Differential

- What is your differential diagnosis?
- What are your recommendations?

Diagnostic Criteria - 2015

- Definite Meniere’s Disease
  - Episodic vertigo
    - 20 minutes to 12 hours
  - Low-to-medium frequency sensorineural hearing loss
  - Fluctuating aural symptoms
    - Hearing, tinnitus, and/or fullness in affected ear

Case #2

- 45 year old female presents with episodes of dizziness
- What do you ask about dizziness?
Case #2: Dizziness

- Duration and Recurrence
  - 12 hours to all day; 8 attacks in past 5 months; 2 attacks last week; wiped out next day
- Nature
  - Intense wooziness; like spinning in head
  - Is this vertigo?
  - Foggy, can’t concentrate
- Associated symptoms
  - N/V, left ear/head pain; loud ringing in both ears
  - Feels gets bilateral hearing loss during attacks

Case #2: History

- What further information do you need?
  - Migraines with 1st pregnancy 15 years ago
  - Occasional retinal migraines
  - Gets “sinus headaches” 1-2x per month
  - Irregular menstrual cycle; hot flashes
  - No medications
  - No prior otologic history; no head trauma
Case #2: Testing

- Is there a role for VNG in this case?
- Is there a role for rotary chair in this case?
- Do you use ECoG? What is the role?
- Do you use VEMPs? What is the role?
- Is there a role for MRI?

Case #2: Physical Exam

- What do you do?
- What are you looking for?

Case #2: Physical Exam

- Normal ear exam
- Weber midline
- Head thrust normal but blinks a lot
- Head shake normal but feels ill
Case #2: Testing

• What testing do you request?

Case #2: Testing

• Is there a role for VNG in this case?
• Is there a role for rotary chair in this case?
• Do you use ECoG? What is the role?
• Do you use VEMPs? What is the role?
• Is there a role for MRI?
Case #2: Differential

• What is your differential diagnosis?
• What are your recommendations?

Diagnostic Criteria

• At least 5 episodes with vestibular symptoms of moderate or severe intensity lasting 5 minutes to 72 hours
• Current or previous history of migraine
• One or more migraine features with 50%
  – Headache: unilateral, pulsing, moderate to severe, aggravated by activity (need 2)
  – Photo- or phono-phobia
  – Visual aura

References

• J Neurol (2016) 263(suppl 1):S82-89
  – Vestibular migraine: the most frequent entity of episodic vertigo
Case # 3

- 45 year old female presents with episodes of dizziness
- What do you ask about dizziness?

Case #3: Dizziness

- Duration and Recurrence
  - All the time; 8 major episodes in past 5 months; 2 severe exacerbations last week; wiped out most days
  - First major attack 9 months ago after the flu; vertigo lasting 3 days; then better for few months
- Nature
  - Spinning, woozy, lightheaded, foggy, imbalanced
  - Can’t work, can’t do some ADLs; worse walking
  - Fatigue, motion sensitive, low-grade nausea
- Associated symptoms
  - N/V, left ear/head pain; loud ringing in both ears
  - Feels has bilateral severe hearing loss always

Case #3: History

- What further information do you need?
Case #3: History

- What further information do you need?
  - Denies migraines
  - Denies retinal migraines but eyes don’t focus
  - Gets “sinus headaches” daily
  - Has fibromyalgia
  - On xanax, reflux meds, pain meds
  - No prior otologic history; no head trauma

Case #3: Physical Exam

- What do you do?
- What are you looking for?

- Normal ear exam
- Rinne and Weber difficult to repeat and interpret
- Try head thrust but eyes wander and roll around
- Head shake causes pseudo-seizure
Case #3: Testing

• What testing do you request?

Case #2: Testing

• Is there a role for VNG in this case?
• Is there a role for rotary chair in this case?
• Do you use ECoG? What is the role?
• Do you use VEMPs? What is the role?
• Is there a role for MRI?

Case #3: Differential

• What is your differential diagnosis?
• What are your recommendations?
3PD

- Persistent Postural and Perceptual Dizziness
- Chronic subjective dizziness
- Starts with a vestibular insult
- Strong anxiety, depressive, psychological overtones
- Non-physiological responses
- Responds to SSRIs/SNRIs; CBP

Summary

- Do:
  - Understand vestibular migraine is vastly more common than Meniere’s disease
  - Use diagnostic criteria for Meniere’s disease to help distinguish from vestibular migraine (audiogram)
  - Be judicious in the use of testing

Summary

- Do not:
  - Fail to acquire a complete and accurate history
  - Over order tests with little diagnostic specificity
  - Be quick to establish a diagnosis; it may take time (diary, repeat audiogram)