**LECTURE OBJECTIVES**

- Understand the historical context of Persistent Postural Perceptual Dizziness (3PD).
- Know how to recognize the condition.
- Understand the multidisciplinary approach to treatment.

**CC: “I FEEL SPACY”**

- Patient presents with a 2 year history of feeling dizzy.
  - Described as feeling spaced out, “off”, as if she is moving, states as though equilibrium is off.
- 2 years back had an episode of vertigo following an upper respiratory infection. The vertigo resolved but feelings above persisted.
- Patient has history of mild situational anxiety but this has worsened since onset of symptoms.
- No longer driving as she feels as though it’s unsafe.
- Examination and work-up including MRI/MRA brain, VNG, hearing test, autonomic testing, labwork all normal.
**HISTORICAL BACKGROUND**

- **1870s**
  - Benedict
    - "Platzchwindel" (vertigo in a plaza or square)
  - Cordes
    - "Platzangst" (fear in a plaza or square)
  - Westphal
    - "GeAngst" (fear of marketplace)

**PHOBIC POSTURAL VERTIGO (PPV)**

- Defined by Brandt and Dieterich (1986)
  - Postural dizziness and fluctuating unsteadiness accompanied by mild anxiety and depression
  - Showed that it was common, persistent and distinct from other vestibular and psychiatric disorders

**SPACE-MOTION DISCOMFORT (SMD)**

- Jacob and colleagues (1989)
  - Looked into links between anxiety symptoms, persistent dizziness and vestibular dysfunction
  - SMD=uneasiness about spatial orientation + increased awareness of motion stimuli
  - Triggered by movement in visual rich environments
  - Somatosensory dependence higher in patients with anxiety
VISUAL VERTIGO (VV)

- Bronstein (1995)
  - Symptoms following acute peripheral or central vestibular losses
    - Sensations of unsteadiness or dizziness on exposure to complex or moving visual stimuli
    - Persistent even after recovery
    - Triggers similar to SMD

CHRONIC SUBJECTIVE DIZZINESS (CSD)

- Staab and colleagues (2004)
  - Similar to PPV, but focused primarily on physical not psychological symptoms
    - Nonvertiginous dizziness/unsteadiness
    - Heightened sensitivity to motion of self or objects
    - Difficulty with tasks requiring precise visual focus

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PERSISTENT POSTURAL PERCEPTUAL DIZZINESS (3PD)

3PD CRITERIA

• A. One or more symptoms of dizziness, unsteadiness, or non-spinning vertigo are present on most days for 3 months or more.
  - 1. Symptoms last for prolonged (hours) periods of time, but may wax and wane in severity.
  - 2. Symptoms need not be present continuously throughout the entire day.

• B. Persistent symptoms occur without specific provocation, but are exacerbated by 3 factors:
  - 1. Upright posture
  - 2. Active or passive motion without regard to direction or position
  - 3. Exposure to moving stimuli or complex visual patterns

3PD CRITERIA CONTINUED

• C. The disorder is precipitated by conditions that cause vertigo, unsteadiness, dizziness or problems with balance including acute, episodic, or chronic vestibular syndromes, other neurological or medical illnesses, or psychological distress.

• D. Symptoms cause significant distress or functional impairment.

• E. Symptoms are not better accounted for by another disease or disorder.
EXAMPLES OF PRECIPITATING EVENTS

- A peripheral vestibular disorder
  - Benign paroxysmal positional vertigo (BPPV)
  - Vestibular neuritis
  - Meniere’s disease
- A central vestibular disorder
  - Stroke
  - Vestibular migraine
- Panic attacks with dizziness

Staab & Ruckenstein, Arch Oto-HNS, 2007

FACTORS THAT PROVOKE OR EXACERBATE SYMPTOMS

OTHER IMPORTANT FEATURES

- PPPD rarely starts slowly and gradually without a triggering event
- Anxiety or mild depression may be present as comorbidities
  - However, they are not symptoms of PPD
- PPPD may coexist with other vestibular disorders, which can confuse the diagnosis
- Patients with PPPD will avoid situations that exacerbate symptoms
  - A physiological disorder with psychological consequences
**DIAGNOSIS OF PPD**

- Physical exams, laboratory tests and neuroimaging are NOT used to diagnose PPD itself.
- Physical exam however may show a current or previous vestibular problem that does not fully explain patient’s symptoms.
- It’s all in the history.

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**3PD PATHOPHYSIOLOGY**

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**TREATMENT OF 3PD**
COMMUNICATING THE DIAGNOSIS

• Treatment starts with education
  - Give the diagnostic name and explaining that it is well-known, common and potentially treatable cause of chronic dizziness.
  - Provide case examples
    - Resonates well with patient and gives confidence that they have met a clinician who is familiar and understands.
    - https://www.neurosymptoms.org/dizziness/4594358005

INDIVIDUALIZED TREATMENT

• Vestibular rehabilitation and physiotherapy
• Cognitive behavioral therapy
• Medication
• Lifestyle modifications
VESTIBULAR REHABILITATION

• Goal is to desensitize a balance control system that is stuck on “high alert”
  - Using habituation exercises and relaxation techniques
  - Techniques aim at fatiguing abnormal reflexive responses to movement tasks and reducing sensitivity to visual stimuli
• May include general (i.e. walking programs) and/or specific dizziness-provoking treatments
• Should be started gently and increased slowly

COGNITIVE BEHAVIORAL THERAPY

• Patient education.
• Guided self-observation on physical, emotional and psychological levels.
  - Taught to recognize abnormal postural control and overreaction to misinterpreted normal postural behavior
• Identification and appraisal of emotional and cognitive responses to dizziness can help reduce fear arousal and catastrophizing thoughts.
• Psychosocial factors such as fear of falling and social embarrassment, avoidance and safety behaviors are identified and assessed.
  - Exposure therapies can be used

MEDICATIONS

• Selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) are commonly recommended.
  - With or without psychiatry comorbidity
• Often start with one SSRI, followed by a second SSRI trial; then switch to SNRI.
• Randomized controlled and blinded trials however are needed.
LIFE STYLE MODIFICATIONS

- Practice good sleep hygiene
- Physical exercise
- Balanced diet

IS THERE HOPE?

- Estimated that 78% of patients with chronic dizziness in general will improve with such a neurotological and psychotherapeutic regimen after avg. 32 months.
- BE PATIENT!

LECTURE SUMMARY

- Persistent postural perceptual dizziness (3PD) is a common chronic functional disorder presenting with the complaints of dizziness and unsteadiness.
- The diagnosis is made by obtaining the characteristic clinical history.
- 3PD may coexist with structural vestibular disorders or other neurological, medical or psychiatric disorders that cause vertigo, unsteadiness or dizziness.
- Communicating the diagnosis is key for further rehabilitation.
- Treatment options include vestibular rehab and medication, with CBT for associated psychological morbidity and can lead to good outcome.
THANK YOU!!!