

FUNCTIONAL DIZZINESS

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Functional Dizziness (FD)

and its different syndromes

-An update on the current scenario

- ❖ Phobic Postural Vertigo (PPV)
- ❖ Visual Vertigo (VV)
- ❖ Chronic Subjective Dizziness (CSD)
- ❖ Space Motion Discomfort (SMD)
- ❖ Persistent Perceptive Postural Dizziness (PPPD)

- What do they have in common?
- How do they differ?
- Our experience with FD



Functional Dizziness

- **Is defined positively** (*i.e., by the presence of identifiable and unique sets of symptoms*) **and not negatively** (*i.e., by the absence of structural deficits*)
- **Is a NEUROTOLOGICAL disorder with behavioural elements, is not primarily a psychiatric disorder** ¹

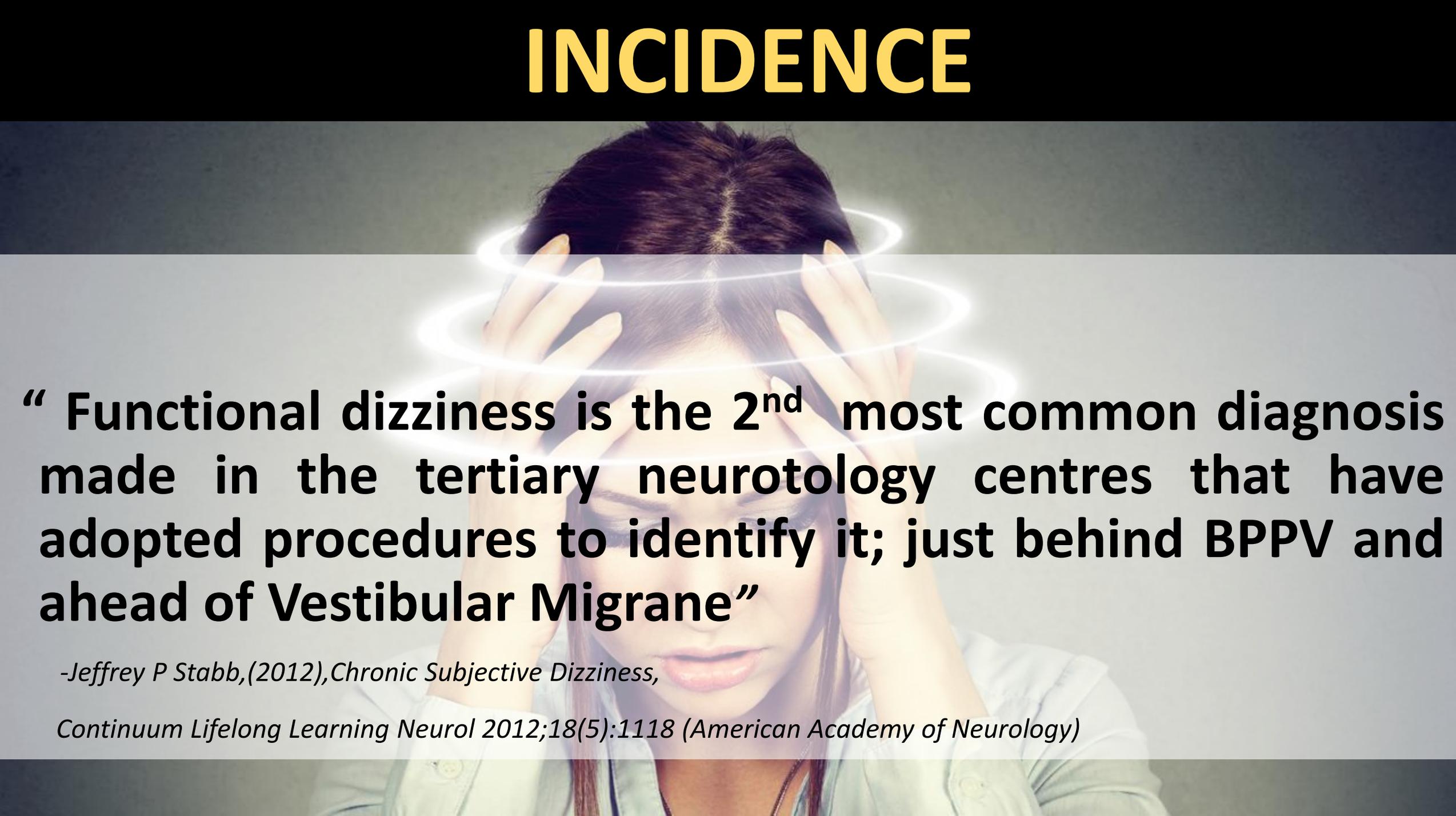


S Y M P T O M S

Functional Dizziness

- ✓ **Non spinning Vertigo** - a false or distorted sensation of self-movement
- ✓ **Unsteadiness** - a feeling of rocking or swaying when upright
- ✓ **Dizziness** - a non-motion sensation of disordered spatial orientation.

INCIDENCE



“ Functional dizziness is the 2nd most common diagnosis made in the tertiary neurotology centres that have adopted procedures to identify it; just behind BPPV and ahead of Vestibular Migrane”

-Jeffrey P Stabb,(2012),Chronic Subjective Dizziness,

Continuum Lifelong Learning Neurol 2012;18(5):1118 (American Academy of Neurology)

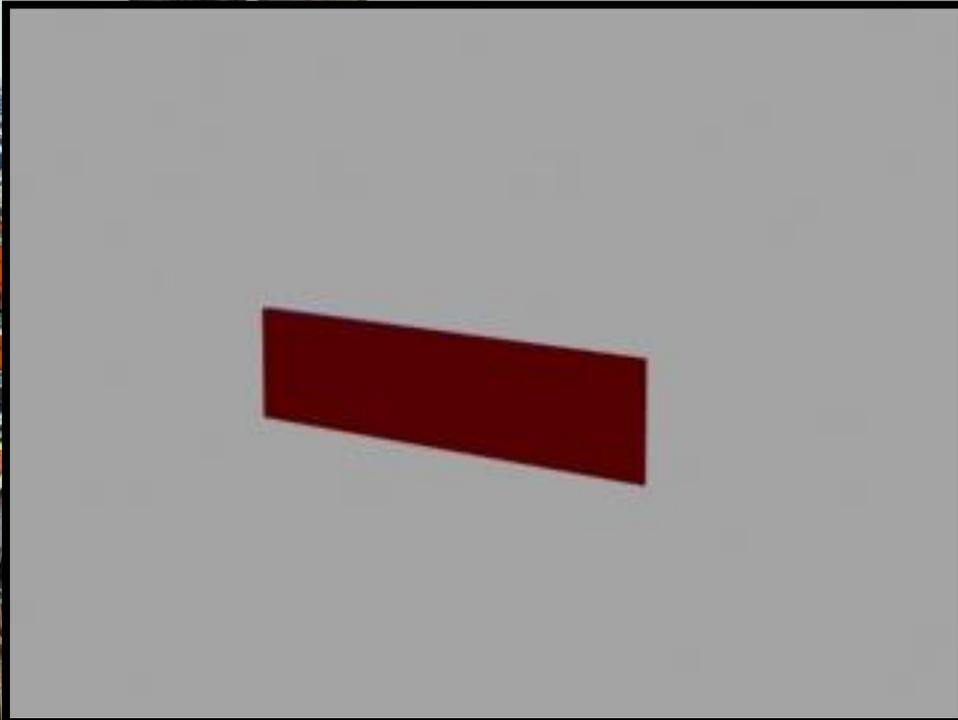
INCIDENCE

of Functional Dizziness at German Center for Vertigo and Balance Disorders, Munich ,Germany



KLINIKUM
DER UNIVERSITÄT MÜNCHEN

WIR MACHEN MEDIZIN

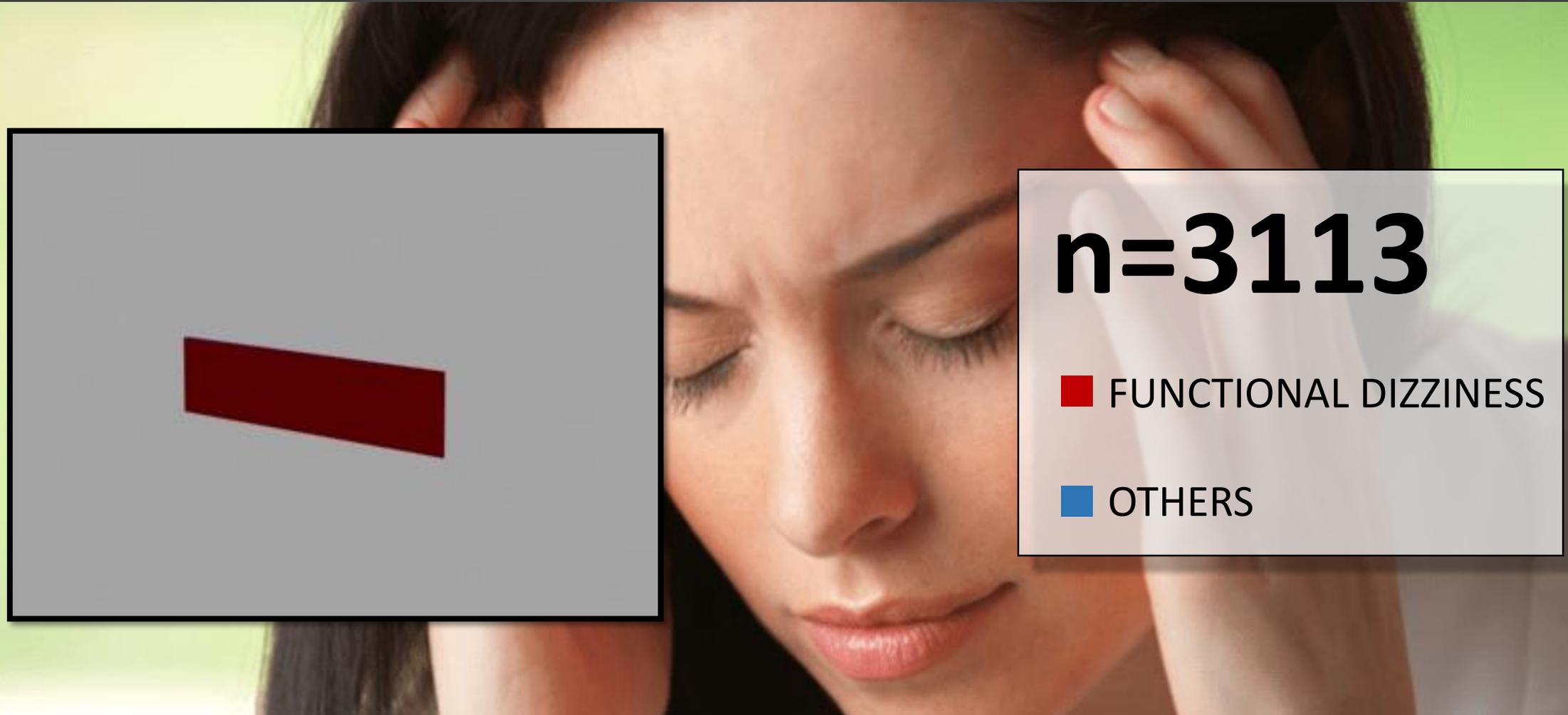


n=17700

- FUNCTIONAL DIZZINESS
- OTHERS

INCIDENCE

of Functional Dizziness in another tertiary Dizziness unit



n=3113

■ FUNCTIONAL DIZZINESS

■ OTHERS

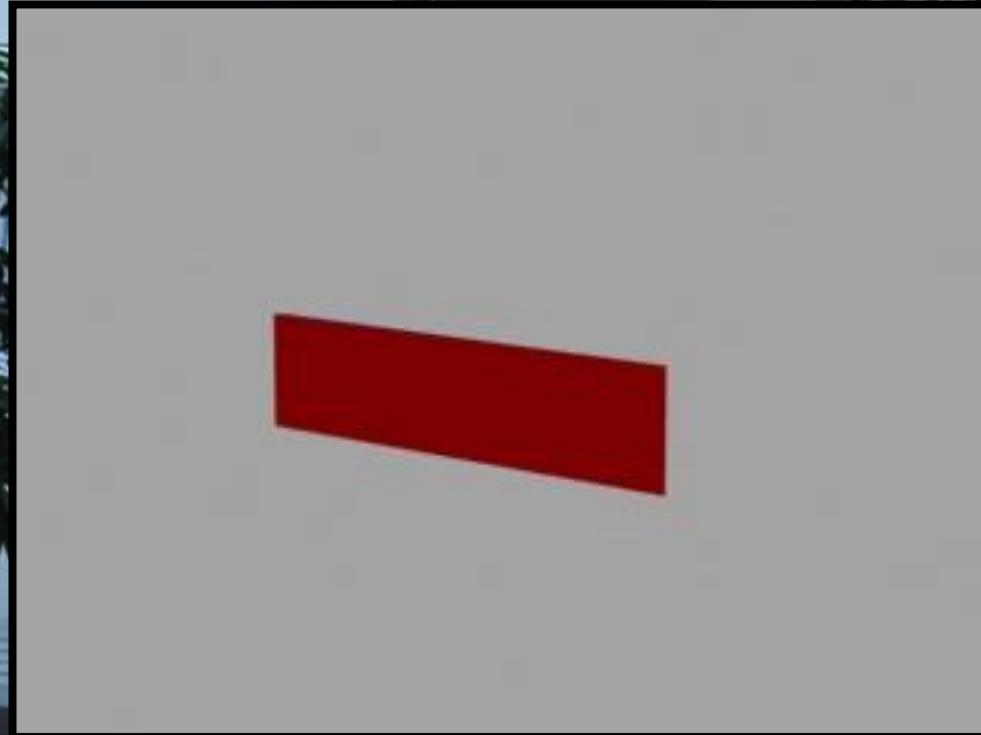
INCIDENCE

of Functional Dizziness in Paediatric population



INCIDENCE

of Functional Dizziness at Vertigo and Deafness Clinic, Kolkata, India



n=15400

- FUNCTIONAL DIZZINESS
- OTHERS

Vestibular disorders can be classified into 3 types

Structural

Functional

Psychiatric

- each may occur independently or in combination
- when in combination one may be the *cause /consequence/complication* of the other

Ref:Bradt 1996,Stabb & Ruckenstein (2003,2001)Eckhardt Henn 2008).

For diagnostic criteria of Psychiatric disorder that cause vestibular symptom refer to ICD -10 (WHO ,1995) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, American Psychiatric Association,2013)

VESTIBULAR DISORDERS

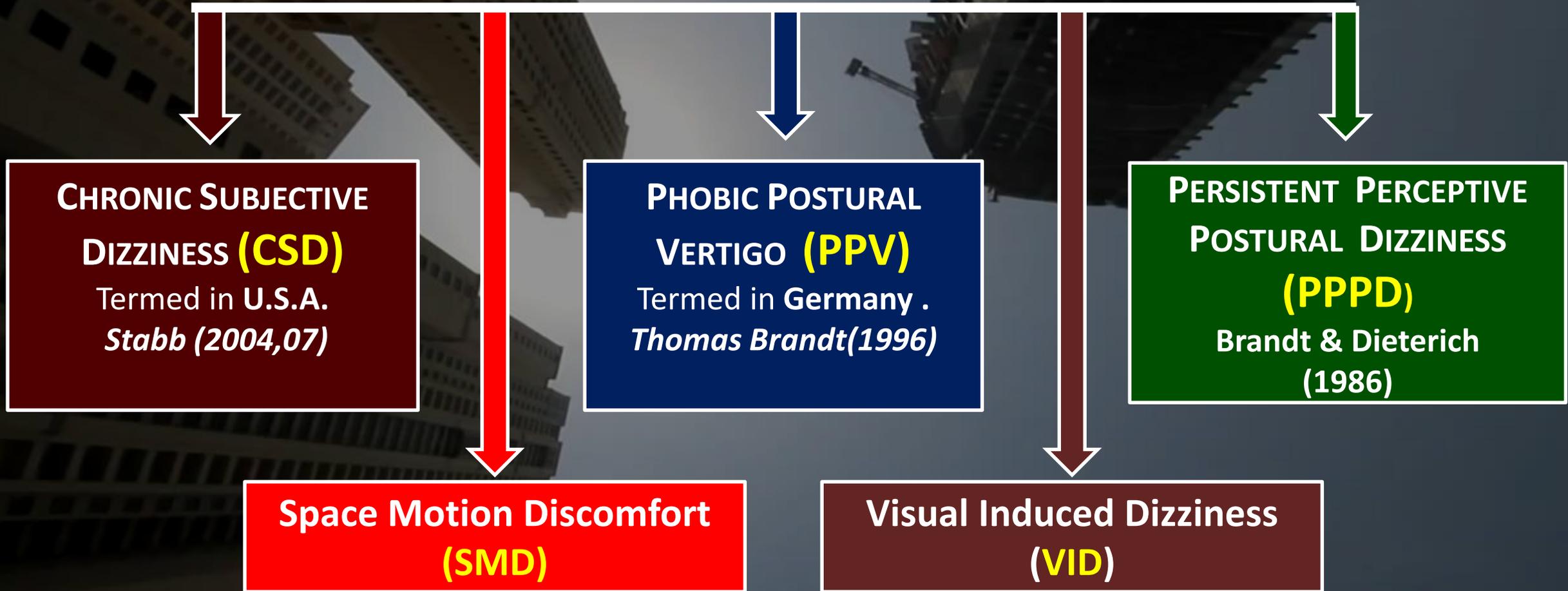


Structural
or
cellular

Psychiatric

Functional

Types of Functional Dizziness



What is the difference??

Phobic Postural Vertigo

Def:-Postural Dizziness + Fluctuating unsteadiness provoked by environmental stimuli with mild anxiety-depression-OCD traits

Diagnostic criteria



- A) Postural dizziness provoked by motion (self/surrounding, sudden)
- B) Anxiety related Afferent Efferent Mismatch
- C) Triggered by
 - i) Vestibular disorders
 - ii) Medical illness
 - iii) Psychological stress .
- D) Personality trait- Labile affect/Pseudobulbar affect/Emotional incontinence, Obsessive –compulsive trait

conscious awareness of discrepancies between anticipated and actual movements that occur transiently in the course of normal voluntary motion

a disorder where the patient has excessive displays of emotion, or expresses emotions that are not congruent with the situation

Chronic Subjective Dizziness (CSD)

Def:- persistent non-vertiginous dizziness or unsteadiness, heightened sensitivity to motion of self or objects in the environment, and difficulty performing tasks that require precise visual focus

Diagnostic criteria



- A) Postural dizziness provoked by sensory & emotional stimuli.**
- B) Difficulty with precision visual tasks such as reading or using a computer / reading messages in a mobile phone .**
- C) Triggered by**
 - i) Neurotological disease*
 - ii) Medical illness*
 - iii) Psychiatric illness .*
- D) Personality trait- Anxious & Introvert personality.**
- E) Diurnal variation more during day lesser in morning.**

Chronic Subjective Dizziness (CSD)

Exacerbated by



Pathophysiology of CSD

Acute vestibular lesion or acute anxiety/panic attacks

Acute adaptation strategies by brain to maintain postural control.

increased visual and somatosensory dependence

CSD

predisposing anxiety / depression

Hypersensitivity to provocative motion stimuli (both for the self and the environment)

postural control systems drawn into a perpetual state of failed re-adaptation

Space Motion Discomfort (SMD)

Def:- Is a combination of uneasiness about spatial orientation and increased awareness of motion stimuli

Diagnostic criteria



- i) Precipitated by**
 - a) Movements: Active or passive movement in visually-rich environments.(walking down a supermarket aisle, riding in a vehicle)**
 - b) Stationary : exposure to moving or patterned objects in the environment (passing traffic, striped curtains, or crowds of people).**
- ii) Common in pts with anxiety disorders**



Visual Induced Dizziness

Earlier



Visual Vertigo (VV) - Bronstein (1995)

Visual Vestibular Mismatch (VVM) - *Staab et al (2017)*

Diagnostic criteria

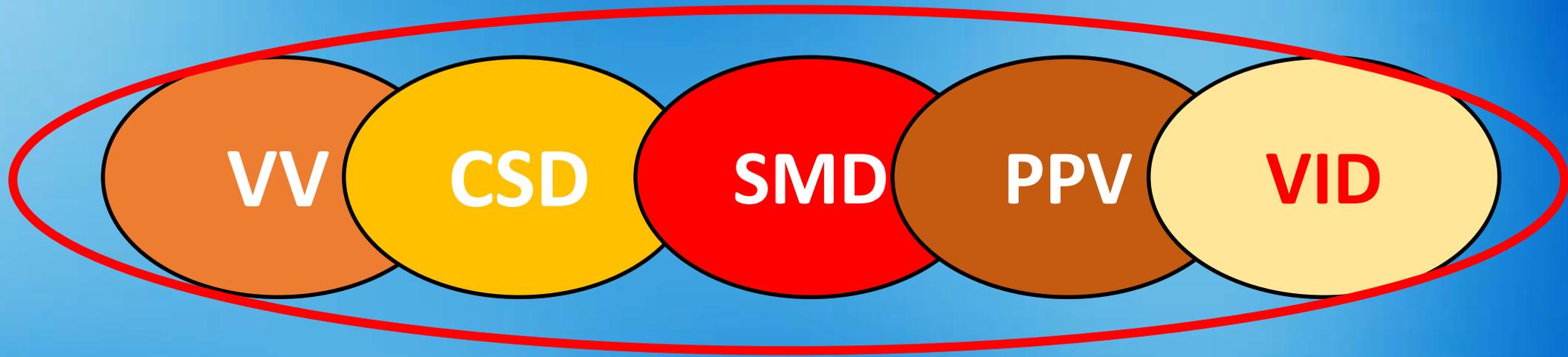


- i) Occurs only after an acute peripheral or central vestibular lesion
- ii) Symptoms :- sensations of unsteadiness or dizziness on exposure to complex or moving visual stimuli.
- iii) not provoked by upright posture which differentiates it from PPV /CSD
- iv) situation provoked but persistent in nature like SMD
- v) Pathophysiology : a) Visual Dependence b) Visual Vestibular Mismatch (VVM) ,
c) increased vigilance about vestibular symptoms

What's common ??

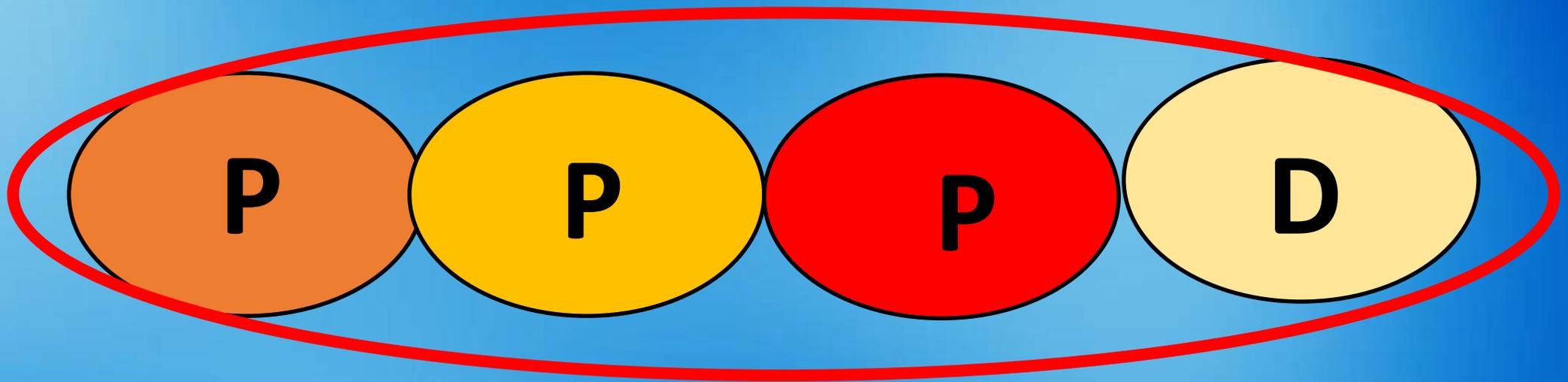
- 1) Longstanding/ chronic ailment
- 2) cc: Unsteadiness /Dizziness/ Non-spinning Vertigo
- 3) Provoked by Active/Passive motion/ Moving Visual Stimuli
- 4) Stimulated by recent or past Vestibular syndromes and even by conditions like falls / syncope .
- 5) Normal findings in clinical tests of balance

The current consensus



- ❖ All of these are functional abnormalities of the vestibular system i.e., are behavioral abnormalities with Neurotological manifestations .
- ❖ Most if not all are triggered by a vestibular event.
- ❖ All are unrelated to the organic disorders of the vestibular system (MD,VM,BPPV,VN) which may have just triggered this chronic disorder but is no longer there now

The current consensus



PERSISTENT **P**OSTURAL **P**ERCEPTIVE **D**IZZINESS

Persistent Perceptive Postural Dizziness

Diagnostic criteria



- A. One or more symptoms of **dizziness, unsteadiness, or non-spinning vertigo** are present on most days for 3 months or more.
- B. Unprovoked persistent symptoms, but are **exacerbated by upright posture/ self-motion/ moving visual field**
- C. Precipitated by conditions causing vestibular disorders / neurological disorders / psychological illnesses / other medical illnesses
- D. Symptoms cause **significant distress or functional impairment.**
- E. Symptoms are not better accounted for by another disease or disorder.

“Presence of all the 5 conditions is a MUST for diagnosis of PPPD”

Persistent Perceptive Postural Dizziness

❖ Exacerbating factors^{1,2}



1. Upright posture
2. Active or passive motion
3. Exposure to moving visual stimuli or complex visual pattern

❖ Precipitating factors³



1. Conditions causing vertigo, unsteadiness, dizziness,
2. Neurologic or medical illnesses,
3. Autonomic disorders
4. Psychological distress.



1. Balaban C.D. et al. Background & history of the interface between anxiety and vertigo, J Anxiety Disorders 15 (2001).
2. Bárány Society initiative for the establishment of the International Classification of Vestibular Disorders (ICVD), [http://www.jvr-web.org/images/Instructions for ICVDsubcommittees_as_of_19Oct2014.pdf](http://www.jvr-web.org/images/Instructions%20for%20ICVDsubcommittees_as_of_19Oct2014.pdf). Accessed 07 July 2017.
3. Benedikt M. ,Über "Platzschwindel," Allgemeine, Wien MedizinZeitschrift 15 (1870), 488–490.

Differential Diagnosis

Episodic ataxia

Bilateral vestibulopathy

Neurodegenerative disorders
(spinocerebellar ataxias, multisystem atrophy, ext-pyramidal disorders)

Vestibular paroxysmia

Vestibular migraine

Central vestibular syndromes

Peripheral neuropathy

autonomic dysregulation / autonomic neuropathy.

Mal debarquement syndrome

Treatment

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graph TD; Treatment --> Drugs; Treatment --> PhysicalTherapy[Physical Therapy]; Treatment --> Psychological; Drugs --> DrugsList["• Seratonergetic drugs- SSRI, SNRI.  
• Benzodiazepines"]; PhysicalTherapy --> PhysicalTherapyList["• Habituation  
• Stabilometry  
• Virtual reality  
• Balance enhancement"]; Psychological --> PsychologicalList["• Psychotherapy /counselling  
• Cognitive Behavioural therapy (CBT)  
• Desensatization  
• Patient education"];
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Drugs

- Seratonergetic drugs- SSRI, SNRI.
- Benzodiazepines

Physical Therapy

- Habituation
- Stabilometry
- Virtual reality
- Balance enhancement

Psychological

- Psychotherapy /counselling
- Cognitive Behavioural therapy (CBT)
- Desensatization
- Patient education

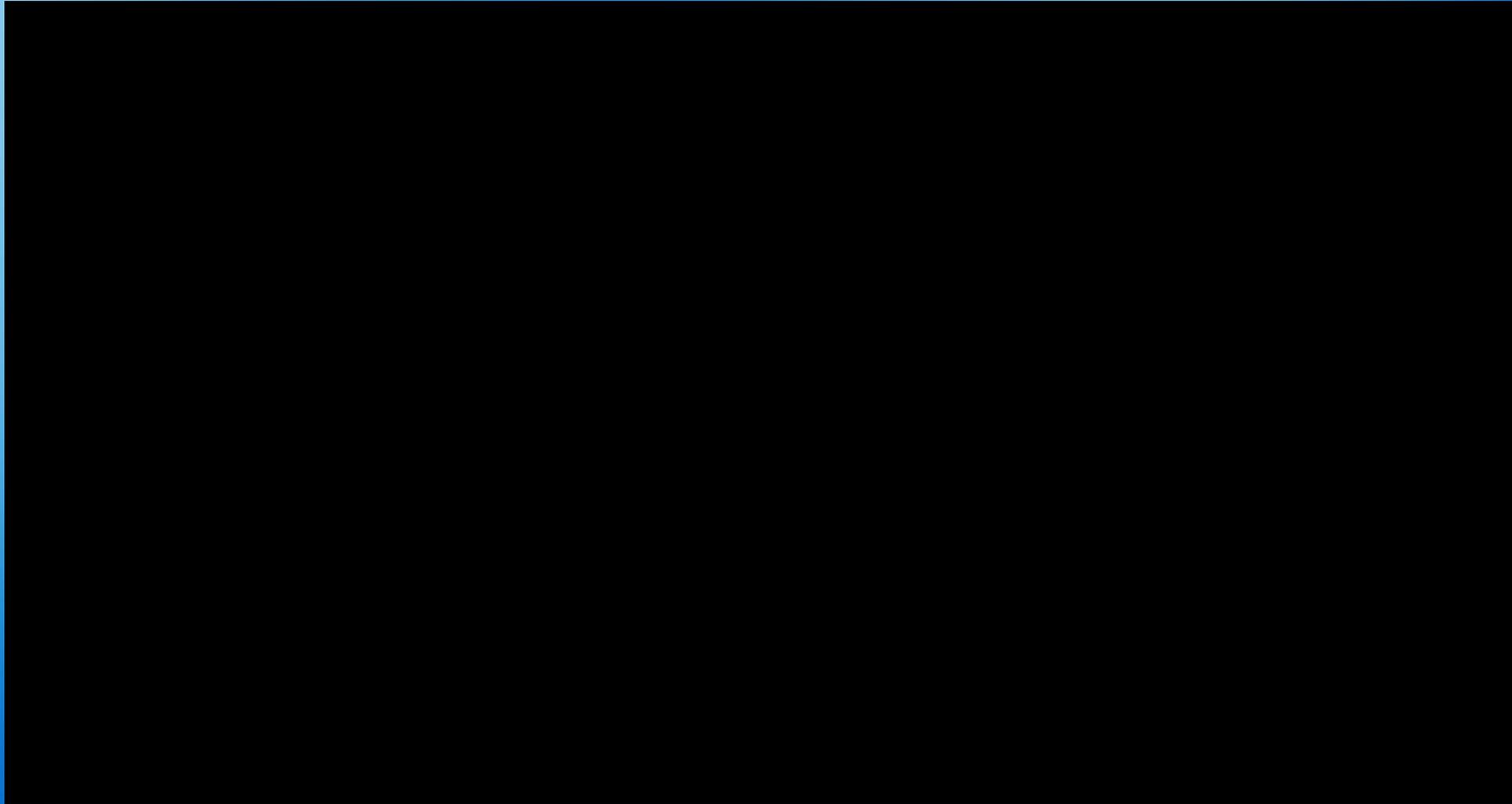
Serotonergic drugs are the principal pharmacologic treatment for PPPD, -should be started at LOW does and increased MORE SLOWLY than usual for best results .

FUNCTIONAL DIZZINESS INVENTORY

SN	Questions	Yes	No	sometime
1	Do you feel unstable, while standing and /or walking?			
2	. Do you feel inability to maintain your posture in relation to surrounding environment?			
3	. Do you feel sensation of yourself bouncing/rocking/swaying and /or the surrounding bouncing ?			
4	.Do yoursymptoms persist > 15 days/month			
5	Are there fluctuations (waxing and waning) of your symptoms?			
6	Do you feel better in the morning and the symptoms get worse as the day progresses?			
7	Are your symptoms persisting for > 3 months			
8	Does your feeling of instability / dizziness/ non-spinning vertigo have recurrent flare-ups i.e., sudden increase in symptoms for short periods??			
9	Does your symptoms get worse while standing or while walking but you are perfectly comfortable when lying or sitting?			
10	Does your symptoms get worse, when you are in active motion i.e., you yourself are moving for e.g., walking/ running,			
11	Does your symptoms get worse when you are in passive motion i.e., when riding a vehicle e.g., car / cycle or when you ascending / descending in a Lift.			
12	Does your symptoms get worse, when you see small objects from a close distance e.g. working in a computer/ in a mobile phone ,reading books.			
13	Does your symptoms get worse, when you see moving visual fields like crowds of people in a shopping mall / or fast moving vehicles in traffic ?			
14	Did you have an symptoms of anxiety,fear or psychological stress prior to symptoms.			
15	Did you have some illness like Vestibular disorders e.g., B.P.P.V / Autonomic disorders orthostatic hypotension/ neurocardiogenic syncope(sinking sensation), some neurologic disease where there was instability / headspinning like head injury/ stroke following which your symptoms of dizziness/ unsteadiness/ non-spinning vertigo have started ??			
16	. Do you have feeling of loss of interest, or change in appetite, fatigue.			
17	Do your symptom occur, when you are exposed to a particular provocative situations like crossing a speedbreaker on motorcycle or moving in rough roads?			
18	Do your symptom aggravates when exposed to complex visual stimuli like in striped curtains?			
19	Have you ever been diagnosed with Obsessive Compulsive disorder or if not then do you get repeated and persistent unreasonable thoughts leading to repetitive behavior like repeatedly washing your hands as you are obsessed that there are germs in your hands, or you repeatedly check the door locks at night as you are obsessed with a feeling of being unsafe? .			
20	Do you like to stay away from social gatherings & feel more comfortable and happy staying away from social functions where you can interact with people and prefer being left alone??			
21	. Does sitting in a chair or bed without any support exacerbates their symptoms??			
22	Do your symptoms immediately cease once the provoking/triggering factor (e.g., a curtain in a wall that was provoking your dizziness) is removed			
23	Do you feel the severity of your symptoms decrease when you sit or lie down in bed??			
24	Do you feel that intensity of your symptoms drastically decrease or even disappear after merely touching a nearby object??			
25	Do you feel aggravation of symptoms when you see large visual fields like open fields /warehouses??			

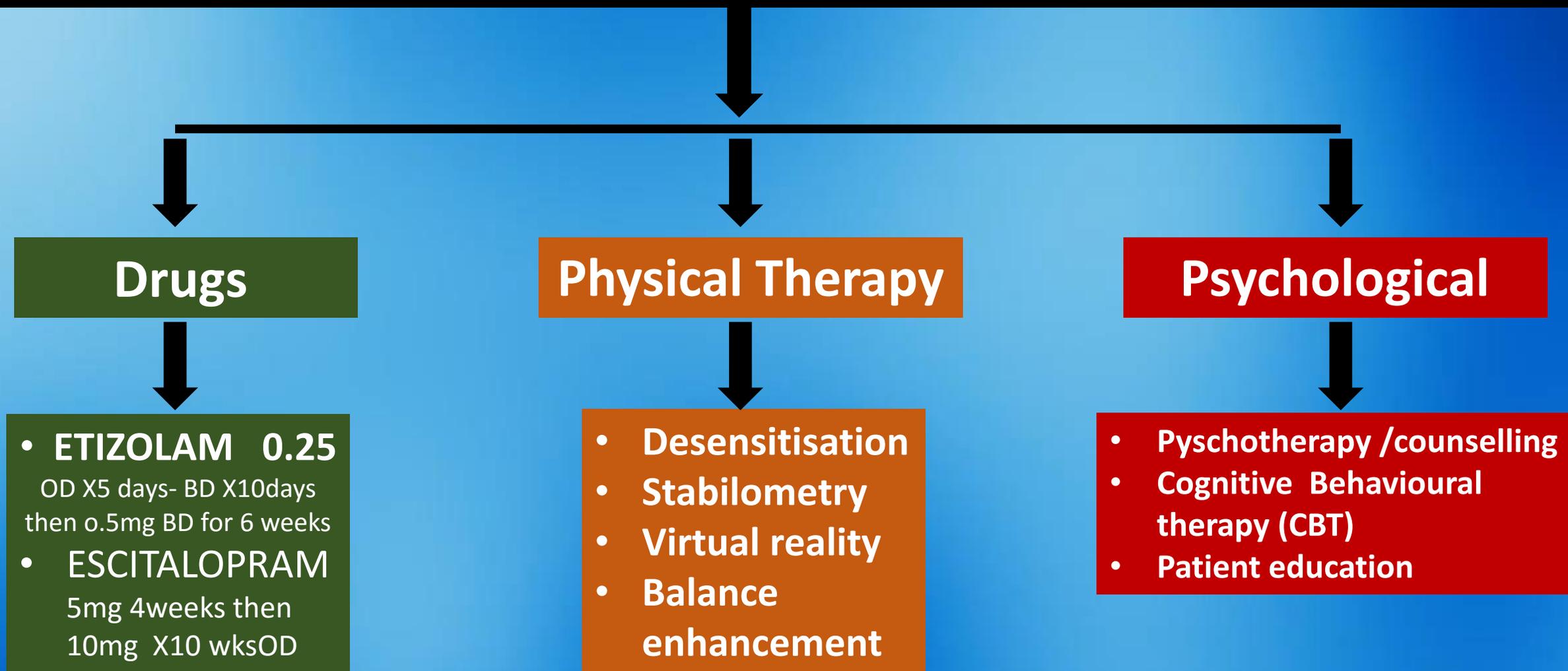
- 1)For PPPD the questions 1,2,3,4,5,7,9,10,11,12,13,15, will have to be YES and questionswill have to be NO
- 2) For PPV the questions 1,2,3,5,8,9,10,11,12,13,14,15, 16,19 will have to be YES and questions..... will have to be NO
- 3 For SMD the questions 1,2,3,10,11,12,13,14,15,17 will have to be YES and questions will have to be NO
- 4)For VID the questions 1,2,3,10,11,12,13,15, 18, will have to be YES and questions..... will have to be NO
- 5) For CSD the questions 1,2,3,7,9,10,11,12,13,14,15, 18will have to be YES and questionswill have to be NO
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Virtual Reality (VR) in vestibular physiotherapy



THERAPY FOR ADAPTATION by VIRTUAL REALITY

Managing FD at VERTIGO & DEAFNESS CLINIC, Kolkata, India



ALL TREATMENT IS CUSTOMISED FOR INDIVIDUAL PATIENTS

Our results with PPPD at Vertigo & Deafness Clinic

In a period of 3yrs from April 2016 to Feb 2019

Total new patients 4000:-

Cases diagnosed as FD - 1190 (29.75%)

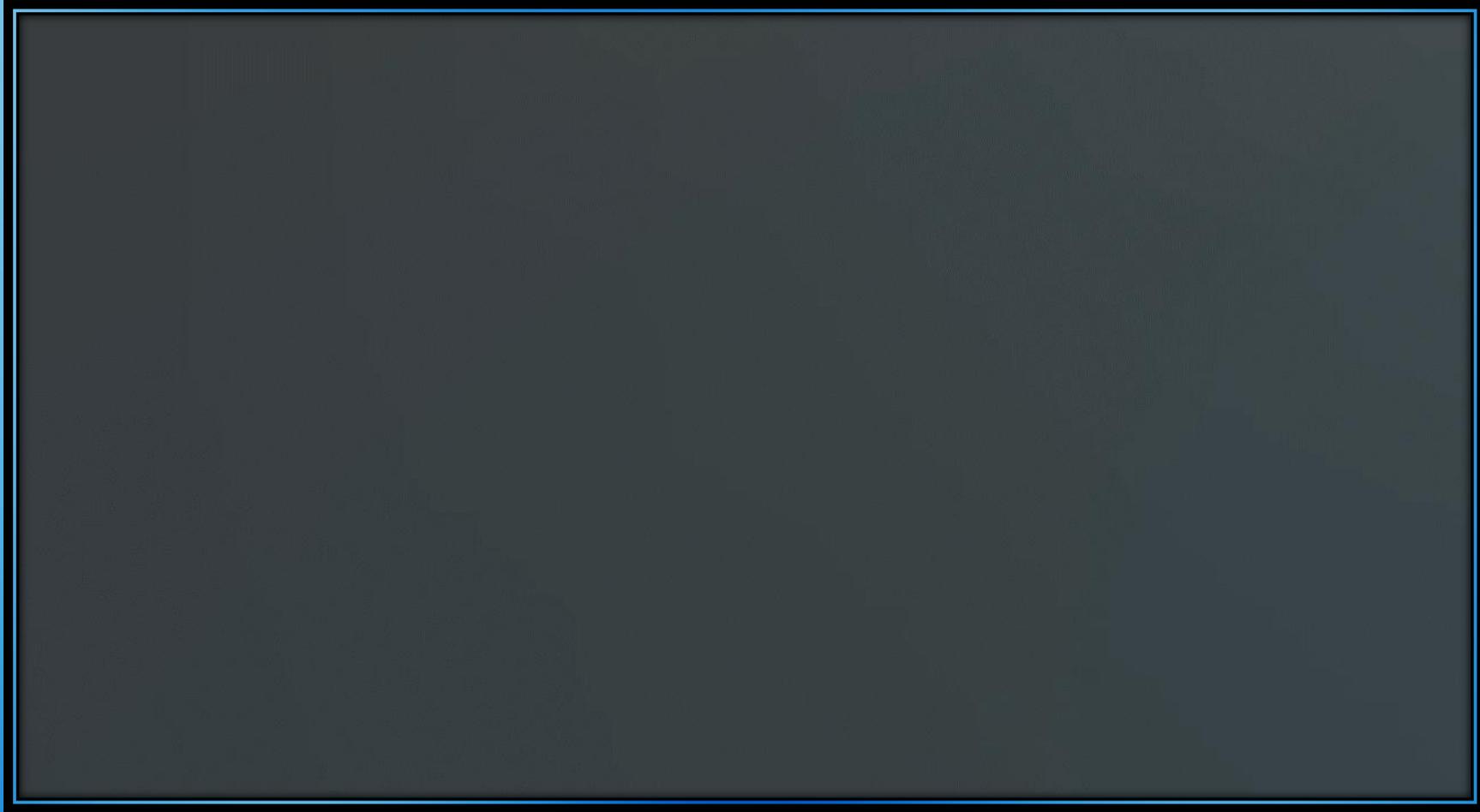
- PPV -547 (45.96%)
- CSD -419 ((35,21%
- SMD-23 (1.9%0
- VV -13 (1.09%)
- Undetermined FD- 188(15.8%)

Improvement after Vest physio+ Counselling:- 402 (33.8%)

Improvement after medication:- 551 (46.3%)

Non-satisfactory response :-rest 237 (19.9%)

BALANCE IN LIFE IS THE KEY TO EVERYTHING



THANK YOU