# ETHICAL & RATIONAL MANAGEMENT OF VERTIGO

## Drugs & other Modalities

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# ETHICAL & RATIONAL MANAGEMENT OF VERTIGO

*-drugs & other modalities*

## Drugs

Non specific Symptomatic thera

Specific therapy to treat the underlying disorder

## Maneuvers

For Benign Positional vertigo

## Physical Therapy

Non specific Vestibular Exercises-

Cawthorne Cooksey Excercises

Tai Chi / Yoga/ Virtual Reality

Organ specific Vestibular Physiotherap

# Objectives of management of vertigo

- **Provide symptomatic relief –** *taking care of the inherent ill-effects of anti-vertigo drugs*
- **Diagnose the cause of the vertigo and *treat the cause* of the vertigo** *rather than merely suppress & camouflage the symptom of vertigo*
- **Treat the co-morbidities** *esp the psychological and cognitive impact of the balance disorder*
- **Restore the deranged balance function** *possible only by physical therapy in different formats*

# Vestibular physiotherapy

Physical therapy to restore normal balance function after it has been deranged by disease.

*Acts by:-*

**(1) enhancing the vestibular compensatory mechanism**

**(2) improving the general balance function and sharpening the balancing skills of the subject**

**(3) enhancing the functionality of a damaged part of the vestibular labyrinth or of a deranged mechanism in the vestibular system**

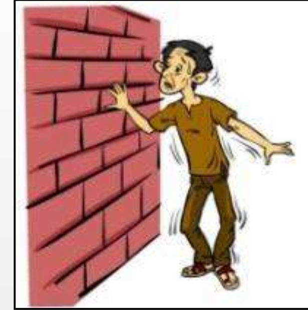
# What is new in today's scenario ??

- ***Our understanding of vestibular physiology has undergone immense refinement;*** *the morbidity of the balance disorder patient is now  much better understood*
- ***Any lesion in the vestibular system can be very precisely diagnosed with pin-point accuracy;*** *specific therapy is now available for most if not all balance disorders*
- ***The pharmacology of the anti-vertigo drugs and their mechanism of action in the balance disorder patient is now much better known;*** *some drugs are now proved to be a complete hoax or just a placebo, some are found to have serious adverse effects and all jeopardise the vest compensatory mechanism*
- ***Very specific treatment is available for most causes of balance disorders today;*** *management now involves treating the co-morbidities also*
- ***Vestibular physiotherapy targeted to specific organs in the vestibular system is now a reality; hence relevance of anti-vertigo drugs is much lesser now***

# Balance disorder patients are not just

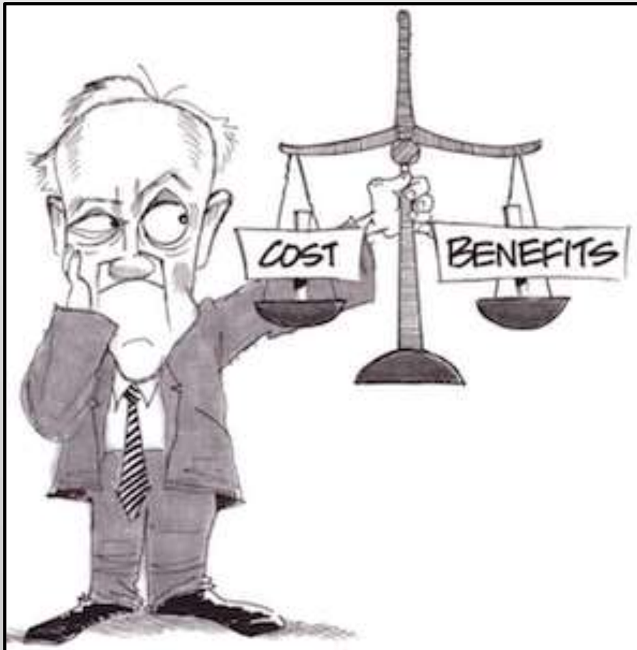
Vertigo

*or*



Imbalance

***-- they have a lot of other problems***




Irrational behavior

Poor concentration

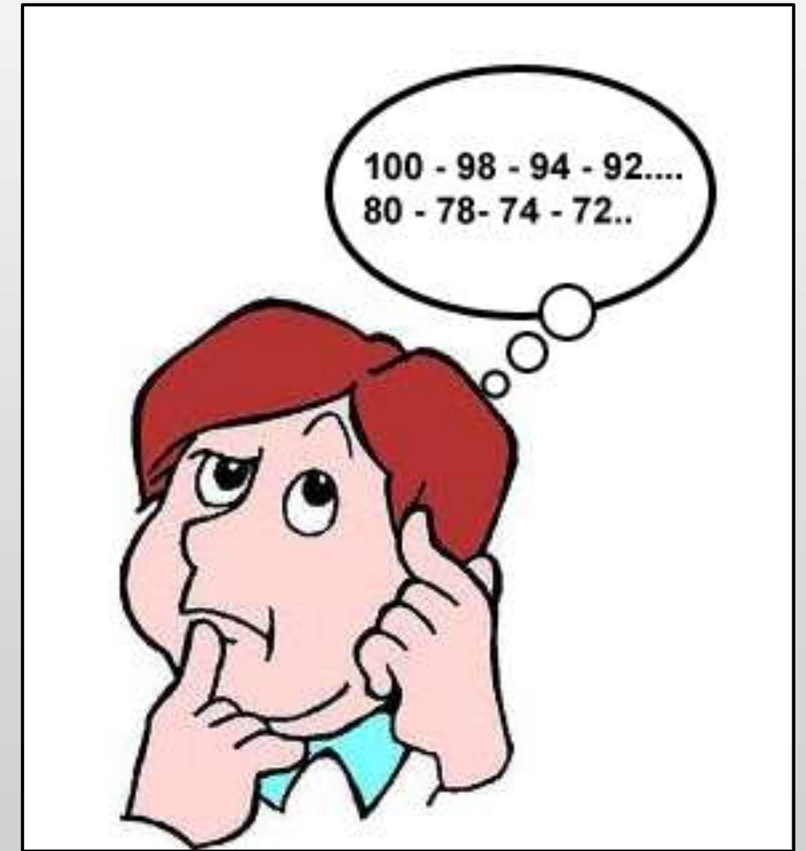
Forgetfulness

Anirban Biswas,
*Neurotologist*

# Balance disorder patients have COGNITIVE deficits and show poor cognitive skills in the domains of:-

Memory

Concentration




Arithmetic and reading

*They also have **psychological** and **emotional disorders***

**VERTIGO** or **IMBALANCE** are just one of their many problems

# A HOLISTIC MANAGEMENT is NEEDED

# Some undisputed basics relevant to therapy

- Vertigo / imbalance is just a ***symptom*** or manifestation of an underlying disorder; the causative pathology needs to be known for treatment

- Objective of management is to ***correct the cause***, (not merely suppress the symptom) and to **promote balance restoration** by stimulating the deranged balance system and by enhancing vestibular compensation

- ***Vestibular compensation*** is a natural process but can be expedited by physio therapy **and inhibited by CNS depressants and the anti-vertigo drugs**

- ***Central disorders and bilateral vestibulopathy*** *usually present with* ***imbalance****; suppressing vestibular sensitivity by vestibular sedatives will* ***aggravate the imbalance*** *as CNS gets deprived of normal vestibular input*

# Some undisputed basics relevant to therapy

- Vertigo / imbalance and psychogenic as well as cognitive disorders are ***co-morbid*** conditions that need effective management

- Neurotropic agents / antioxidants / cognition enhancing drugs have a ***positive*** role in the management of balance disorders

- Prolonged use of anti-vertigo drugs is hazardous and detrimental to the balance system; **current recommendation for duration of therapy with anti-vertigo drugs is <u>3-5 days</u> maximum 7 days,**

# The role of Vestibular sedatives-

*decrease the sensation of head spinning*

PROCLORPERAZINE

CINNARIZINE

MECLIZINE

P

*Outcome of prolonged use of vestibular sedatives:--*

**-Poor vestibular compensation**

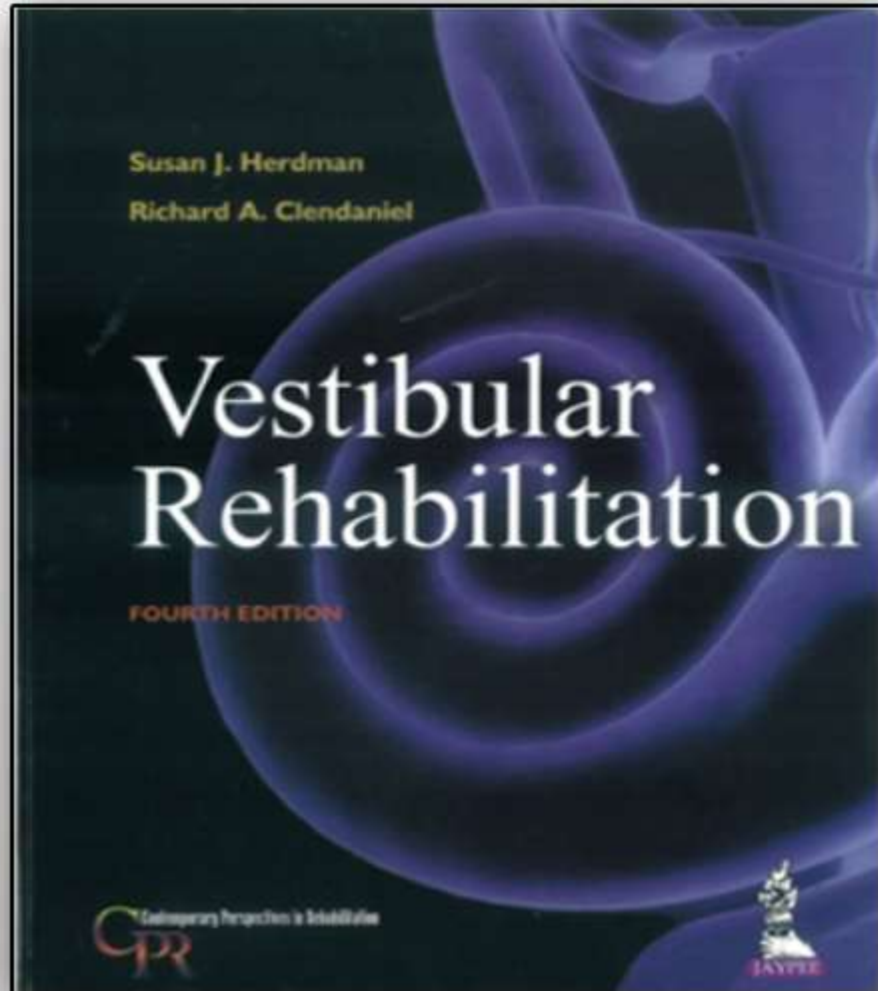
**-Complete balance function *not* restored**

**-Persistence of imbalance**

**Al ... the central ves... compensatory mechanism**

*Sensory conflicts that increase vertiginous symptom **enhances** compensation*

# This is what the world believes today…




valacyclovir offer no therapeutic advantage.[36] There is a consensus that drugs exerting a "sedative effect" on the vestibular system should be used for only the first 24 hours.[10] Some drugs commonly used for treatment of vertigo, nausea,

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10. Baloh RW, Kerber KA. *Clinical Neurophysiology of the Vestibular System*. Fourth ed. New York: Oxford University Press, 2011.

# More than 95% patients of vertigo/ imbalance are due to-

- BPPV
- Vestibular neuritis
- Migraine related vertigo
- Psychogenic vertigo e.g., PPV / PPPD / Spont MdDS
- Labyrinthitis
- Meniere’s disease
- Vestibular siezures
- Sensory ataxia /posterior column lesions
- Ototoxicity
- Central vertigo due to oculomotor or other CNS diseases like extrapyramidal disorders

# More than 95% patients of vertigo/ imbalance are due to-

- BPPV.........26%
- Vestibular neuritis..........4%
- Migraine related vertigo..........21%
- Psychogenic vertigo e.g. PPV/P
- Labyrinthiti
- ......1%
- column lesions.........1%
- vestibulopathy -?Ototoxicity............1%
- Central vertigo due to oculomotor or other CNS diseases like extrapyramidal/ cerebellar disorders/ NPH .............5%

**Specific therapies exist for all of them and none require long continued non-specific therapy with anti-vertigo drugs**

# Specific therapy for BPPV

# Specific therapy for VESTIBULAR NEURITIS

VESTIBULAR NEURITIS

# Specific therapy for VERTIGINOUS MIGRAINE

MIGRAINE RELATED VERTIGO

# Specific therapy for PHOBIC POSTURAL VERTIGO

PHOBIC POSTURAL
VERTIGO

# Specific therapy for LABYRINTHITIS

LABYRINTHITIS

# Specific therapy for MENIERE’S DISEASE

MENIERE'S DISEASE

RESEARCH

# Efficacy and safety of betahistine treatment in patients with Meniere's disease: primary results of a long term, multicentre, double blind, randomised, placebo controlled, dose defining trial (BEMED trial)

*BMJ* 2016; 352 doi: https://doi.org/10.1136/bmj.h6816 (Published 21 January 2016)

## Discussion

### Principal findings

For patients with Meniere's disease, unpredictable vertigo attacks are the most unpleasant symptom, leading to not just physical but also psychological strain. Clinical experience and several studies have supported a potential beneficial effect of prophylactic drug treatment with betahistine on the attacks of vertigo as well as on vestibular and, to a lesser degree, audiological symptoms. However, **according to a Cochrane review of betahistine for Meniere's disease or Meniere's syndrome, there is insufficient evidence to say whether betahistine has any effect.**

RESEARCH

# Efficacy and safety of betahistine treatment in patients with Meniere's disease: primary results of a long term, multicentre, double blind, randomised, placebo controlled, dose defining trial (BEMED trial)

*BMJ* 2016; 352 doi: https://doi.org/10.1136/bmj.h6816 (Published 21 January 2016)

**The key findings of the BEMED trial are as follows:**

- A significant decline of attack rates in each treatment arm was observed over the nine month treatment period
- The effects of two different doses of betahistine could not be distinguished from a patient reported effect caused by placebo intervention in terms of the incidence of attacks as well as vestibular and audiological function and quality of life. **Therefore, the results do not give clear evidence that patients have a relevant clinical reduction in the number of attacks after nine months of treatment with betahistine at a daily dose of 48 mg or 144 mg, compared with a placebo (sham) intervention**
- There were no safety concerns, and betahistine was well tolerated even in the high dose group of 144 mg betahistine per day.

# Specific therapy for VESTIBULAR SEIZURES

VESTIBULAR SEIZURES

# Specific therapy for VESTIBULAR PAROXYSMIA

VESTIBULAR PAROXYSMIA

# Specific therapy for SENSORY ATAXIA

SENSORY ATAXIA / POSTERIOR COLUMN LESIONS

# Specific therapy for BILATERAL VESTIBULOPATHY

OTOTOXICITY

# Specific therapy for CENTRAL VERTIGO

CENTRAL VERTIGO

# Managing the main COMORBIDITIES

**VERTIGO – *are there definite COGNITIVE & PSYCHIC aspects that need effective management ? Is mental stress / anxiety an issue in balance disorders?***

***If so what is the logic and why and how to manage them??***