REM Sleep Behavior Disorder: A Superstar Parasomnia.

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Speaker Disclosures

- I have no relevant commercial relationships to disclose.
- Distinguished speaking faculty for Merck
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Can there be a common thread between a snake, a flying carpet, Viet Nam, and Gulliver's travels?

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But first, let’s once again review the basics.

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Typical Progression of Sleep Over the Course of the Night

REM = rapid eye movement

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Slow Wave Parasomnias*

- Disorders of arousal:
  1) Confusional arousals (Sexsomnia)
  2) Sleep (night) terrors
  3) Sleep walking (Sleep related eating disorder)

- Characterized by:
  - Occurrence in the first half of the night
  - No recall of event

* undesired physical events or experiences during or around sleep.

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REM Parasomnias

1) Sleep Paralysis
2) Nightmares
3) REM Sleep Behavior Disorder (dream enactment).

- Characterized by:
  - Occurrence during the second half of the night
  - Recall of event.

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REM Sleep Behavior Disorder
RBD

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Attack of the “little people” at the Biltmore Estate

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49 yo corporate consultant

- Dreamed he was diving into the swimming pool of the Biltmore estate in North Carolina and was subsequently accosted by “little people” when he awakened and had punched his wife.

PSG: REM without atonia
AHI and MRI negative

REM SLEEP BEHAVIOR DISORDER

What makes RBD a such a “special” parasomnia?

RBD Diagnostic Criteria
ICSD-3 (2014)

- A. Repeated episodes of sleep-related vocalization and/or complex motor behaviors.
- B. These behaviors are documented by PSG to occur during REM sleep, or based on clinical history of dream enactment, are presumed to occur during REM sleep.
RBD Diagnostic Criteria

• C. Polysomnographic recording demonstrates RWA
  - REM sleep without atonia

• D. The disturbance is not better explained by another sleep disorder, mental disorder, medication or substance use.

RBD behaviors:

• Loss of REM-atonia: core, universal feature.
  1) Minimal: limb twitching and jerking
  2) Complex: hand waving, hand grabbing, reaching and searching motions, gestures
  3) Vigorous and violent: punching, kicking
  4) Vocalizations: talking, yelling, profanities, anger, laughter.
RBD—Sleep-Related Injuries

- Subdural, epidural hematomas
- Lacerations, ecchymosis, abrasions
- Fractures (including facial, skull and cervical)
- Dislocations
- Dental injuries

Parasomnias: State-of-the-Art Management, Carlos H. Schenck, M.D.
APSS SLEEP MTG, SLEEP June 7, 2015

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“They shot arrows at me on the flying carpet.”

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58 yo salesman, “participating” in his dreams

- Punching wife believing someone was trying to take gold chain off his neck.
- Kicking wife believing he was kicking a field goal and playing football.
- Falling out of bed, dreaming he was on a flying mattress with people shooting arrows at him.

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Chronic RBD

- A) Idiopathic (Cryptogenic—Evolving
  – Neurodegeneration)
- B) Associated with Neurologic Disorders
- C) Medication-induced

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**Minnesota Group RBD Outcome Data**

- 80.8% (21/26): eventual conversion rate.
- 14.2 + 6.2 years: mean interval, – RBD onset to onset of parkinsonism/dementia.

*Sleep Med 2013; 14 (8): 744-748.
Schenck CH, Boeve BF, Mahowald MW
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**Barcelona Group RBD Outcome Data**

- 82% (36/44) of patients with idiopathic RBD – eventually developed neurodegeneration.

Iranzo A, Tolosa E, Gelpi E, et al.

**Parkinsonism/Dementia/MCI Rate of Conversion From Idiopathic RBD**

- 81% Schenck et al. (2013)—Minnesota
- 82% Iranzo et al. (2013)—Barcelona

- Mean Latency Period
  - 14.2 yrs (range 5-29) Schenck et al. 2013
  - 11.5 yrs (range 5-23) Iranzo et al. 2013
  - 12.0 +9.6 years Postuma et al. 2009

*Sleep Med 2013; 14 (8): 744-748. Schenck CH, Boeve BF, Mahowald MW
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Medication-Induced RBD

- Antidepressants: SSRIs, venlafaxine, mirtazapine, TCADs
  - but not bupropion (dopaminergic/noradrenergic)
- Beta-blockers: bisoprolol, atenolol
- Selegiline
- Anticholinergics
- Rivastigmine (Ach-esterase inhibitor)
- Caffeine/chocolate in excess

Did you actually jump through a window... twice?

40 yo electronics representative

- 1993 “jumped through a window and then back through again and tackled a friend”
- 2005 jumped through another window with multiple lacerations.

Initially seen by me 2011.
PST, EEG and MRI unremarkable
No further episodes on clonazepam 0.5mg
What to discuss with the newly diagnosed RBD patient

- Regarding any risk of future Parkinsonism/Dementia?
- There are currently no data available to serve as guideposts.
- Clinical judgment must be exercised.

Parasomnias: State-of-the-Art Management, Carlos H. Schenck, M.D.
APSS SLEEP MTG, SLEEP June 7, 2015

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REM Sleep Behavior Disorder

- Preceding Other Aspects of Synucleinopathies
- By “Up To a Half a Century”
- RBD may have some sort of Neuro-Protective quality.

Classen DO, Josephs KA, Alkire KJ, Sitter ML, Tippmann-Pedretti M, Steele BF
Mayo Clinic, Sleep Center, Rochester, Minnesota
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RBD Retrospective Study

2 entry criteria:
- i) Diagnosis of a neurodegenerative Disorder
- ii) Presence of RBD for >15 years
  – before the onset of a neurodegenerative disorder.
  – Results (N=27)

- 23 years: median interval between RBD onset and neurodegenerative disorder onset.
- 50 years: greatest interval.

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“But it seemed so unbelievably real!”

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77 yo WM retired military

• Dreamed he was fighting in Viet Nam and in an effort to avoid gunfire, jumped behind a clump of bushes, fell out of bed, struck head on night table and bruised knee on floor.

• Doing well on clonazepam 1.0mg and melatonin 10mg

RBD Safety Concerns

• Initial (Environmental) Considerations:
  – Maximize the safety of the sleeping environment:
    Move bedside table and hard objects close to the bed.
  • --Bed away from any window.
  • --Mattress on the floor.
  • --Bedpartner moves to a separate bed.

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"I swear, I was wrestling a really, really big snake."

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66 yo computer consultant

- Dreamed he was wrestling a snake and grabbed and pushed his wife.
- Following international travel with jet lag

AHI 19, REM AHI 29, min O2 88.
No REM w/o atonia
On Auto PAP
On Melatonin 10mg

Lessons Learned

When multiple sleep disorders are seen concomitantly, usually best to

**treat the Sleep Disordered Breathing first.**
"I always wanted to vacation in Hawaii in a house with a pool."

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62 yo health professional

- Dreamed she was snorkeling on vacation in Hawaii and subsequently realized she was in her swimming pool.

PSG AHI 13.1 with minimum O2 90%
Rx w Auto BIPAP
Meds: had been on amitriptyline treated with low dose clonazepam 0.25mg

Lessons Learned

Exists pseudo RBD phenomenon with:

1) Medication Effect
   - Typically antidepressants (TCAD’s and SSRI’s)
   - But not Buproprion

2) Arousals as related to underlying sleep apnea

3) Occult brain/brain stem lesion, trauma.

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Chronic RBD Treatment

Medications

Clonazepam (the “gold standard” 0.25-2.0+ mg qhs)

- Suggested for the therapy of RBD, to decrease the occurrence of sleep-related.
- Should be used with caution in patients with dementia, gait disorders, or concomitant OSA.
- Use should be monitored carefully over time as RBD may be a precursor to neurodegenerative ds.

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RBD Treatment cont.

Melatonin (3-15 mg at bedtime)

Suggested for the treatment of RBD with the advantage that there are few side effects.

Clonazepam-Melatonin combined Rx.

*No feedback loop with melatonin. Extrinsic melatonin does not diminish or turn off intrinsic melatonin.

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Chronic RBD Treatment

Other Medications

- Pramipexole: contradictory results.
- L-Dopa: limited evidence.
- Paroxetine: efficacy in Japanese patients; may trigger/exacerbate RBD in other patients, along with virtually all other SSRIs.

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Chronic RBD Treatment

Other Medications

- **Acetylcholinesterase inhibitors**: limited data; also may trigger/exacerbate RBD:
  - Yeh S-B, Schenck CH. Rivastigmine-induced REM Sleep Behavior Disorder (RBD) in a 88 year-old man with Alzheimer's Disease.

Other Medications

- Zopiclone
- Other benzos (alprazolam/triazolam)
- TCAs (desipramine/imipramine)
- Carbamazepine
- Clozapine
- Sodium oxybate
- Yi-Gan San (Japanese herbal medicine)

55 yo retired police officer
The “I’ll be there with bells on” case
Just how many bizarre behaviors can one person manifest?

- Taking showers with clothes on
- Taking clothes off
- Drinking citrus cleaning fluid
- Moving silverware into refrigerator
- Smoking while asleep
- Making Christmas decorations
- Sleep eating
- Sleep cooking
- Swears and becomes agitated if awakened
- Getting up with a knife or scissors during the night

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Episodes so severe her husband has resorted to:

- "tying bells to a belt around her waist"
- "fastened with a rope"
- "tied to a large table in the dining room".

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RBD "Novel Therapy"

- Spouses often have discovered a calming phrase that stops dream-enacting behaviors.
- A pressurized bed alarm that was customized with a familiar voice to deliver a calming message during dream-enacting behaviors.

http://www.posey.com/Products/Posey-Sitter-Select/trade__8361.aspx
"A Novel Therapy for REM Sleep Behavior Disorder (RBD)"
Howell MJ, Amason PA, Schenck CH

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Service Animals as an adjunct treatment for sleep disorders

• In patients with obstructive sleep apnea (OSA), nightmares, narcolepsy, parasomnias, and other sleep disorders, service animals may add a valuable, and currently underappreciated, treatment option.

By Mary W. Rose, PsyD, CBSM; Colleen G. Lance, MD; and Carlos H. Schenck, MD http://www.sleepreviewmag.com/2015/06/dogs-promising-roles-sleep-disorders-therapy

OK, so what have we learned today? Pearls to remember.

Multiple sleep disorders, multiple parasomnias can occur concomitantly.

Usually best to treat the sleep disordered breathing first.

If potentially dangerous activity, may need to treat the RBD & OSA simultaneously.
RBD Pearls to Remember

- RBD can be seen as a pseudo phenomenon as related to:
  - medications (SSRI’s, TCAD’s)
  - arousals as related to underlying SDB
  - intracranial/brainstem lesion
  - posttraumatic brain injury.

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RBD Pearls to Remember

- Clonazepam is the “gold standard” for RBD
- REM without atonia may persist on PSG even after Clonazepam.
- Think about adding Melatonin

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RBD Pearls to Remember

- May need to recheck PSG regarding potential respiratory suppression of BZD.
- Advise against abrupt cessation.
- Safety issues and patient education always paramount.

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RBD Bibliography


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- Schenck CH, Boeve BF, Mahowald MW, Minnesota Group RBD Outcome Data Sleep Med 2013; 14 (8): 744-748.
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