Sleep Dysfunction in Multiple System Atrophy

DR CALLUM DUPRE – NEUROLOGY/SLEEP MEDICINE
CAPITAL HEALTH SYSTEM
Categories of Disturbance

- Sleep Breathing Disorders
- Parasomnias
- Sleepiness
- Insomnia
Breathing?

- Sleep Apnea (Obstructive vs Central)
- Stridor – Not just scary for the bed partner
- Hypoventilation
Sleep Apnea

- Obstructive vs Central
- Very common and very treatable
- Why does it matter?

- Increased Risk of...
  - Hypertension
  - Heart Attack
  - Stroke

- Worsens...
  - A.fib
  - Diabetes
  - High Cholesterol
Not only a disorder of the overweight...
Signs and Symptoms

- Snoring!
- Snorts and Gasps
- Witnessed Apneas
- Multiple Awakenings (Nocturia)
- Nonrestorative Sleep
- Morning dry mouth, sore throat or headache
- Daytime Sleepiness
OSA: What do we do about it?

- CPAP vs BiPAP!
- Oral Appliances
- Positional Therapy
- Provent
- Surgery
- Weight Loss!

- Hypoventilation?
Stridor

- Wake vs sleep
- Suggests overactivity of the vocal cord musculature
- Treating aggressively can have significant survival benefits

Treatment?
- PAP
- Tracheostomy
Parasomnias

- Usually REM-related

- Often the “canary in the mine-shaft”
  - precedes the onset of symptoms by up to 10 years
  - SSRI effect?

- DANGEROUS!!!
  - “Vigorous and violent” at times with multiple episodes through the night
  - 33-65% of patients with harm to themselves or their bed partner

Aurora et al, JCSM, 2010
The numbers?

- **RBD**
  - 70% of patients with MSA
  - Older data: 38-65% risk of developing synucleinopathy
  - Newer data?
    - 33.1% at five years
    - 75.7% at ten years
    - 90.9% at 14 years
    - The median conversion time was 7.5 years.
  - Emerging diagnoses were dementia with Lewy bodies (DLB) in 29/65 subjects, Parkinson disease (PD) in 22, multiple system atrophy (MSA) in two, and mild cognitive impairment (MCI) in 12.

Aurora et al, JCSM, 2010
REM Behavior Disorder

- Treatment?
  - Clonazepam
  - Melatonin
  - Non-Benzodiazepine hypnotics?
REM Behavior Disorder

- Clonazepam
  - Generally effective (>80%)
  - But with side effects...

- Side Effects?
  - Sedation
  - Gait Unsteadiness/Falls
  - Confusion
  - Worsening of sleep breathing disorders
REM Behavior Disorder

- Melatonin
  - Conventionally used as a “natural” sleeping pill
  - Often effective
  - Safer but not perfect
  - Doesn’t just sedate the person through it

- Side Effects? (5/14)
  - Sedation
  - Confusion
  - Morning headache

Boeve et al, Sleep Medicine, 2003
Mcgrane et al, Sleep Medicine, 2014
Non-Benzodiazepines ("Z-drugs")
- Not necessarily effective and with side effects...
- Not well studied
- REM suppression vs sedate you through

Side Effects?
- Sedation
- Gait Unsteadiness/Falls
- Confusion
- Worsening of sleep breathing disorders
- Other parasomnias
REM Behavior Disorder

- RBD IS DANGEROUS!!!!!!!!!!!!!!!

- Bedroom Safety?

- Bed partner safety

Specific Interventions

- Mattress on the floor
- Padding corners/moving furniture
- Windows?
- Guns/knives?

- Restraints?? – recommend against
Fatigue vs Sleepiness

- 50% of MSA patients
- Underlying sleep disorders
- Medication induced
- Secondary Narcolepsy
- Often treatable!
Insomnia
Eliminate Bad Habits (Sleep Hygiene)

- Caffeine!
- Napping!
- Clock Watching!
- Alcohol or Nicotine!
- The bedroom environment
Maximize Good Habits (Sleep Hygiene)

- “Worry Time”
- Exercise
- Bedroom Temperature
- Mental Distraction Techniques

- Probably equally effective initially*
- Effects of drugs wears off if discontinued after 6-8 wks, effect of CBT persists for 10-24 months
Medications?

- Older
  - Supplements?
  - Benzodiazepines
  - Sedating Anti-depressants

- Newer
  - Non-Benzodiazepine Hypnotics (Z-drugs)
  - Melatonin Receptor Agonists
Medications vs Behavioral Strategies

- Each has their place

- Medications
  - May be effective in the long run
  - Risk of tolerance, dependence and side effects

- Behavioral
  - Relaxation Training
  - Cognitive Therapy
  - Stimulus Control
Management of Insomnia: Take Home Messages

- New drugs safer, but not without side effects
- Minimal tolerance, minimal withdrawal effects
- Benefits still modest
- CBT as effective as drugs; still first line treatment for chronic primary insomnia
- Drugs are useful if CBT ineffective, unavailable or declined