



# Medications That Make You Go Nighty Night

JESSICA SCHWELLER, MS, APRN-CNP, RRT-SDS

THE OHIO STATE UNIVERSITY LUNG AND SLEEP DISORDERS CENTER

# Conflict of Interest

- ▶ None to disclose

# Objectives

- ▶ Review the definition, prevalence and causes of insomnia
- ▶ Discuss pharmacology of medications used as sleep aids
- ▶ Discuss the implications of the use of sleep aids long term and alternative ways to treat insomnia

# Insomnia

- ▶ Definition: the subjective perception of difficulty with sleep initiation, duration, consolidation, or quality that occurs despite adequate opportunity for sleep, and that results in some form of daytime impairment (AASM)
- ▶ Prevalence: about 30% of general population
- ▶ May be acute (less than 4 weeks) or chronic (greater than 3 months)
- ▶ Can be related to chronic health conditions and/or medication side effects

# Insomnia cont.



# Insomnia cont.

Risk factors for insomnia include:

- > Age (elderly more likely)
- > Gender (women greater than men)
- > Stressful or traumatic event
- > Night shift or rotating shifts
- > Travel across time zones
- > Substance abuse
- > Asthma
- > Excessive computer work
- > Depression and anxiety
- > Sedentary lifestyle

# Acute Insomnia

- ▶ Generally an underlying cause/effect response to a recent event
  - ▶ Family trauma
  - ▶ Death in the family/grieving
  - ▶ Pregnancy
  - ▶ Recent surgery or hospitalization
- ▶ Episode lasts for less than 4 weeks
- ▶ Can resolve after episode resolves or can develop into chronic insomnia

# Chronic Insomnia

- ▶ Condition that lasts for 3 or more months
- ▶ Can be caused by an underlying sleep disorder, such as OSA, PLMD, RLS or general dyspnea
- ▶ Common in patients with underlying psychiatric disorders
- ▶ Poor sleep at night can increase risk for daytime accidents

# Evaluation for Insomnia

- ▶ Extensive sleep history can tell you a lot!
- ▶ Insomnia can be managed by primary care but when treatment is not working or patients continue to have ongoing symptoms, a referral to sleep medicine should be done
- ▶ Sleep study not warranted unless you suspect underlying OSA, PLMD or other conditions that may be causing insomnia
- ▶ Medication review for side effect profile
- ▶ Psychiatric assessment for depression and anxiety

# Treatment For Insomnia

- ▶ Alleviate the underlying cause, if possible
- ▶ Sleep hygiene and stimulus control
- ▶ Sleep restriction
- ▶ Relaxation therapy
- ▶ Other behavioral modifications
- ▶ Frontal cortex cooling
- ▶ **Medication**

# Choosing a Medication That Is Right For Your Patient

- ▶ Patient's Age
  - ▶ Caution in elderly
- ▶ Gender
  - ▶ Lower dose recommendation for women
  - ▶ Caution if patient could be pregnant/become pregnant
- ▶ Occupation
- ▶ Health History
  - ▶ History of OSA and/or other hypoventilation syndromes

# Benzodiazepines

- ▶ MOA: bind to several GABA-A receptors in the brain to help reduce sleep onset, prolong stage 2 sleep, prolong total sleep time, and can reduce rapid eye movement (REM) sleep
- ▶ Duration of action
  - ▶ Short acting
  - ▶ Intermediate acting
  - ▶ Long acting

# Benzos cont.

- ▶ Short Acting
  - ▶ Triazolam (Halcion)
- ▶ Intermediate Acting
  - ▶ Estazolam (Prosom)
  - ▶ Lorazepam (Ativan)
  - ▶ Temazepam (Restoril)
- ▶ Work best for sleep onset insomnia

# Benzos cont.

- ▶ Long Acting
  - ▶ Flurazepam (Dalmane)
  - ▶ Clonazepam (Klonopin)
  - ▶ Quazepam (Doral)
  - ▶ estazolam
- ▶ Work best for sleep maintenance insomnia

# Benzos cont.

## ▶ Side Effects:

- ▶ Residual daytime sleepiness
- ▶ Drowsiness
- ▶ Dizziness
- ▶ Cognitive impairment
- ▶ Motor incoordination
- ▶ Dependence
- ▶ Respiratory suppression
- ▶ Long term use can be habit forming and can lead to rebound insomnia when stopped

# Non-Benzodiazepine Receptor Agonists

- ▶ MOA: bind to a one of kind GABA-A receptor in the brain and therefore makes the medication less anxiolytic than benzodiazepines
- ▶ Can be used for both sleep onset and sleep maintenance insomnia
  - ▶ zaleplon (Sonata)
  - ▶ zolpidem (Ambien, Zolpimist, Intermezzo)
  - ▶ eszopiclone (Lunesta)
  - ▶ zolpidem extended release (Ambien CR)

# Zaleplon (Sonata)

- ▶ Very short half life
- ▶ Dose: 5 mg or 10 mg capsules
- ▶ Ideal for sleep onset insomnia
- ▶ Ok to take in the middle of night if sleep maintenance is an issue as long as the patient has 4 or more hours left to dedicate to sleep

# Zolpidem (Ambien, Intermezzo, Zolpimist, Edluar, Ambien CR)

- ▶ half life of 1.5-4 hours and can be used for both sleep onset and sleep maintenance
- ▶ Dose: 5 mg or 10 mg tab
- ▶ Ambien CR: continuous release to help you both initiate and maintain sleep
  - ▶ Dose: 6.25 mg or 12.5 mg tab
- ▶ Intermezzo: lower dose quick dissolve zolpidem used for dosing in the middle of the night to help return to sleep quicker
  - ▶ Dose: 1.75 mg or 3.5 mg sublingual tabs
- ▶ Zolpimist: oral mist zolpidem used for sleep onset
  - ▶ Dose: 5 mg per spray
- ▶ Edluar: 5 mg or 10 mg sublingual for sleep onset

# Zolpidem cont.

- ▶ Caution with zolpidem in elderly as it can increase fall risk
- ▶ Dose recommendation for women is HALF the dose recommended for men
  - ▶ Use the lowest dose option for women
- ▶ Common SE: sleep eating, sleep walking, sleep talking, vivid dreams or hallucinations

# Eszopiclone (Lunesta)

- ▶ 6 hour half-life and is intended for both sleep onset and maintenance
  - ▶ Slow release over time to help initiate and maintain sleep
- ▶ Common complaint: unpleasant metallic taste in the mouth
- ▶ Dose: 1 mg, 2 mg and 3 mg tab
  - ▶ Ideal starting dose in elderly and females: 1 mg
  - ▶ Ideal starting dose for males: 2 mg
- ▶ FDA approved for long term use in chronic insomnia

# Melatonin Agonists

- ▶ MOA: bind to the melatonin receptors in the suprachiasmatic nucleus to help promote sleep
- ▶ Side effects: daytime sleepiness, memory issues
- ▶ Ramelteon (Rozerem) is metabolized by the liver and should be used with caution in those with hepatic insufficiency
  - ▶ Dose: 8 mg tab
  - ▶ Half-life: 1.5-5 hours
  - ▶ Efficacy is minimal in relationship to cost

# Orexin Antagonists

- ▶ Work differently than previous medications
- ▶ MOA: help to block the wake promoting centers of the in the hypothalamus thus improving sleep
- ▶ Suvorexant (Belsomra) is a dual orexin receptor antagonist with a 12 hour half life and should be avoided those with narcolepsy
- ▶ Dose: 10 mg, 15 mg, and 20 mg tabs
  - ▶ Recommended dose: 10 mg
- ▶ Side effects: increased daytime fatigue, REM behavior disorder, sleep walking and hallucinations

# Antidepressants (Tricyclics)

- ▶ Commonly used: doxepin and trazodone
- ▶ Used for patients with comorbid anxiety, depression and insomnia
- ▶ Sedating effects and minimal risk make them ideal for use in general population
- ▶ Trazodone: most commonly prescribed sleep aid in primary care
  - ▶ Minimal side effects however long half life (16 hr)
  - ▶ Dose: 50 mg, 100 mg and 150 mg tabs
- ▶ Doxepin (Silenor) is a low dose of the antidepressant marketed for insomnia
  - ▶ Dose: 3 mg or 6 mg tabs

# OTC Sleep Aids

- ▶ Melatonin
- ▶ Diphenhydramine
- ▶ Other herbal supplements (ex: Valerian Root, 5-HTP)
- ▶ Many are not FDA regulated and use caution with patients when “self-medicating”

# Prescribing Sleep Aids

- ▶ Should be done as part of a comprehensive evaluation for insomnia
- ▶ Lowest dose possible to achieve desired affect
- ▶ Education on possible effects with the use of other substances, such as alcohol, marijuana and other sedating medications
- ▶ Urine toxicology screenings and controlled substance reporting systems
- ▶ Should be done in conjunction with CBT-I and other behavioral/psychological therapies
  - ▶ Medication is not the only answer!

# Insomnia in Pregnancy

- ▶ Common cause for acute insomnia
- ▶ Caution should be used when prescribing medications
- ▶ Diphenhydramine most commonly used to help
- ▶ Ambien low dose can be used with supervision (Cat B/C)
- ▶ Avoidance of benzos as they are either category D or X
- ▶ Melatonin can increase risk of pregnancy complications and childbirth

# Treating Insomnia Inpatient

- ▶ Insomnia can be the result of trauma/illness as well as develop due to fragmented sleep inpatient
- ▶ Can be the result of new medication side effects
- ▶ Using medication however can increase confusion and risk for falls
- ▶ Most medications should only be used under supervision in the hospital and discontinued before discharge
- ▶ If needed long term, evaluation and management should be done by PCP or referral to sleep medicine

# Conclusion

- ▶ Insomnia affects over 30% of the general population and can be acute or chronic
- ▶ Treatment should include evaluation for other co-morbid sleep disorders and should be used in conjunction with behavioral modification
- ▶ Tolerance and dependence is a common issue and medications may become ineffective over time
- ▶ Caution when prescribing these medications in those who engage in behaviors such as illicit drug use and alcohol

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Questions?

Thank you!

[Jessica.Schweller@osumc.edu](mailto:Jessica.Schweller@osumc.edu)