Sleep and the Patient with Mental Illness

NPI First Annual Winter Conference
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Objectives

• Why is sleep so important?
• Sleep promotion
• Non-pharmacy options and tricks
• Medications
• Sleep hygiene? What is this and who should care about it?
• NIH – National Institute of Health 2011
• 1560 mental health patients
• 75% had sleep problems
• 50% severe sleep issues
• This study behavioral changes and intervention with medications worked the best.
Sleep stages

• Non-REM (Slow wave, N3 and delta)
  – Physical restoration
  – Driven by homeostatic pressure
    • Quiet brain with an active body

• REM
  – Mental restoration/memory
  – Driven by circadian pressure
  – Active brain and quiet body
REM verses Non-REM Sleep

<table>
<thead>
<tr>
<th>Physiologic variable</th>
<th>Non-REM</th>
<th>REM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart rate</td>
<td>Regular</td>
<td>Irregular</td>
</tr>
<tr>
<td>Respiratory rate</td>
<td>Regular</td>
<td>Irregular</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>Regular</td>
<td>Variable</td>
</tr>
<tr>
<td>Skeletal muscle tone</td>
<td>Preserved</td>
<td>Absent</td>
</tr>
<tr>
<td>Brain O2 consumption</td>
<td>Reduced</td>
<td>Increased</td>
</tr>
<tr>
<td>Ventilatory response</td>
<td>Normal</td>
<td>Reduced</td>
</tr>
<tr>
<td>Temperature</td>
<td>Normal</td>
<td>Poikilothermic</td>
</tr>
<tr>
<td>Sexual changes</td>
<td>Rare</td>
<td>Frequent</td>
</tr>
</tbody>
</table>
Sleep medications

• What percent of Americans take sleep medications every year?
  – 5%
  – 10%
  – 25%
  – 70%
  – 90%
Non-prescriptions – Safe?

- NIH (National Institute of Health 2005 Consensus statement- vast majority of OTC not recommended
- Lack of safety data, no efficacy data
- Goal was to improve sleep hygiene
Hypnotics

- Prescription medication that promote sleep
- Recommendations to use with insomnia (related to medical or biological conditions)
- Short term insomnia (jet lag)
- Insomnia that interferes with quality of life
- When behavioral approaches are ineffective
Cautions with all sleep meds

- Start with lowest possible effective dose
- Short term, if used nightly
- Intermittent, if used long term
- Combination with good sleep hygiene and behavioral approaches
- Caution in lung diseases, OSA, elderly, renal or hepatic disease, pregnancy
- Not with alcohol or other drugs!
FDA approved medications

• Benzodiazepine and non-benzodiazepine GABA agonists
• Melatonin agonists (Rozerem)
Benzodiazepines

• Bind to GABA type A receptors
• Reduce sleep onset latency, increase stage N2 sleep and efficiency, decrease REM sleep
• Duration of action differs between medications:
  – Short acting: Triazolam (Halcion)
  – Intermediate acting: Estazolam (ProSom), Lorazepam (Ativan, Temazepam (Restoril)
  – Long acting: Diazepam (Valium), Flurazepam (Dalmane) (Doral)
Benzo side effects

• Daytime sedation
• Groggy in the morning – “hang over feeling”
• Cognitive impairment
• Dizziness
• Dependence – addiction
• Insomnia
• Sleep walking
• Sleep rebound
Non-Benzodiazepines

• More targeted action at GABA type A receptors than benzo’s
• Decreases sleep onset latency, increases sleep duration and sleep quality
• Similar side effects as benzo’s but less frequent
Non-benzo meds

- Zolpidem (Ambien) – ½ life of 1. hours to 2.4 hours, effective for sleep onset insomnia. Extended release form available (Ambien CR)
- Zolpidem tartrate (Intermezzo) FDA approved for middle of night awakenings;
- Eszopiclone (Lunesta): ½ life of 5-7 hours. Effective for sleep onset and sleep maintenance
- Zaleplon (Sonata): ½ life 1 hour. Effective for sleep onset insomnia
Melatonin Agonists

- Ramelteon (Rozerem): ½ life of 1.5 to 5 hours.
- Metabolized in the liver.
- Contraindicated in patients taking SSRI’s (Luvox, etc.) as it will decrease the metabolism of the Rozerem
- Best for sleep onset insomnia
- Randomized trials have shown subjective benefit persistent up to 6-12 months
- Little abuse potential
- No hypnotic side effects
Non- FDA approved medications

• Sedating antidepressants: Amitriptyline (Elavil), Trazodone (Desyrel), Doxepin. Most appropriate with depressed patients.

• Sedating antihistamines: Benadryl – long half life, available as OTC sleep aids. Not recommended for routine use to treat insomnia.

• Antipsychotics and barbiturates: Not routinely recommended.
OTC Sleep Medications

• Valerian: Herbal, decreases sleep latency by only one minute compared to placebo. Potential to be hepatotoxic. Non-FDA regulated.

• Melatonin: pineal gland hormone; Can be very helpful in delayed sleep phase syndrome and patient with low melatonin levels. Appears to be safe in short term use (3 months or shorter).

• Alcohol: Decreases sleep onset latency in the short term. Promotes sleep disturbances later in sleep. Worsens sleep apnea. Not recommended as a sleep aid.
Restless Legs Syndrome Treatments

• Treatments that are approved by FDA for RLS:
  – Ropinirole (ReQuip) (2005)
  – Pramipexole (Mirapex) 2006
  – Gabapentin enacarbil (Horizant) 2011
  – Rotigotine (Neupro) 2012

– Remember dopamine agonist can cause somnolence, impulse control issues (QVC spending, gambling, internet spending)
Pearls

• Recent CDC data showed 1 in 24 drivers admitted to nodding off while driving
• FDA New Release: Recommendations to lower zolpidem dosing especially in women to 5 mg (from 10 mg) due to slower elimination of this medication than males. Lower CR dosing for women too. January 10, 2013
• Society of Behavioral Sleep Medicine BSM) has lists available for trained folks in BSM...None in Idaho. (One in Oregon and 2 in Washington) Cognitive Behavioral Sleep education is available in Idaho.
• Sleep specialist are available. Sleep School available.
• Sleep is a very necessary component to life, our mental health and well being. Sleep can affect every part of our health (B/P, glucose abilities in our bodies, sexual dysfunction and function, renal, memory and on and on.....
Thanks

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