Sleep and Mental Health: Lessening the Impact of Common Sleep Disorders in Psychiatric Populations
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Overview

- Insomnia Disorder Refresher
  - Please see previous session materials from April and November 2015 for more details

- Thinking about other common sleep disorders that cause insomnia and are often overlooked:
  - Obstructive Sleep Apnea
  - Restless Legs Syndrome
  - Circadian Rhythm Sleep-Wake Disorders
DSM-5 Criteria for Insomnia Disorder

• One or more:
  – difficulty initiating sleep
  – difficulty maintaining sleep
  – waking up too early

• Sleep difficulty occurs:
  – despite adequate opportunity for sleep
  – at least 3 nights a week
  – at least 3 months

• Daytime consequences

• Not explained by another sleep-wake disorder or substance use

• Co-existing mental disorders and medical conditions do not adequately explain the predominant complaint of insomnia

• About 6-10% of the general population meet the above criteria

• 40-50% of those with insomnia also have a co-morbid psychiatric disorder
Insomnia Consequences

Reference Group = 1073 mild hypertensive patients


Insomnia Consequences

- Work-related issues
  - Higher rates of absenteeism
  - Decreased concentration
  - Difficulty performing duties
  - Increased risk of accidents
- Higher health care expenditures

Roth T. (2007) J of Clinical Sleep Medicine

Insomnia predicts future depression: Meta-analysis, OR 2.6 (CI 1.98-3.42)

Baglioni C et al. (2011) J Affective Disorders
Insomnia Assessment

- Clinical Interview
- Sleep Logs (included in materials today)
- Medical/Neurological exam is not routinely indicated; however, if any concerns about medical issues that have not been followed, a referral would be indicated
- An overnight sleep study is not routinely indicated

A Cognitive-Behavioral Model of Insomnia

Key Insomnia Sleep-Related Behaviors: Clinical Interview and Sleep Log

- Variable bedtimes and wakeup times
  - body’s clock
- Using the bed for activity other than sleep and sex
  - hyperarousal/conditioning
- Staying in bed awake
  - hyperarousal/conditioning
- Compensating for sleep loss through sleep extension
  - sleep drive
Key Insomnia Sleep-Related Behaviors: Clinical Interview and Sleep Log

- Excessive caffeine, nicotine, alcohol, and/or drug use
  - hyperarousal/conditioning
- Daytime napping and dozing
  - sleep drive
- Lack of daily structure
  - body’s clock
- Worry/frustration about sleep
  - hyperarousal/conditioning

Insomnia Treatment

- Psychological and behavioral interventions are effective and recommended in the treatment of chronic primary and comorbid (secondary) insomnia. (Standard)
  - These treatments are effective for adults of all ages, including older adults, and chronic hypnotic users. (Standard)
  - These treatments should be utilized as an initial intervention when appropriate and when conditions permit. (Consensus)"


Insomnia Treatment

- Cognitive-behavioral therapy for insomnia resources:
  - Books
  - Online treatment programs
    • http://shuhi.me/
    • www.sleepio.com
Sleep Maintenance Insomnia or OSA?

Sam is a 60 year old man who often comes to appointments looking very tired and can be found dozing in the waiting room. He has been struggling with depression and a number of health concerns for the last 15-20 years. He describes very unrefreshing sleep, waking frequently during the night. He often says, “When I wake up in the morning, it is as if I didn’t sleep at all the night before.” It has been hard to see any improvement in his depression or health and there have been many consequences to his relationships with his family and ability to work consistently.

OSA Description

- Common and serious problem in which the airway collapses repeatedly during sleep
- Causes repeated arousals
- Results often in fatigue and/or sleepiness
- OSA prevalence – 2-15% in middle aged adults; 20% in older adults
OSA Consequences

- Longitudinal findings over 4 to 15 years demonstrate that untreated sleep apnea predicts increased:
  - blood pressure
  - hypertension
  - stroke
  - depression
  - mortality

Young et al. (2009) WMJ

OSA Assessment

- Clinical Interview
- Medical/neurological exam sometimes needed
- Overnight sleep study

Clinical Interview

- STOP-BANG screening tool
  - Snoring loudly?
  - Tired/fatigued/sleepy?
  - Observed apnea or waking gasping/choking?
  - Pressure (blood pressure) issues or treatment?
  - BMI > 35
  - Age > 50
  - Neck size > 17 inches for males (> 16 for females)
  - Gender male?
- A bed partner’s report is helpful if available
Clinical Interview

  - OSA - Low Risk: Yes to 0 - 2 questions
  - OSA - Intermediate Risk: Yes to 3 - 4 questions
  - OSA - High Risk: Yes to 5 - 8 questions
  - Or Yes to 2 or more of 4 STOP questions + male gender
  - Or Yes to 2 or more of 4 STOP questions + BMI > 35kg/m²
  - Or Yes to 2 or more of 4 STOP questions + neck circumference
    17 inches / 43cm in male or 16 inches / 41cm in female

Clinical Interview

- Assess medication
  - Medication can indirectly exacerbate OSA through weight gain (e.g., atypical antipsychotics, antidepressants, mood stabilizers) and muscle relaxation (e.g., benzodiazepines, barbiturates)


Medical/Neurological Exam

- Examination of nasal passages and airway

Class I  |  Class II  |  Class III  |  Class IV
Polysomnography (Overnight Sleep Study)

• Apnea/Hypopnea Index (AHI):
  – Mild OSA: 5-15 events/hour
  – Moderate OSA: 15-30 events/hour
  – Severe OSA: 30 or greater

OSA Treatment

• Typically, positive airway pressure (PAP) therapy is recommended in the treatment of OSA
• Other treatment recommendations can include:
  – Weight loss
  – Supine preclusion
  – Oral appliance
  – Surgical procedures

Restless Legs Syndrome (RLS)
Sleep Initiation Insomnia or RLS?
Sheila is a 40 year old women who experienced significant sexual abuse as a child and has coped with anxiety for most of her life. She has been able to engage in anxiety treatment, including medications and therapy, and she has experienced some benefit. She notes it is still hard to cope with a sense of restlessness at night. It has always been hard for her to sit down in the evening, and she has described this as “feeling antsy”. She is finding herself really fatigued because despite trying to “wear herself out” prior to bedtime, she often struggles to fall asleep while tossing and turning, waiting to feel less anxious. She has been trying to practice relaxation at bedtime, but it only makes her restlessness feel worse.

RLS Description
• RLS is characterized by uncomfortable or odd sensations, mostly in the legs, that are accompanied by an urge to move.
• The sensations tend to occur most commonly in the evening, when the patient is sitting or lying down, and are relieved temporarily by movement
• Symptoms present challenges in initiating sleep

RLS Assessment
• Clinical Interview
• Medical/neurological exam
• An overnight sleep study is not routinely indicated
Clinical Interview

• Screening question with good sensitivity and specificity (>90%) in clinical populations:
  – When you try to relax in the evening or sleep at night, do you ever have unpleasant, restless feelings in your legs that can be relieved by walking or movement?

  Ferri et al. (2007) Eur J Neurol

Clinical Interview

• Important to assess anti-depressant medications
  – Approximately 9% of individuals experienced new-onset or exacerbation of restless legs symptoms after starting newer antidepressants (e.g., SSRIs or dual-reuptake inhibitors)
  – Agents such as bupropion, with significant dopaminergic activity, are thought to be less likely to exacerbate these symptoms


Clinical Interview

• RLS is differentiated from akathisia, which is most commonly a side effect of neuroleptic anti-psychotic medication
  – Akathisia usually is experienced as restlessness throughout the body that does not demonstrate a circadian pattern or improve with movement

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Medical/Neurological Exam

- Ferritin level is assessed
  - Considered iron deficient if ferritin < 50 µg/L
- Neuropathy examination

RLS Treatment

- Iron supplementation if ferritin is < 50 µg/L
- Change of medication exacerbating RLS symptoms if appropriate
- Dopamine agonists (timing and dose of medication is very important):
  - ropinirole
  - pramipexole

Circadian Rhythm
Sleep-Wake Disorders
Insomnia or Circadian Rhythm Issues?
John is a 30 year old male with a mood disorder who complains of insomnia. It takes him hours to fall asleep at night and then he struggles to wake up. He often sets multiple alarms and can easily sleep through all of them. He has a hard time making it to appointments and never finished school because it was so hard to get to class each day. If he has an early appointment, he often just stays up as it is a better guarantee that he will make the appointment.

Circadian Rhythm Sleep-Wake Disorders
• Circadian rhythm disorders involve a mismatch between the 24-hour day and the endogenous circadian rhythm, which is generated by the master pacemaker within the suprachiasmatic nucleus of the hypothalamus
  – Delayed and Advanced Sleep Phase Type
  – Irregular Sleep-Wake Type
  – Shift Work Type

Circadian Rhythm Assessment
• Clinical Interview
• Sleep Logs or Activity Device
• An overnight sleep study is not routinely indicated
Delayed and Advanced Sleep Phase Types

Delayed Sleep Phase Type
- Significant difficulties initiating sleep
- Significant difficulty rising in the morning (sleep inertia)
- Typically, sleep is non-problematic when following a later schedule
- About 0.17% of the population

Advanced Sleep Phase Type
- Significant difficulties with early morning awakenings
- Significant difficulties with nighttime dozing
- Typically, sleep is non-problematic when following an earlier schedule
- Unknown prevalence
Clinical Interview and Sleep Logs

- "Night owl" or "early bird" history by simply asking about chronotype preference
- Otherwise, patient describes delayed or advanced sleep patterns when allowed to sleep naturally or demonstrates these patterns in sleep logs or with an activity device

Irregular Sleep-Wake Type

- Patient may complain of sleep difficulties at night
- However, when exploring the sleep-wake pattern, it becomes more clear that sleep occurs at various periods throughout the day and night
- Unknown prevalence
Clinical Interview

• Report of irregular sleep-wake pattern
• Often at least 3 periods of sleep throughout 24-hour day
• Usually in context of no routine

Shift Work Type

• Difficulty initiating or maintaining sleep at times sleep is desired or can occur
• Difficulty staying awake and alert at times when wakefulness is required
• Work demand is leading to above difficulties
• Occurs in 5-10% of night shift workers, which is about 16-20% of the work force
Clinical Interview

• Getting a sense of what shift work looks like and how the individual compensates
• Understanding potential roadblocks to sleep out of the typical nighttime window (household responsibilities, appointments)
• Often helpful to have patient track day-to-day to get a sense of the pattern or lack of pattern

Circadian Rhythm Sleep-Wake Disorder Treatment

• Sleep scheduling
• Light therapy
• Melatonin

• Timing of all of these interventions is very important!

Summary

• A variety of sleep issues can be present in those with co-morbid mental health concerns

• Ultimate goal = with effective sleep-related assessment and treatment, clients have more optimal care and outcome overall