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PSYCHOLOGICAL AND BEHAVIORAL TREATMENTS FOR INSOMNIA

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GENERAL DISCLOSURES

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SPEAKER DISCLOSURES

- ✓ no conflicts of interest

OBJECTIVES

1. To develop an understanding of psychological and behavioral treatments for insomnia disorder
2. To understand recommendations for first line treatments for chronic insomnia
3. To appreciate the evidence of how CBT-I compares to pharmacologic treatments for insomnia

INSOMNIA DISORDER

DSM-5

- Dissatisfaction with quantity or quality of sleep at least 3 nights per week for at least 3 months and includes and one or more of:
 - Difficulty initiating sleep
 - Difficult staying asleep (awakenings or difficulty returning to sleep after waking)
 - Early morning waking with difficulty returning to sleep
- Clinically significant distress or impairment in functioning
- Adequate time for sleep
- Not otherwise explained by medical condition, substance or another sleep-wake disorder
 - Insomnia is still diagnosed if it is comorbid with another medical or psychiatric illness

- Important to treat any underlying medical or psychiatric precipitating factors

MEDICAL CAUSES OF INSOMNIA

- Asthma
- Chronic obstructive pulmonary disease
- Congestive heart failure
- Depression
- Fibromyalgia
- Gastroesophageal reflux disease
- Hyperthyroidism
- Menopause
- Obstructive sleep apnea
- Pain
- Periodic limb movement disorder
- Pruritus
- Restless legs syndrome
- Urinary incontinence
- Sleep Apnea
- Restless Leg Syndrome

SUBSTANCE INDUCED INSOMNIA

- Alcohol
- Antidepressants (SSRIs, bupropion)
- Beta blockers
- Caffeine
- Chemotherapy agents (some)
- Cimetidine
- Diuretics
- Herbal Remedies (some)
- Illicit drugs (some)
- Nicotine
- Phenytoin
- Pseudoephedrine
- Steroids
- Stimulant Laxatives
- Theophylline
- Quinidine
- Levodopa
- Methyldopa
- synthroid

COMORBID INSOMNIA AND PSYCHIATRIC DISORDERS

- Anxiety disorders
 - PTSD
- Depressive disorders
- Bipolar disorder
- Psychosis

OVERVIEW TREATMENTS TO BE DISCUSSED

- Cognitive Behavioral Therapy for Insomnia (CBT-I)
 - Sleep education
 - Stimulus control
 - Sleep restriction
 - Sleep hygiene
 - Relaxation
 - Cognitive therapy
- Paradoxical Intention
- Hypnotherapy
- Problem Solving Therapy

COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA (CBT-I)

- CBT-I: Combination of cognitive and behavioral components to improve sleep
- Rationale is based on Spielman's model of predisposing, precipitating and perpetuating factors for insomnia (Edinger)

COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA (CBT-I)

- Improves most sleep outcomes (moderate evidence)
 - Wake time after sleep onset
 - Sleep efficiency
 - Sleep onset latency
 - Sleep quality

- Benefits sustained at 6 month follow-up

COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA (CBT-I)

- Strongly recommended as initial treatment for all adults with chronic insomnia
 - Consensus statements from:
 - American College of Physicians (2016)
 - American Academy of Sleep Medicine (2008)
 - British Association for Psychopharmacology (2010)
- Excellent benefit to risk ratio

CBT-I COMPARED TO PHARMACOLOGIC TREATMENTS FOR INSOMNIA

- Effectiveness of CBT-I is superior to benzodiazepines and non-benzodiazepine hypnotic agents in long term (low-moderate evidence)
 - Benzodiazepines may be more effective in short term (very low grade evidence)
 - Effectiveness of medications decreases over time
- In comparing CBT-I alone to CBT-I with zolpidem, there is moderate benefit in adding zolpidem in acute phase, but not long term
- CBT-I is superior for short and long term management of insomnia for older adults compared to zopiclone

Silversten, 2006, Morin et al, 2009,
Mitchell et al, 2012

- CBT-I shows effectiveness in those with medical and psychiatric comorbidities
- CBT-I also shows benefit for those who have chronically used sedative-hypnotic medications

CBT-I – SPECIAL POPULATIONS

- Breast cancer survivors had improved quality and quantity of sleep with CBT-I
- Evidence for improvement for older adults (low-moderate evidence)
- Open trial showing benefit for CBT-I for insomnia during pregnancy

PATIENT CONSIDERATIONS FOR CBT-I

- Can patient reliably commit to 4-8 sessions?
- Is patient motivated to make behavioral changes?
- Are there cognitive concerns that would prevent patient from participating and retaining information?
- Does patient have a comorbid illness where sleep restriction should be avoided?
 - Bipolar disorder (probably okay for most euthymic patients)
 - Seizures
 - Can modify CBT-I if needed

COMPONENTS OF CBT-I

- Sleep Diary
- Sleep Education
- Stimulus Control
- Sleep restriction
- Sleep Hygiene
- Relaxation
- Cognitive Therapy

SLEEP DIARY SAMPLE

TREATMENT MANUAL. COGNITIVE BEHAVIORAL INSOMNIA THERAPY. JACK EDINGER

1. Yesterday I napped from ___ to ___ (note time of all naps).	1 : 30 - 2 : 45 PM							
2. Last night I took ___ mg. of ___ or ___ of alcohol as a sleep aid.	Ambien 5 mg.							
3. Last night I turned off the lights and attempted to fall asleep at _____ (AM or PM?)	11 : 30 PM							
4. After turning off the lights it took me about minutes to fall sleep.	40 Min.							
5. I woke from sleep _____ times. (Do not count your final awakening here)	2 Times							
6. My awakenings lasted _____ minutes. (List each awakening separately.)	25 Min. 40 Min.							
7. Today I woke up at _____ (AM or PM?) NOTE this is your final awakening.	6 : 30 AM							
8. Today I got out of bed for the day at (AM or PM?).	7 : 15 AM							

CBT-I: SLEEP EDUCATION

- Usually provided during first session
- Important for patients to know what is typical and develop realistic expectations
- Topics discussed may include
 - Sleep needs
 - Most adults need 6-8 hours sleep/night (but for some, sleep needs can range from 3-12 hours/night)
 - Circadian rhythms
 - Effect of aging on sleep
 - Sleep deprivation

STIMULUS CONTROL

- Component of CBT-I or used as a stand alone
- **Components of stimulus control**
 - 1. Bed only used for sleep and sex**
 - 2. Only go to bed when sleepy**
 - 3. Leave bed if unable to sleep (within 15-20 minutes)**
 - 4. Get out of bed same time daily**
- Evidence for stimulus control alone (without CBT-I)
 - Improves sleep onset latency and increased total sleep time
 - Few studies evaluating stimulus control alone

Kaplan et al, 2013, Brasure et al,
2016, Espie et al, 1989

SLEEP RESTRICTION

- Component of CBT-I or as stand alone treatment
- Components of sleep restriction
 - Only in bed for time actually sleeping
 - Time “allowed” in bed based on previous weeks sleep diaries
 - (for example if only sleeping 5 hours/night then only allowed 5.25 hours in bed for first week)
 - Time in bed gradually increased based on sleep efficiency
 - May not always be this formal
- Sleep Restriction as stand alone treatment
 - Few randomized control trials
 - Patient reports improvement in insomnia, but generally evidence is insufficient and results are mixed

*Caution in patients with bipolar disorder and seizures

Kaplan et al, 2013, Falloon et al, 2015,
Columbo et al, 1999, Fernando et al, 2013

SLEEP HYGIENE EDUCATION

- Used alone or as a part of CBT-I
- Recommended that those with insomnia should adhere to sleep hygiene guidelines, but insufficient evidence that sleep hygiene education alone treats insomnia (American Academy of Sleep Medicine guideline)

Schutte-Rodin et al, 2008, Mastin et al, 2006

SLEEP HYGIENE EDUCATION

- Sleep hygiene factors
 - Behaviors and environmental conditions that affect quality of sleep
- Sleep hygiene behaviors (varies depending on study and some overlap)
 - Avoiding daytime naps
 - Same bedtime daily
 - Getting out of bed at same time daily
 - Avoiding exercising 1 hour before bed
 - Avoiding excessive time in bed
 - Avoid alcohol, tobacco or caffeine within 4 hours of going to bed
 - Use bed only for sleep and sex
 - Avoiding worry in bed
 - Avoiding stimulating activities before bed
 - Avoiding important work before bed

RELAXATION

- Component of CBT-I and used as stand alone treatment
- Progressive Muscle Relaxation
 - Exercises to teach patients to progressively tense and relax major skeletal muscle groups
 - Few small trials
 - Insufficient evidence that there is benefit greater than placebo when used as a stand alone treatment.
- Diaphragmatic breathing
- Imagery
- Many others

Edinger et al, 2001, Espie et al, 1989,
Brasure et al, 2016, Harsora et al, 2009

COGNITIVE THERAPY

- Usually used as part of CBT-I
 - Limited evidence as a stand alone treatment
- Goal is to identify, challenge and correct dysfunctional beliefs about sleep
 - Ex: “If I don’t get 7 hours of sleep, I will do poorly on my interview” or “I will never sleep well again”



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OTHER LESS COMMON TREATMENTS FOR INSOMNIA

PARADOXICAL INTENTION

- Rationale is that trying to sleep causes performance anxiety
 - Goal is to remove fear from trying to sleep
- Patients instructed to try to stay awake as long as possible
- Level II-III evidence
- Most of literatures is older

MINDFULNESS MEDITATION FOR INSOMNIA

- Some mild improvement in sleep quality
- no significant effect on total sleep time, wake after sleep onset .

Gong et al, 2016

HYPNOTHERAPY FOR INSOMNIA

- Few randomized controlled trials
- Meta-analysis shows improved sleep latency compared to waitlist, but not compared to sham treatment

PROBLEM SOLVING THERAPY

- Goal is to help patients cope with stressful life circumstances – cognitive behavioral model
- One RCT
 - showed similar benefits to CBT-I
- Consider for patients who did not respond to CBT-I

Pech et al, 2013

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