Excessive Daytime Sleepiness (Hypersomnia)

A Guide to Management

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Disclosure

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At the end of the session, participants will be able to

• Define hypersomnia and identify the various possible causes of excessive sleepiness;

• Recognize the importance of history and physical examination in the evaluation of patients with EDS;

• Enumerate the different ancillary tests available to evaluate EDS; and

• List the different treatment modalities (pharmacotherapeutic and nonpharmacotherapeutic) available to treat EDS.
Clinical Case

M.C., 25/M, single, Filipino-Chinese
CC: excessive daytime sleepiness
HPI:
• No prior psychiatric diagnosis or treatment
• Persistent daytime sleepiness, more evident in new job
• Similar issues in school
• Copes by walking around the office intermittently
• Sleeps through the night for 8 hours
• History of sleep paralysis
• Increased likelihood of falling asleep
• No history of snoring
• Denies being depressed but reports anhedonia, low motivation, poor appetite and poor focus
• PHQ was 15
• Denies any mania, anxiety, psychosis
Review of Systems

• Excessive sleepiness
• All other systems reviewed and were unremarkable

Past Medical History

• History of sleep paralysis
• No history of head trauma
• No seizures
• No known drug or food allergies
• No current medications/supplements
Past Psychiatric History

• No prior psychiatric diagnosis, treatment or hospitalization

Family Psychiatric History

• Denies any history of mental illness in the family
Substance Abuse History

- Alcohol – rarely
- No past substances used
- Does not like taking caffeine – makes him jittery
- Nonsmoker

Trauma/Abuse History

- Denies any history of abuse
- No history of domestic conflicts
- No history of trauma
Developmental/Academic History

• No developmental issues, to his knowledge
• College graduate

Vocational/Occupational History

• Employed as a scientist for a start-up
• Used to work from home
• No financial issues
Personal/Social History

• Born in Manila, Philippines
• Lives with a roommate
• Family lives in Canada
• Poor support system
• No history of military involvement
• No history of involvement with legal system
Mental Status Examination

**Appearance:** well-groomed, dressed appropriately

**Behavior:** calm, cooperative, guarded

**Speech:** normal prosody

**Mood:** “tired”

**Affect:** restricted

**Thought Process:** linear and goal-directed

**Thought Content:** no paranoia, delusions, HI/SI

**Perception:** no AVH

**Orientation:** oriented to time, place and person

**Attention:** intact

**Concentration:** intact

**Memory:** intact recent and remote memory

**Fund of Information:** appropriate

**Impulse Control:** fair

**Insight:** good

**Judgment:** good
Impression

• Hypersomnolence Disorder
• R/O Depression
Excessive Daytime Sleepiness (Hypersomnolence)
Which of the following is true regarding Excessive Daytime Sleepiness (EDS)?

A. Patients with EDS have impaired function due to difficulty maintaining alertness at appropriate times of the day.

B. Complaints of EDS constitute some of the most common issues presented to clinicians.

C. EDS is important to recognize because it can signal an undiagnosed sleep disorder.

D. EDS can have a negative impact on a broad range of activities and raise safety risks.

E. All of the above.
Introduction

• Serious, debilitating, potentially life-threatening condition
• Difficulty maintaining wakefulness at appropriate times of the day
• Usual complaints
  • Tiredness
  • Fatigue
  • Lack of energy
• Can be due to an undiagnosed sleep disorder
• Can have negative impact on broad range of activities and safety concerns (i.e. driving, working heavy machinery)
Epidemiology

- 10 to 25 percent of population
- Quality of data is limited
- Conflicting reports regarding EDS and increasing age
- Most studies show equal ratio by gender (some show female preponderance)

Independent risk factors:
- Insomnia
- Smoking
- Anxiety
- Depression
- Somatic symptoms
- Snoring
- Obesity
Which of the following is not considered an etiology of EDS?

A. Insomnia
B. Klein-Levin Syndrome
C. Depression
D. Benzodiazepines
E. Obstructive Sleep Apnea
Insufficient Sleep

• Can be self-imposed or socially dictated (i.e. shift work)
• Medical help is usually not sought
• Sleep debt produced by insufficient sleep is cumulative
• Can be unmasked by a heavy meal, low-dose alcohol ingestion, warm room or sedentary activity
• Can be from underlying comorbidity (depression, medical illness or pain)
• Medications and abuse of drugs
Sleep Disorders

• Results in EDS because of reduced total sleep time or sleep fragmentation
• Sleep-breathing Disorder
  • OSA
  • Central Sleep Apnea
• Circadian Rhythm Sleep Wake Disorder
  • Jet lag
  • Delayed sleep wake phase disorder
• Sleep-related movement disorder
  • Restless legs syndrome
  • Periodic limb movement disorder
• Parasomnias are not associated with EDS
Central Disorders of Hypersomnolence

• Narcolepsy
  • Irresistible sleep after which patients feel refreshed
  • Occur at inappropriate times
  • Hallucinations, cataplexy and sleep paralysis

• Klein-Levin syndrome
  • Recurrent periods of prolonged sleep with intervening normal sleep
  • Withdrawal from social contacts and return to bed at first opportunity

• Menstrual-Related Hypersomnia
  • At or shortly before menses

• Idiopathic hypersomnia
  • Sleep is usually well preserved and sleep efficiency remains high
Medical Disorders

• Neurological disorder
  • Myotonic Dystrophy
  • Parkinson Disease

• Genetic disorders
  • Prader-Willi syndrome
  • Niemann-Pick Type C

• Medical conditions
  • Hypothyroidism
  • Obesity
Psychiatric Disorder

• Depression
  • Atypical Depression
  • Bipolar Depression

• Anxiety

• Somatization disorder
Medications and Substance Abuse

• Medications
  • Benzodiazepines
  • Nonbenzodiazepine sedatives
  • Antihistamines
  • Anticonvulsants
  • Opioid analgesics
  • Sedating antidepressants
  • Antipsychotics

• Drugs of abuse
  • Alcohol
  • Narcotics
  • Stimulant withdrawal
During your initial evaluation, the following are important to know, EXCEPT:

A. It is important to review medication list.
B. Fatigue, lack of energy and weakness are the same as sleepiness.
C. Sleepiness usually manifests during sedentary activities so ask regarding propensity to fall asleep in low stimulus situations.
D. Sleep history should include information on disturbed sleep, duration of symptoms and sleep environment.
E. Probe for symptoms of specific sleep disorders (i.e. snoring, witnessed apneas, leg discomfort, limb movements during sleep, cataplexy, sleep attacks).
Initial Evaluation

• History
  • Differentiate sleepiness from fatigue, lack of energy or weakness
  • Sleepiness manifests during sedentary activities
  • Ask regarding propensity to fall asleep in low stimulus situations
  • Review medication list
  • Sleep history to include information on disturbed sleep, duration of symptoms and sleep environment
  • Sleep log for 1 to 2 weeks
  • Probe for symptoms of specific sleep disorders (i.e. snoring, witnessed apneas, leg discomfort, limb movements during sleep, cataplexy, sleep attacks)
Initial Evaluation

• Screen for depression
• Interview family members
• Sleepiness is not always obvious to the person suffering from it
Which physical examination finding can provide a clue to an underlying sleep disorder?

A. Excessive oropharyngeal tissue  
B. Retrognathia  
C. Large neck circumference  
D. Obesity  
E. All of the above
Physical Examination

• In most cases, no specific findings
  • Falling asleep while waiting
  • Excessive yawning
  • Difficulty keeping eyes open
  • Poor concentration

• Exam can provide clues to underlying sleep disorder
  • Excessive oropharyngeal tissue
  • Retrognathia
  • Large neck circumference
  • Obesity
Epworth Sleepiness Scale

- Estimate likelihood of dozing off in 8 sedentary situations
  - Sitting and reading
  - Watching television
  - Sitting inactively in a public place
  - Riding as a passenger in a car for one hour without a break
  - Lying down to rest in the afternoon when circumstances permit
  - Sitting and talking with someone
  - Sitting quietly after lunch without alcohol
  - Sitting in a car as the driver, while stopped for a few minutes in traffic

- Scores greater than 10 are considered abnormal and supportive of complaint of EDS

- Increases likelihood that EDS complaint is true as opposed to fatigue or low energy
Additional Testing

• Polysomnography
  • Suspicion is raised for OSA, PLMD, narcolepsy, central hypersomnias

• Home sleep apnea testing
  • Overnight cardiopulmonary recordings (airflow, chest excursion, ECG, snoring)
  • Do not record sleep

• Multiple Sleep Latency Test
  • Individual’s tendency to fall asleep at different times of the day
  • Indicated when clinical suspicion of narcolepsy exists
Management

• Extending and regularizing sleep
• Wake-promoting substance: Modafinil
• Traditional stimulants: amphetamines
• Antidepressants: REM sleep-suppressing drugs
  • Imipramine
  • Protriptyline
  • SSRIs
  • Sodium oxybate
• Scheduled naps, lifestyle adjustment, psychological counseling, drug holidays, careful monitoring
Recommendations

• Discussed the possible diagnosis of depression
• Refused discussion about medications at this time
• Interested in pursuing sleep medicine referral, e-consult sent
• To follow-up after being seen by sleep medicine
References


• American Academy of Sleep Medicine. International Classification of Sleep Disorders, 3rd ed, American Academy of Sleep Medicine, Darien, IL 2014.


• Chervin RD. Use of clinical tools and tests in sleep medicine. In: Principles and Practice of Sleep Medicine, Kryger MH, Roth T, Dement WC. (Eds), Elsevier Saunders, St. Louis 2011. p.666.


Questions?
Thank you!