Managing Sleep Health in a Primary Care Setting CME Program

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Michigan Osteopathic Association

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- *I have no relevant financial relationship with any commercial interest to disclose.*

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Learning Objectives

By the end of the session the learner will be able to:

1. Explain how sleep health, management, and treatment of sleep disorders contribute to overall well-being.

2. Identify risk factors and symptoms of insomnia, circadian rhythm disorders, restless leg syndrome, and obstructive sleep apnea.

3. Define and differentiate common treatments available for these conditions.

4. Determine when it's appropriate to prescribe medications and/or refer patient for a sleep study.

Case Study 1

Setting

- 11:30 AM in your exam room
- Middle age woman sitting, tapping her feet
- Looks quite tired and anxious

Chief Complaint

"I have been waiting for a sleep disorders appointment and cannot get in for 6 months!"

She becomes teary.

"I can't sleep and can't take this any more!"

Present Illness

- 42 years old attorney
- Has not slept well for over 3 years.
- Bedtime is 10:30 PM
- Falls asleep ~ 11:30 PM to 1:00 AM
- Wakes at night and has difficulty falling back to sleep, often remaining awake until her 6:00 AM alarm
- “Tired and wired” at work

Present Illness

- Always fatigued
- Irritable and easily angered
- Difficulty concentrating and paying attention
- Has fallen to sleep in court and during depositions

Present Illness

- Activity monitoring device shows only 3 hours of sleep each night
- Tried deep breathing exercises, yoga, wine, diphenhydramine
- Each worked for 1 – 2 days and then the problem recurred

Physical Examination

- Vital signs normal
- Comprehensive physical examination normal

Synthesis

- *Next steps?*
- *Differential evaluation?*

Closure

- *How would you manage this patient?*
- *Pharmacological considerations?*

Summary: Case Study 1

1. *Define insomnia.*
   - **SHORT TERM INSOMNIA DISORDER:**
   - **Symptoms present for less than 3 months;**
   - **Difficulty initiating and/or maintaining sleep;**
   - **Waking earlier than desired; resistance going to bed on an appropriate schedule;**
   - **Daytime symptoms of fatigue, sleepiness, attention problems, mood/behavior problems;**
   - **Reduced motivation;**
   - **Accident and error prone.**
   - **CHRONIC INSOMNIA DISORDER: Symptoms present for 3 months or longer.**

Summary: Case Study 1

2. Discuss the evaluation of patients with complaints of difficulty falling to sleep and staying asleep.

   - **Comprehensive sleep history; standardized questionnaires; sleep diary/sleep log; actigraphy.**

Summary: Case 1

3. Describe appropriate treatment options for insomnia.

- **CBT-I**
- **Pharmacotherapy**
- **Other Interventions.**

Case Study 2

SETTING

- Friday 3:00 PM in your office
- 5 more patients in the waiting room
- You have a medical staff meeting at 6:30 PM

Setting

- Patient is 15 years old and his mother is present
- He appears quite unhappy and only stares at the floor
- He does not look up when you enter the room and his mother is texting on her cell phone

Chief Complaint

"Johnny is going to be kicked out of school because of being late almost every day. He has missed more days of school than I can count. He used to be a good student, but now he is failing most of his subjects."

Johnny just glares at his mother, then looks back to the floor

What are your initial thoughts?

History – obtained after mother leaves room

- Symptoms began upon entering high school last year
- Difficulty falling to sleep before 2:00 AM – 3:00 AM
- Difficulty waking up in the morning
- Sleeps until 2:00 PM – 3:00 PM on Saturdays and Sundays

History

- Has to catch the school bus at 6:45 AM
- School starts at 7:45 AM
- Falls asleep on the bus and in school every day
- Tried melatonin at night but it does not help him fall asleep

History

- No medical problems, allergies, hospitalizations, surgeries, or head injuries
- No substance use/abuse
- Does not snore

Physical Examination

- Vital Signs:
  - BP 92/75
  - Pulse 85
  - Temperature 37 degrees C
  - Respiration 16/minute
  - Height 155.1 cm
  - Weight 48.9 kg (BMI 20.33 kg/m^2
  - Oxygen Saturation (room air) 97%

Physical Examination

- Positive Findings:
  - Mallampati score 3 sitting and 4 supine
  - Tonsils 2+ enlarged

- Remainder of the physical exam normal

Synthesis

- *Diagnosis?*

- *How would you manage Delayed Sleep Phase Syndrome?*

Summary: Case Study 2

1. *Describe symptoms of delayed sleep phase circadian rhythm disorder in the adolescent/young adult.*
   - **Difficulty falling to sleep at a desired time.**
   - **Waking significantly later than desired when permitted to wake ad lib in the morning.**
   - **When permitted to sleep ad lib, there are no other sleep complaints.**
   - **Daytime symptoms typically include excessive daytime sleepiness and school performance problems.**
   - **They may also include mood disturbances and behavioral changes.**

Summary: Case Study 2

2. *Describe methods of diagnosis of delayed sleep phase circadian sleep disorder in the adolescent/young adult.*

   - **Comprehensive history and physical. Sleep diary / sleep log; actigraphy.**

Summary: Case Study 2

3. *Discuss three (3) important countermeasures to address delayed sleep phase circadian sleep disorder.*

- **Realistic consistency in sleep-wake schedule both week days and weekends.**
- **Morning phototherapy; darken room at night; avoid bright screens at night.**
- **Prophylactic naps when needed.**

Case Study 3

Setting

- 2:00 PM in your exam room
- New patient … 45 years old female
- School bus driver
- Looks distressed and tired

Chief Complaint

"No matter how hard I try, I can't fall to sleep at night. It seems that I just can't get comfortable in bed. I have bought different mattresses, pillows, sheets and blankets. Nothing seems to work."

History

- Symptoms are difficult to describe.
- Predominantly occur when she gets into bed at night, but also can occur in the evening when she is reading on the sofa.
- Often feels like she has to stretch her arms and legs.

History

- Takes more than 3 hours to fall to sleep
- Cannot concentrate at work
- Has fallen to sleep while driving the bus after dropping off the last child

History

- Arms feel “twitchy” and sometimes it feels like she has “bugs crawling” on her legs
- No leg cramps or other movement problems
- Symptoms improve if she gets out of bed and walks around

Physical Examination

- Height: 5’ 2”
- Weight: 100 lbs
- BMI 18.3
- PR: 78
- RR: 12
- BP: 90/70

Next Steps

- *What would you looks for during the physical exam?*
- *Any lab work?*
- *Polysomnogram?*

Physical Examination

- Exam is negative

- There is no:
  - positional discomfort of extremities
  - tenderness or pain
  - evidence of arthritis
  - edema
  - varicosities
  - discomfort with walking

Case 3 continues

- You check her iron stores and ferritin is 112 nanograms per ml
- No family history of RLS symptoms
- Bikes on occasion for exercise, but not strenuously – does not influence symptoms

Next Steps

- *What can she do to minimize RLS symptoms?*
- *Treatment options?*
- *What would you tell her about prognosis?*

Summary: Case Study 3

3. Differentiate RLS from PLMD

- **RLS is typically a clinical diagnosis.**
- **PLMD is a clinical and polysomnographic diagnosis (Limb movements > 15/hour in adults; 5/hr children)**
- **Patients with RLS may also have PLMD.**
- **Patients with PLMD often do not have RLS.**

Summary: Case Study 3

1. *Define Restless Leg Syndrome (RLS)*

- **Irresistible urge to move legs (limbs) particularly in the evening.**
- **Symptoms improve with movement / walking about.**
- **Sleep Onset Insomnia.**
- **There is no other identifiable reason for the paresthesia.**
- **Daytime sleepiness and its consequences can occur.**

Summary: Case Study 3

2. Define Periodic Limb Movement Disorder (PLMD)

- **Greater than 15 limb movements/hour in adults**
- **Greater than 5 limb movements/hour in children**
- **Clinical symptoms are present:**
  - **Insomnia and/or EDS in Adults**
  - **Hyperactivity alternating with EDS/Attention Problems/School performance difficulties in children**
  - **Children can complain of growing pains.**
- **Other movement disorders ruled out.**

Summary: Case Study 3

4. Discuss management of RLS and PLMD.

Counsel regarding:

- ***Avoid caffeine, nicotine, and alcohol.***
- ***Physical Therapy.***
- ***Stretching.***
- ***Hot or cold compresses.***
- ***Massage***
- ***Exercise and relaxation***

- **Medication options:**
  - ***Dopaminergic medications.***
  - ***Benzodiazepines.***
  - ***Opioids.***
  - ***Gabapentin.***

Case Study 4

Setting

- 9:00 AM in your office exam room
- 39 years old obese male reading a copy of *Sports Illustrated*

Chief Complaint

"I was told to come to your office by our corporate health center because I failed my blood pressure test."

History

- 39 years old accountant
- Hypertension for 8 years
  - Treated with amlodipine and benazepril
- No SOB or chest pain

History

- Frequent morning headaches
- Pre-diabetic (diagnosed 2 years ago)
  - HgbA1c = 6.2
- Quit smoking 4 years ago
- Occasional alcohol on weekends
- Married with a 12 y/o son and 9 y/o daughter

Discussion

- *What sleep-related information do you want to obtain?*

History

- Sleepy during the day
- Fell asleep at a stoplight; has had 2 near miss MVAs
- Falls to sleep at work
- Sometimes has difficulty concentrating.
- Making mistakes at work and fearful of being fired

History

- He denies snoring
  - Wife tells him he snores loudly, has breathing pauses and snorts
- Family history positive for OSA (father)
- Has had difficulty falling asleep for 2 years

History

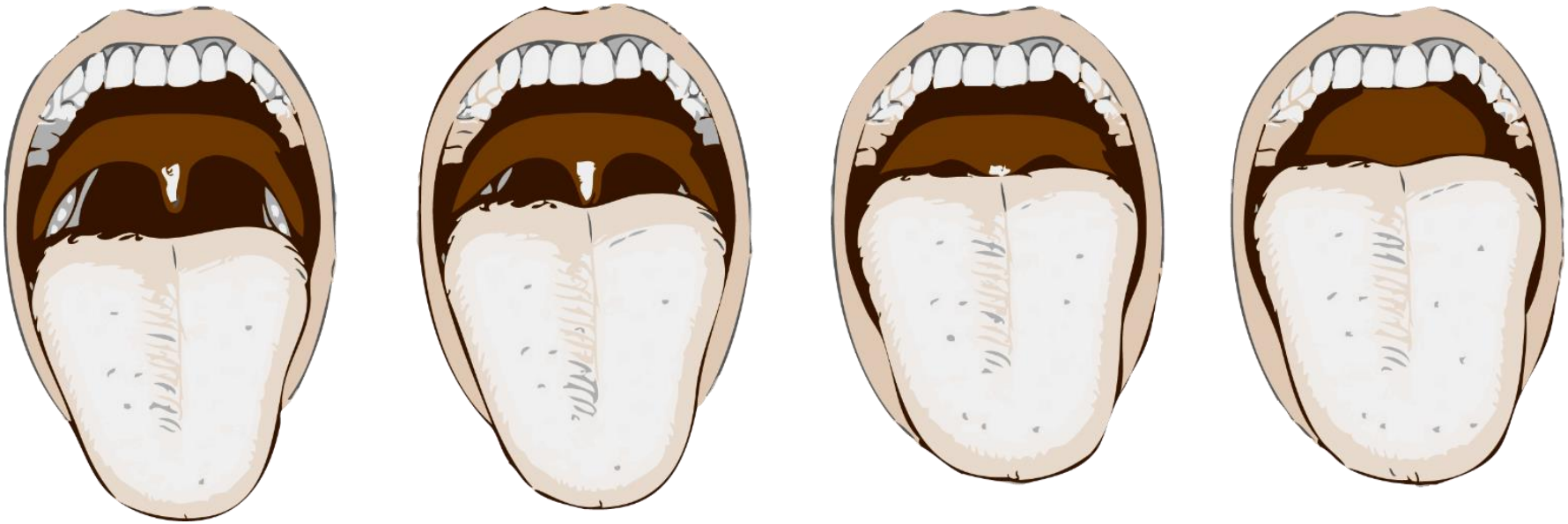
- Wakes multiple times at night to void
- Once asleep has no problem sleeping
  - His wife says his sleep is very restless, he wakes her frequently with snoring and restless sleep
  - She often has to sleep in another room of the home
- Wakes on weekends spontaneously at 8:00 – 9:00 AM

Physical Examination

- Vital signs:
  - BP 150/95
  - Height 5’10”
  - Weight 206 lbs
  - BMI 29.6
  - Neck circumference 20.5”
  - PR 80
  - RR 10
  - Pain VAS 2
- Physical exam normal

Mallampati Scale

Odds of OSA increase more than 2-fold for every 1-point increase



Class I **Class II** **Class III** **Class IV**

Nuckton TJ, et al. *Sleep*. 2006;29:903-908.

With this information:

- *Next steps?*

Physical Examination

- Epworth Sleepiness Scale = 18
- Mallampati class 4 airway.

PSG

- Arousal Index (AI) = 10/hr.
- Apnea Hypopnea Index (AHI) = 30/hr.
- Respiratory Disturbance Index (RDI) = 50/hr.
- Loud snoring and increased WOB.
- Sleep was fragmented by frequent brief movement and/or electrocortical arousals.

Closure

- *Other sleep related disorders to consider?*
- *Management?*

Case 4 continues

- He returns in 4 months
- After using CPAP for several weeks, during which he felt less tired and more "with it" at work, he became irritated with the machine, especially after awakening in the middle of the night
- Stopped CPAP 2 weeks ago and is having difficulties at work again
- He asks if there are alternatives to CPAP

Case 4 Closure

- *What further information do you want?*
- *What options would you consider for him?*

Summary: Case Study 4

1. *Identify symptoms of obstructive sleep apnea (OSA).*

    - **Principle features include habitual loud snoring, daytime sleepiness; possible near-miss or actual MVA; difficulty with attention, concentration and/or daytime performance; cardiovascular consequences occur, including systemic hypertension.**

Summary: Case Study 4

2. *Describe symptoms and consequences of excessive daytime sleepiness.*

   - **Unintentional sleep episodes and sleep attacks; falling asleep at unusual and undesired times; mood and behavioral difficulties; performance difficulties; possible memory deficits.**

Summary: Case Study 4

3. *Demonstrate common office procedures used to diagnose excessive sleepiness.*

- **Epworth Sleepiness Scale**
- **Stanford Sleepiness Scale**
- **Others**

Summary: Case Study 4

4. *Discuss common treatment and describe appropriate treatments for these problems.*

- **CPAP**
- **bilevel PAP**
- **Surgical options**
- **Oral appliances**

Additional Resources

- For additional resources, visit:
  - Sleepfoundation.org
  - Sleep.org
  - Sleephealthjournal.org

Thank You!