CMEO
BriefCase

Plugging Recent Clinical Trial Data into Treatment Decisions: A Fundamental Formula

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CME OUTFITTERS

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Learning Objective

Apply data from recent clinical trials to optimize treatment decision-making.

Audience Response

How confident are you in developing personalized, effective treatment plans and strategies for obstructive sleep apnea (OSA)-related excessive daytime sleepiness (EDS)?

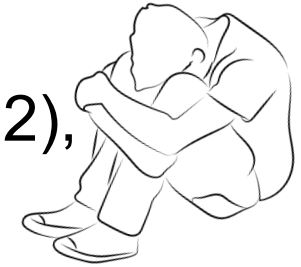
A. Not confident at all
B. Somewhat confident
C. Confident
D. Extremely confident

Patient Case: Barry

- 36-year-old white male with prior history of moderate OSA → AHI = 26 episodes/hour; O2 sat = 79%; ESS = 17
- Experiences loud snoring, multiple awakenings, frequent nocturia, and nonrestorative sleep with residual sleepiness
- Remains on CPAP using an auto mode at a pressure of 5-12 cm (96% adherence); AHI = 2.2, average use of 5.5 hours; ESS = 15; FOSQ = 16; Mallampati score = 4
- Job as service technician impacted by fatigue, difficulty staying awake in meetings, and occasionally missing work
- Alcohol misuse and frequent use of cannabinoids

AHI = Apnea-Hypopnea Index; CPAP = continuous positive airway pressure; EDS = excessive daytime sleepiness; ESS = Epworth Sleepiness Scale; FOSQ = Functional Outcomes of Sleep Questionnaire; OSA = obstructive sleep apnea

Medical History

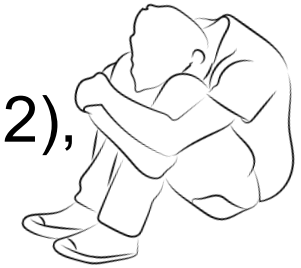


- Borderline hypertension, obesity (BMI = 32), and depression
- Consumes energy drinks and caffeinated beverages to maintain reasonable alertness throughout the day and combat fatigue
- Consumes 2 beers in the evening
- Currently taking escitalopram

BMI = body mass index

Meet Barry

Medical History



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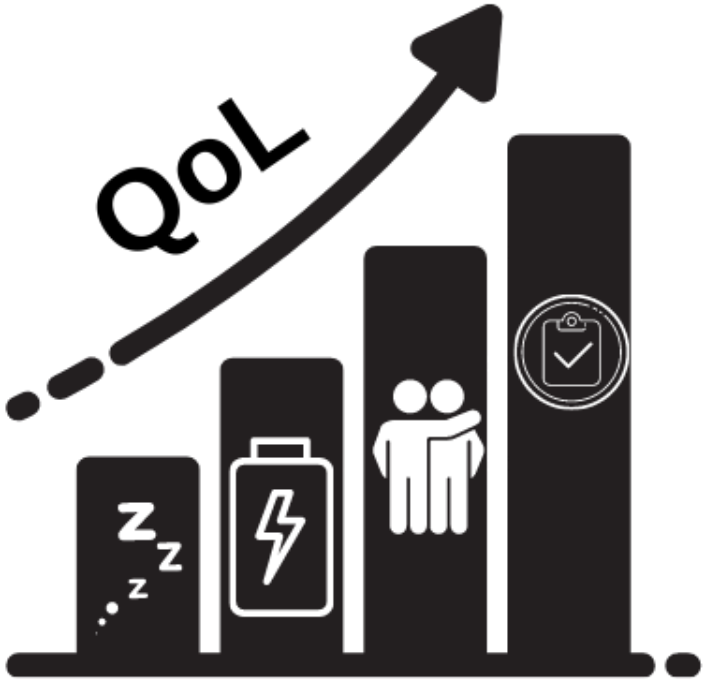
Treatment Goals in OSA

- Reduce EDS
- Improve fatigue and brain fog
- Reduce psychosocial and work dysfunction and improve QoL
- Standardize the follow-up and optimize risk/benefit of pharmacotherapies



QoL = quality of life

Morgenthaler TI, et al. *Sleep* 2006;29(8):1031-1035. Rosenburg R, et al. *Postgrad Med*. 2021;133(7):772-783. Lal C, et al. *Ann Am Thorac Soc*. 2021;18(5):757-768.

Audience Response

Which of the following is true?

A. Solriamfetol is a primary therapy for OSA
B. Regardless of OSA-therapy adherence, patients taking solriamfetol have overall improvement in EDS
C. Solriamfetol is available in 37.5, 75, 150, and 400 mg/d and armodafinil and modafinil are available in 100, 200, and 400 mg
D. EDS should be assessed with interviews, questionnaires, and subjective data from the Maintenance of Wakefulness Test
E. I don’t know

FDA-Approved Treatments for EDS in OSA

Agent	
Modafinil	**Indication:** Adult patients with excessive sleepiness associated with narcolepsy, OSA, or shift work sleep disorder
	AEs (≥ 5%): Anxiety, back pain, diarrhea, dizziness, dyspepsia, headache, insomnia, nausea, nervousness, rhinitis
Armodafinil	**Indication:** Adult patients with excessive sleepiness associated with narcolepsy, OSA, or shift work sleep disorder
	AEs (≥ 5%): Dizziness, headache, insomnia, nausea
Solriamfetol	**Indication:** Adult patients with EDS associated with narcolepsy or OSA
	AEs (≥ 5%): Anxiety, decreased appetite, headache, insomnia, nausea

AEs = adverse events

Drugs@FDA Website.

Comparing FDA-Approved Treatments for EDS in OSA vs. Placebo

Study Design

- Systematic literature review involving 6 trials and N = 1714 participants
- Treatments compared included placebo, armodafinil (150 mg, 250 mg), modafinil (200 mg, 400 mg), and solriamfetol (75 mg, 150 mg, 300 mg)

Results

- Armodafinil, modafinil, and solriamfetol improved outcomes related to sleepiness and wakefulness
- The risk of serious AEs was low for armodafinil, modafinil, and solriamfetol
- Solriamfetol* was associated w/ the greatest likelihood of achieving efficacy outcomes / improvements
- ESS
  - At 4, 8, and 12 weeks, solriamfetol* had the greatest improvement in ESS
  - At 12 weeks, solriamfetol* had highest probability of greatest improvement in ESS

* Solriamfetol 150 mg and 300 mg

Ronnebaum S, et al. *J Clin Sleep Med.* 2021;17(12):2543-2555.

Comparing FDA-Approved Treatments for EDS in OSA vs. Placebo (cont.)

- MWT20
  - At 4 and 12 weeks, armodafinil, modafinil, and solriamfetol had greater improvement
  - At 12 weeks, solriamfetol* had highest probability of greatest improvement in MWT20
- CGI-C
  - At 4 and 12 weeks, armodafinil, modafinil, and solriamfetol had greater chances of improvement
  - At 12 weeks, solriamfetol* had highest likelihood of CGI-C improvement
    - Solriamfetol (150 mg) > modafinil (200 mg or 400 mg) and armodafinil (150 mg)
    - Solriamfetol (150 mg) > modafinil (200 mg) and armodafinil (150 mg)
- FOSQ
  - At 12 weeks, armodafinil, modafinil, and solriamfetol (with the exception of solriamfetol 75 mg) demonstrated greater improvement in FOSQ
  - Solriamfetol* did not show greater improvement in FOSQ vs. modafinil (200 mg, 400 mg)
  - Greatest improvement seen w/ solriamfetol (300 mg), followed by modafinil (400 mg) and solriamfetol (150 mg)

*Solriamfetol 150 mg and 300 mg

CGI-C = Clinical Global Impression of Change; MWT20 = Maintenance of Wakefulness Test over 20 minutes

Ronnebaum S, et al. *J Clin Sleep Med.* 2021;17(12):2543-2555.

Effects of Solriamfetol on EDS Based on OSA-Therapy Adherence

Study Design

- Randomized placebo-controlled study (N = 449)
- Efficacy of solriamfetol (37.5, 75, 150, or 300 mg/d)*

Results

- 70.6% adherent vs. 29.4% nonadherent
- Vs. baseline, adherent and nonadherent solriamfetol subgroups demonstrated mean increases in MWT sleep latency, mean decreases in ESS score, and mean increases in FOSQ-10 total score
  - MWT sleep latency decreased 3.2 min to 13.4 min
  - ESS ranging from 4.3 to 8.9 points
  - FOSQ-10 total score ranging from 1.5 to 3.5 points
- PGI-C: Improvements w/ solriamfetol vs. placebo regardless of adherence (except nonadherent subgroup taking the 37.5-mg dose)
- Improvement in EDS from solriamfetol not impacted by OSA therapy adherence

*Solriamfetol treats EDS associated with OSA but is not a substitute for primary therapy for OSA

PGI-C = Patient Global Impression of Change

Schweitzer PK, et al. *Chest*. 2021;160(1):307-318.

Personalizing Treatment Selection for Patients with OSA

- Patient's needs and preferences
- Severity of EDS
- Comorbidities, including substance use disorder
- Polypharmacy
- Monitoring treatment effectiveness
- Assessment of EDS:
  - Interviews, questionnaires
    - ESS, FOSQ, PHQ-9
  - Objective data: MSLT, MWT, etc.

PHQ-9 = Patient Health Questionnaire-9

Rosenburg R, et al. *Postgrad Med*. 2021;133(7):772-783.

Audience Response

Now, how confident are you in developing personalized, effective treatment plans and strategies for obstructive sleep apnea (OSA)-related excessive daytime sleepiness (EDS)?

1. Not confident at all
2. Somewhat confident
3. Confident
4. Extremely confident

SMART Goals

Specific, Measurable, Attainable, Relevant, Timely

- Develop personalized, effective strategies to reduce the burden of EDS in patients with OSA
- Apply data from recent clinical trials to optimize treatment decision-making in patients w/ OSA whether adherent or not to CPAP
- Consider medical and psychiatric comorbidities and drug interactions when making treatment decisions
- Standardize and personalize patient follow-up, including the use of standardized scales such as the ESS and FOSQ

CMEO BriefCase 1

The Impact of OSA-Related EDS on HRQoL: Time for a Wake-Up Call

CMEO BriefCase 2

Crafting an Individualized Plan to Optimize Patient Outcomes: Safe, Effective, and Personalized Treatment

www.CMEOutfitters.com/sleep-disorders-hub/

Sleep Disorders Hub

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https://www.cmeoutfitters.com/sleep-disorders-hub/

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To Receive Credit

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