

Case Report: Excessive Daytime Sleepiness - Comorbid Sleep Apnea and Narcolepsy

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Background:

Excessive Daytime Sleepiness (EDS) is a common symptom of both narcolepsy and obstructive sleep apnea (OSA). It is difficult to distinguish the cause of EDS between narcolepsy and other sleep disorders such as OSA, circadian rhythm sleep-wake disorders, restless legs syndrome, insufficient sleep syndrome, and Kleine-Levin syndrome. We present a case of overlap between OSA and narcolepsy.

Case report:

A 32-year-old male visited our sleep center on May 27, 2021. He complained of poor sleep quality for 4 to 5 years with unrefreshing sleep despite 6 to 8 hours of sleep and excessive daytime sleepiness. He also noted snoring and mouth breathing during sleep, so he tried an oral appliance to advance the mandible but to no avail. The patient did not have any metabolic syndromes such as diabetes mellitus, hypertension, or dyslipidemia. He also did not have depression or other psychiatric disorders. His BMI was 25.1 kg/m², categorizing him as overweight. His Epworth Sleepiness Scale (ESS) score was 17/24.

Initial polysomnography (PSG) reported an Apnea-Hypopnea Index (AHI) of 11.3/hr with a minimum SpO₂ of 88%, indicating mild OSA. As a result, weight control was advised, and continuous positive airway pressure (CPAP) therapy was initiated. He returned for his compliance visit in 3 months and felt more refreshed but still sleepy. The download from the CPAP showed an AHI of 2.0 with a pressure of 8 cm H₂O and 67% compliance (> 4 hours usage). He also complained of falling asleep when in a standing position and then sitting down, suspected to be partial cataplexy.

A second PSG showed an AHI of 4.8/hr under CPAP treatment. Stage REM latency from sleep onset was 87 minutes. Multiple Sleep Latency Test (MSLT) reported 5 naps and 3 sleep onset REM periods (SOREMPs). We also arranged an HLA-DQB1*0602 test, which was positive. Modafinil was prescribed, and excessive daytime sleepiness was much improved under combined treatment with modafinil and CPAP.

Conclusion:

Although excessive daytime sleepiness is common in OSA patients, other sleep disorders like narcolepsy should be considered when sleepiness persists despite effective treatment of sleep apnea with positive airway pressure therapy adherence.

Reference:

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