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The Role of Polysomnography and Multiple Sleep Latency Testing: A Case of Narcolepsy Misdiagnosed as Epilepsy

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Background:

Narcolepsy is a chronic sleep disorder characterized by excessive daytime sleepiness, sleep paralysis, and disrupted nocturnal sleep. This condition can present diagnostic challenges, especially when symptoms overlap with other neurological disorders. We report a case of central hypersomnia in a patient previously misdiagnosed with epilepsy, emphasizing the importance of comprehensive sleep studies such as polysomnography (PSG) and multiple sleep latency testing (MSLT), for accurate diagnosis.

Case Presentation:

A 32-year-old female presented with a 13-year history of recurrent episodes of altered consciousness, extreme drowsiness, slurred speech, and prolonged post-episode sleep. Symptoms often occurred during activity, with preserved automatic movements. The patient reported vivid dreams, sleep paralysis, and hypnagogic hallucinations. Initially misdiagnosed with absence epilepsy, she was treated with anticonvulsants without clinical improvement.

Diagnostic evaluations included:

MRI: Revealed an incidental arachnoid cyst in the parietal lobe.

Video-EEG Monitoring: Identified 3 episodes of drowsiness with sleep onset (20–40 seconds), hypnagogic jerks, and disrupted sleep architecture, with all cycles initiating in REM sleep.

PSG and MSLT: Showed fragmented nocturnal sleep and 4 sleep-onset REM periods (SOREMPs) during daytime naps, confirming narcolepsy diagnosis.

Conclusion:

This case underscores the diagnostic challenges of narcolepsy when symptoms mimic epilepsy. PSG and MSLT provided definitive evidence, demonstrating fragmented nighttime sleep, shortened sleep latency, and multiple SOREMPs. Early recognition and accurate diagnosis can significantly improve patient outcomes by guiding appropriate therapeutic strategies.



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Prevalence of Sleep Disorders in Adults with Attention Deficit Hyperactivity Disorder (ADHD) attending specialist clinic in Northwest Ireland

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Background: Sleep disorders are common in ADHD, however, in contrast to children, only few studies have been conducted in adult populations.

Objectives: a) To determine what proportion of adults with ADHD suffer from sleep disorders, b) To identify the sleep disorders that co-occurring most commonly with ADHD c) To examine the relationship between ADHD subtype and sleep disorders

Method: Consecutive patients with ADHD. Scales administered: Pittsburgh Sleep Quality Index (PSQI) to assess sleep quality and Sleep Disorders Symptoms Checklist 17 which screens for 6 sleep disorders: insomnia, obstructive sleep apnoea (OSA), restless legs syndrome (RLS), circadian rhythm, narcolepsy, and parasomnias.

Results: 132 diagnosed with ADHD, mean age 30.26 (SD:10.17), 75(56.8%) females. Eighty-four (63.6%) had combined type, 47 (35.6%) inattentive and 1 (0.8%) hyperactive. Reduced sleep quality (PSQI 5 and above) had 121 (91.7%). Twenty-eight (21.2%) were screened negative for any sleep disorder, 37 (28%) screened positive for one sleep disorder, and the rest 70 for two or more. The most common sleep disorder was insomnia (n=77, 58.3%) followed by OSA (n=58, 43.9%) and RLS (n=48, 65.4%). The majority (n=74, 75.5%) were evening circadian type. Those with combined subtype were significantly more likely to found with RLS ($\chi^2= 12.154$, $p=0.001$, and parasomnias ($\chi^2= 5.685$, $p=.017$) compared to inattentive subtype.

Conclusions: High prevalence of sleep disorders in adult ADHD. They are more likely to display an evening circadian type which may be linked to alterations in melatonin levels. Those with combined type were more likely to have RLS and parasomnias.