

## Treatment of Sleep Disorders with Neurologic Diseases

### Introduction

Approximately 50-70 percent of U.S. adults have sleep apnea or another related sleep disorder. Because sleep disorders are closely linked to age, the prevalence of these diseases will inevitably rise over the next several years.

Sleep disorders may precede and influence the disease course in neurological diseases, involving daytime functioning, quality of life, morbidity, and mortality. Diagnostic and treatment procedures and the treatment of sleep disorders have developed considerably in recent years. There are thus increased opportunities for early detection and management of sleep disorders associated with neurological diseases.

### Epilepsy and Sleep Apnea

Sleep apnea is associated with a higher seizure rate among epilepsy patients. Almost one third of patients with intractable epilepsy have evidence of sleep apnea, and treatment of sleep apnea decreases seizure frequency. Antiepileptic drugs (AEDs) can cause weight gain and may induce or worsen existing sleep apnea.

Using knowledge of sleep disorders to improve the understanding of epilepsy can result in better outcomes. Direct effects of sleep loss, including fragmentation and oxygen desaturation, predispose patients to seizures. Daytime sleepiness from disturbed sleep may exacerbate epilepsy. However, treating associated primary sleep disorder improves seizure control and daytime alertness.

### Early Diagnosis and Treatment of SDB

According to a study in the Journal of Clinical Sleep Medicine, the majority of patients who have experienced a stroke and transient ischemic attack also have sleep-disordered breathing (SDB),<sup>1</sup> which is sometimes undiagnosed. Stroke patients with SDB also have worse functional outcomes.<sup>2</sup> You should consider screening for SDB<sup>3</sup> when investigating the stroke.

Stroke also has the potential to cause SDB, by either affecting central mechanisms resulting in central sleep apnea, or muscle tone resulting in obstructive sleep apnea. The preventive diagnosis and treatment of sleep disorders have been proven to reduce the rate of strokes in newly diagnosed stroke patients, as well as prevent subsequent stroke.

<sup>1</sup>Johnson KG, et al. J Clin Sleep Med. 2010

<sup>2</sup>Martínez-García MA, et al. Am J Respir Crit Care Med. 2009

<sup>3</sup>Wessendorf TE, et al. J Neurol. 2000

### Parkinson's Disease and Sleep

Sleep problems may be an early sign of Parkinson's disease (PD), even before motor symptoms have begun. Some of the common sleep problems for PD patients include:

- Insomnia
- Excessive daytime sleepiness
- Nightmares
- Sleep attacks (a sudden involuntary episode of sleep)
- REM sleep behavior disorder (acting out dreams during sleep)
- Periodic leg movement disorder (PLMD)
- Restless Leg Syndrome (RLS)
- Sleep Apnea

Excessive Daytime Fatigue (EDF) is an important symptom in PD patients because it negatively impacts quality of life. There is a connection between REM Behavior Disorder and the development of PD. In one study, researchers found that up to 75% of patients with REM sleep behavior disorder went on to develop PD. People with PD are also at a higher risk for RLS and periodic leg movement disorder, two conditions that may seriously disrupt sleep.

### Somnas HSAT & Sleep Services

A home sleep apnea test (HSAT) is a sleep study tool that is used for the diagnosis of obstructive sleep apnea. Most HSAT devices are portable and are usually about the size of a telephone handset. HSAT is primarily used to diagnose patients with obstructive sleep apnea because it is easy to use, produces high-quality results and results in cost savings to the patient.

Somnas can provide a HSAT to your patients with neurologic disease to help effectively co-manage and treat disorders with you. The results are interpreted by Dr. Imtiaz Ahmad, our local Board Certified Sleep Physician, and the data is then manually scored by registered polysomnographic technologists to allow for a clear diagnostic result. In-lab services are provided when indicated at our Accredited Sleep Disorder Center. Polysomnogram (PSG), can test for and diagnose a whole range of sleep disorders and a full EEG montage can be performed on the night of testing.

### Conclusion

Patients with neurological diseases often have significant sleep disorders that affect sleep and daytime function, with increased morbidity and even mortality. Many of these disorders are treatable. Therefore, increased awareness should be directed toward sleep disorders in patients with neurologic disease with a focus on diagnostic testing for early intervention.

Somnas offers state-of-the-art diagnostic options to identify specific sleep disorders and manage them using the latest treatments and therapies in an individualized treatment plan. Our office will work with you, communicating every step of the way for the overall health and wellbeing of your patients.



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Dr. Ahmad has been practicing pulmonary, critical care and sleep medicine in Lee County since 2004. He has extensive clinical and academic experience and believes in a proactive approach to healthcare. His postgraduate training took place at the following well-respected institutions: Harvard University, Cornell University, State University of New York at Brooklyn and the University of Mississippi.

### Our Locations

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