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Sleeping Problems in Parkinson's Disease

Sleeping Problems and Daytime Sleepiness in Parkinson's Disease

Sleep has a tremendous impact on patient well being and quality of life. Eighty to 90% of Parkinson's disease (PD) patients have a sleep disorder affecting their ability to fall asleep or to stay asleep, their dreams, their activity during sleep, and/or their daytime somnolence. The sleep difficulties in PD may be a part of the disease process, a consequence of the disease, or partially a side effect of the medications used to treat the disease. The goal of this article is to educate readers about what is normal sleep and about the more common sleep disorders encountered in patients with PD.

Normal Sleep

Sleep is separated into rapid eye movement (REM) sleep and nonREM (NREM) sleep. NREM sleep is composed of stage 1, or transitional sleep, stage 2, and deep stages 3 and 4 sleep. In adults, 60% of sleep is stage 2, 20% stage 3-4, and 20% is REM. NREM and REM sleep alternate. These NREM-REM periods last 90-120 minutes, and a normal sleeper undergoes 6-7 of these cycles per night. REM sleep is the period of sleep when most of the dreaming occurs. During this sleep stage, mechanisms in the brain maintain muscle paralysis which prevents individuals from acting out their dreams. During NREM sleep, muscles are more active and this enables abnormal activities to occur (for example, sleepwalking).

Insomnia

Insomnia is persisting difficulty in falling asleep and/or staying asleep. Its causes are multiple in PD. Most commonly, it can be seen in patients suffering from depression and/or anxiety disorders, and who often report difficulty "turning off their thoughts and worries." Painful conditions (back/neck pain) and rigidity can often result in patients having difficulty in finding comfortable sleeping positions. Pain during the night can trigger frequent awakenings.

For example, wearing-off dystonia (painful contractions of the limbs as medications used to treat PD wear off) can sometimes awaken patients in the early morning hours. Another common reason for PD patients to awaken is urinary urgency and frequency, which result from a number of reasons (due to changes in the innervation of the bladder and sphincter). When patients have been suffering from insomnia for a long time, they can develop habits which can paradoxically worsen the insomnia. For example, patients may try to retire to bed too early when their body isn't ready for sleep or can expose themselves to too much light at night (computer use, television) which keeps the mind alert. Finally, some medications used to treat the motor symptoms of PD can be associated with insomnia (high doses of levodopa, selegiline).

Rapid Eye Movement Sleep Behavior Disorder (RBD)

As mentioned above, normally people are paralyzed during REM or dream sleep, except for eye movements and breathing. In RBD, patients act out their dreams, and these dreams are typically violent. Patients can have very vivid dreams where they are being attacked by animals/intruders or chased and can literally "fight in their sleep." They can throw punches in the air, scream and curse loudly, kick their legs, fall out of bed, and even try to inadvertently choke their bed partner. As a result, the patient and/or bed partner can be seriously injured. These dramatic nocturnal events occur sporadically, sometimes once per month to several times per week. RBD affects up to 30% of men with PD. In PD, it affects men about five times more often than women. This sleep disorder can precede the motor symptoms of PD by 10-15 years or present itself simultaneously. This phenomenon is believed to occur as a result of the degeneration in the centers of the brainstem that normally maintain REM sleep paralysis.

Restless Legs Syndrome (RLS)

RLS is an uncomfortable sensation deep in

the calves and legs which is worsened by lying down or sitting quietly. Patients have a difficult time describing these abnormal sensations and usually use words like "pins and needles," "aching," "creepy-crawly" to describe them pain. It is usually worse at night while trying to fall asleep and can be a contributing factor to difficulty falling asleep. The sensations are relieved by moving the legs or getting out of bed and walking around. Some studies suggest there is an increased rate of RLS in PD patients, which may also be associated to dopamine deficiency in the brain.

Obstructive Sleep Apnea (OSA)

OSA is a syndrome where the pharynx repetitively collapses during sleep. When the patient goes to sleep, the muscles around the neck and pharynx relax. The collapsible segment may be so narrow that sufficient air cannot pass. As a result airflow turbulence develops, causing rattling of the tonsillar pillars, the uvula and the soft palate, thus generating snoring. Due to this mechanical obstruction and insufficient air reaching the lungs, oxygen levels in the blood may dip below normal during the night, triggering a "stress" response and many brief awakenings during the night. As a consequence of these "mini" awakenings, patients with sleep apnea often awaken more tired than when they went to bed. As they are unable to sleep continuously during the night, they are extremely sleepy during the day and fall asleep while performing everyday activities like watching television, or even driving. Risk factors for OSA include upper body obesity, anatomical features (large tonsils/tongue), diabetes, and older age (>65 years of age). Patients with PD may also be at increased risk for OSA as studies have reported that up to 20% of PD patients may have some degree of OSA. Treatment of OSA is important as it has been associated with increased risk of stroke, cardiovascular mortality, poor memory, and mood disorders.

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Parkinson's little-known cousin

BY FATTA B. NAHAB, M.D.
SPECIAL TO THE MIAMI HERALD



Dr. Fatta B. Nahab is an Assistant Professor of Neurology at the University of Miami Miller School of Medicine.

Have you ever noticed the shaky hands of a complete stranger and immediately made the diagnosis of Parkinson's disease? Or, have you noticed that your own hands are not as steady as they used to be, but have avoided telling your doctor for fear it may mean Parkinson's?

It may surprise you to learn that the most common cause of tremors is not Parkinson's disease -- a well-known disease associated with Michael J. Fox, Janet Reno and Muhammad Ali -- but something called Essential Tremor, or ET.

Like Parkinson's, ET is a neurological disorder that leads to tremors in the hands, head and voice, among other areas. Both are irreversible.

Whereas ET primarily causes tremors, Parkinson's is more likely to be accompanied by symptoms such as slowed movement, muscle stiffness, and walking problems that develop over many years.

Both ET and Parkinson's can begin at any age, but frequently develop later in life. Research suggests that about 5 percent of people over the age of 40 may have ET, compared with less than 1 percent who are believed known to have Parkinson's.

For the most people with ET, symptoms will slowly progress over decades, yet remain mild and have no impact on overall life. Parkinson's is a more rapidly progressive and disabling disorder that will require treatment in the majority of cases.

Distinguishing between ET and Parkinson's is relatively easy for an experienced physician. While ET causes shakiness or poor coordination when you are moving or outstretch your arms, Parkinson's tremors occur primarily when the body is at rest and you are not paying attention to the involved limb.

Despite the relative ease of distinguishing ET from Parkinson's, there are other disorders that share some of the symptoms, so they are best evaluated by a trained movement disorder neurologist.

Treatments to relieve symptoms of both ET and Parkinson's also vary widely and range from daily pills to brain surgery. Treatments should always be tailored to the individual based on their potential for benefit

and side effects.

We don't yet understand what causes ET or Parkinson's, but researchers are working to identify the causes and develop better treatments. Neither disease has a cure, though medicines capable of slowing the progression may be on the horizon.

F.Y.I

Carlos Singer, M.D., Professor of Neurology and Division Chief for the Parkinson's Disease and Movement Disorders Center, recently chaired an International symposium on "Gene-Environment Interactions in Parkinson's Disease." The symposium was part of the 12th biennial meeting of the International Neurotoxicology Association held in Israel in June '09.

PD Symposia Offered in 2009

2/12/09	Exercise & PD
3/17/09	Gastrointestinal, Urological, Sexual & Other Problems Related to PD
4/23/09	2 nd Annual Complementary Therapies
5/19 & 5/26/09	PD 101 (In Spanish)
10/6 & 10/13/09	PD 101 (In English)
10/20/09	Medications for the Motor Problems in PD

PARKINSON INSIDER

Calendar schedule may change periodically. For current updates on Miami-Dade Support Groups & Exercise Classes contact:

George Dumenigo at (305) 243-1865 or gduмениго@med.miami.edu

The Parkinson Insider is published as a service to individuals, caregivers, and families affected by Parkinson's Disease & movement disorders

UM Ask The Doctor's Corner;

send us any questions you may have for our doctors via e-mail to:

arussell@med.miami.edu

or fax to (305) 243-3321.

Selected questions will be answered in future "Ask the Doctor" sections.

All proposed content is subject to editorial review and approval...

Parkinson's Disease & Movement Disorders Clinic at UHealth Boca Raton



Announcing our expanded Clinic Operations at UHealth Boca Raton. Dr. Cenk Sengun will be seeing patients for consultation and follow-ups every Monday. Dr. Carlos Singer will be seeing patients referred by Dr. Baily in consultation only the third Friday of every month.

Clinic Days: Monday & 3rd Friday of Every Month

Clinic Time: 10:00am—5:00pm

Location: UHealth– Boca Raton

3848 FAU Blvd. Suite 305

Boca Raton, Fl 33431

To make appointment call: (305) 243-6732 Option 1

Sleeping Problems in Parkinson Disease *Continued from Page 1*

Daytime Sleepiness

Daytime sleepiness is common in PD and has been reported to occur in 10-40% of patient in several studies. There are several contributors to daytime sleepiness in PD, including the common sleep disorders mentioned above, medication side effects and progression of the neurodegenerative process itself. The “alertness” centers of the brain are widely distributed and are affected early on in PD. For this reason, despite optimal treatment of sleep disorders mentioned above, patients may still have residual daytime sleepiness and can even require use of stimulant medication. Sleepiness can be a very early symptom of PD and it tends to worsen with the progression of PD. Curiously, PD patients may not be aware of how sleepy they are during the day as this is a problem that develops very slowly over time. Sleepiness is known to impair judgment and has been shown to be implicated in many motor vehicle accidents. For this reason, it is imperative to seek the help of a sleep specialist if you think sleepiness and sleep disruption are affecting your daytime function and quality of life.

The treatment of each of the disorders mentioned above is tailored and beyond the scope of this brief article. Please feel free to call the University of Miami UHealth Sleep Program to schedule a detailed sleep consultation. For appointment call (305) 243-5195.



Douglas McKay Wallace, M.D.

Assistant Professor of Neurology
University of Miami,
UHealth Sleep Program



Cenk Sengun, MD, Assistant Professor of Neurology, University of Miami, Parkinson's Disease & Movement Disorders Center

Dr. Sengun, will be speaking at the South Palm Beach County Chapter of the NPF Support /Caregiver meetings located at the Mae Volen Senior Center, 1515 W. Palmetto Park Road, Boca Raton, Florida on the following dates from 9:30am-11:30am.

- January 25, 2010 **“Facts about Parkinson's Disease & Treatments”**
- March 15, 2010 **“Complementary Therapies in Parkinson's Disease”**
- May 17, 2010 **“Research Updates in Parkinson's Disease Treatment”**

Find a PD Program in Your Area!

Baptist Hospital @ 8950 N. Kendall Dr. Suite 105, Miami, Fl, Contact: Abe & Ivon Bertan _____ (786) 683-0240

Herbert Kay PD Group @ Michael-Ann Russell JCC, 18900 NE 25th Ave., NMB, Fl, Contact: Bill Marsa ____ (305) 932-1870

Miami VA Hospital @, 1201 NW 16th St. D707, Miami, Fl Contact: Paul Hartman, PhD _____ (305) 575-3215

Park Optimist @ Temple Judea, 5500 Granada Blvd., Coral Gables, Fl, Contact: Carol Goldman _____ (305) 476-8782

U M @ 1501 NW 9th Ave., 3rd Floor, Miami, Fl., Contact: George Dumenigo, LCSW _____ (305) 243-1865

St. Catherine's Rehab Hospital @ 1050 NE 125th St., NM, Fl, Contact: Renee Harris or Sonia Jaeck ____ (305) 891-8850 Ext.4000

South Palm Beach County Chapter of the NPF @ Mae Volen Center, 1515 W. Palmetto Park Rd. Boca Raton, Fl (561) 482-2867

Parkinson's Exercise Classes

Polestar Center (PD Pilates Classes) @ 1500 Monza Ave, Suite 350, Miami, Fl _____ (305) 740-6001

Tai Chi Health Recovery Classes @ 10300 SW 72nd Street, Suite 235, Miami, Fl _____ (305) 598-3959

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2010 Upcoming Event

Symposium on Skills for Enhancing Your Quality of Life

Keynote Speaker: Neva Jillaine Kirk-Sanchez, PhD, PT, Associate Professor of Clinical Physical Therapy
University of Miami Miller School of Medicine, Department of Physical Therapy

When: Thursday, February 11, 2010

Time: 10:00am-12:30pm

Location: The Palace Suites, 11377 SW 84 Avenue, Miami, FL 33173

RSVP: George Dumenigo at (305) 243-1865 or email: gdumenigo@med.miami.edu

***This program is supported & co-sponsored by the ParkOptimist, a Chapter of the NPF**

DISCLAIMER/REMINDER

Please remember that the material presented in this Newsletter is for informational purposes only.
It should not be used for treatment purposes. Consult with your physician for further information.

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