

SPRING 2006

BLADDER DYSFUNCTION IN PD

Many individuals with Parkinson's disease may experience difficulty with bladder control (incontinence), difficulty emptying their bladder completely or frequent bladder infections.

To explain why these various bladder difficulties occur, one must understand how the bladder works. The bladder is a muscle which gradually expands as urine accumulates. At the opening of the bladder, there is a muscle which is called the sphincter, the sphincter is closed except when urinating. Both of these muscles are controlled by the brain. When approximately 500cc (2 cups) of urine has accumulated, the bladder may begin to have small contractions that signal the brain that it is filling up. The brain can suppress the contractions until such time that it is convenient to go to the bathroom. When in the appropriate location (bathroom), the brain gives the "all clear" signal allowing the bladder to contract and the sphincter to relax, thus allowing evacuation of the bladder. The basal ganglia (in the brain) is part of a network that insures the proper timing of this control. The basal ganglia is also where the central malfunction of PD is located.

This malfunction in PD results in a bladder that may contract prematurely at low amounts of urine resulting in an overactive bladder. The individual may experience the sensation to urinate frequently, even when there is minimal urine in the bladder. This process may repeat itself numerous times during the day (urinary frequency) and also during the night (nocturia).

Problems with eliminating urine may be caused by a sphincter which wants to close when the bladder is ready to empty or by a bladder muscle which is too weak to expel the urine. This may result in incomplete emptying of the bladder, due to incomplete emptying of the bladder, urine will accumulate which in turn results in the perfect condition for bacteria to grow causing infection.

If you experience urinary urgency, frequency, nocturia, feelings of incomplete emptying of the bladder or incontinence, evaluation by a urologist is recommended. The urologist will most likely order some tests to determine the exact causes of your problems. There are medications that can be prescribed which may help with urinary problems. Management of urinary difficulties should be directed by the urologist with additional input from your neurologist.

MEDICATIONS; WHAT'S NEW?

There are two new medications that have completed phase III study and will hopefully be FDA approved and available in the US within the first half of 2006.

Rotigotine Patch – This is a dopamine agonist (imitates dopamine) which is delivered in a transdermal patch. The patch is applied once daily and provides sustained plasma levels for 24 hours. This medication can be used as monotherapy in early diagnosed individuals or as adjunct therapy for individuals already taking levodopa.

Rasagiline – This is a MAO-B inhibitor with some similarities to selegiline (eldepryl). MAO stands for monoamine oxidase. B stands for the specific receptor. B's are safer than A's which can cause more side effects and have dietary restrictions. MAO inhibitors block an enzyme that breaks down dopamine, thus allowing more dopamine to be available. Rasagiline is effective as monotherapy in early diagnosed individuals or as adjunct therapy to levodopa. It is delivered in pill form and is taken once daily. Studies have indicated that it may delay the need for levodopa. Neuroprotective effects continue to be under investigation. Unlike selegiline, rasagiline is not metabolized to amphetamine-like compounds.

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HUMOR

A distraught senior citizen phoned her doctor's office. "Is it true," she wanted to know, "that the medication you prescribed has to be taken for the rest of my life?"

"Yes, I'm afraid so," the doctor told her.

There was a moment of silence before the senior lady replied, "I'm wondering, then, just how serious is my condition because this prescription is marked **"NO REFILLS."**"



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WHAT IS A CLINICAL TRIAL AND WHY ARE THEY IMPORTANT?

A clinical trial is a research study which has been designed by scientists and medical experts to answer questions about a disease and for potential new therapies.

Without clinical trials, further understanding and investigation of the disease process, development of new therapies including new medications and surgical interventions would not be possible. People who participate in clinical trials are contributing to science that may not only help themselves, but potentially help numerous individuals in the future. The medications that are available today are only available because people have volunteered in the past to participate in clinical trials.

THERE ARE TWO MAIN TYPES OF CLINICAL TRIALS:

Interventional trials (studies) determine whether experimental treatments or new ways of using known therapies are safe and effective. These types of trials may have participants taking experimental new drugs or undergo experimental surgical procedures.

Observational trials (studies) usually address health issues in large groups or populations in natural settings.

Participants in these types of trials generally answer questions and depending on the study, may give blood samples, but they do not receive any treatment for their disease.

MEDICATION DEVELOPMENT

- Most drugs are studied in animals before testing begins on humans.
- The drug must progress through a series of phases before it can be approved by the FDA
- There is no specific time frame, but usually FDA approval occurs one to two years after completion of phase 3.

MEDICATION DEVELOPMENT PHASES

Phase I – Testing in normal controls (people without disease), to determine side effects, judge for safety of the drug and to determine safe dosage ranges.

Phase II – Safety testing in a specific target population (people with the specific diagnosis) and testing for efficacy.

Phase III – Safety and efficacy testing in a much larger target population.

Phase IV – Usually, already approved medication being tested for another indication.

TYPES OF INTERVENTIONAL CLINICAL TRIALS

Open label – everyone in the clinical trial receives the specific drug or surgical procedure.

Double-blind – People participating in the clinical trial may either get the specific drug or surgical procedure or may get placebo. In many studies, the physician and the clinical coordinators at the site where the trial is taking place do not know whether the participant is on the actual drug or not, only the sponsoring agency/company may know. The participants receiving placebo are considered the “control” group, the control group is used as a basis for comparison.

The Shaky Monkey

By Floyd Hawley

I have this nemesis I've acquired
He's every where I go
He tries to help me with my life
But he is very slow

He tries to help me with
morning chores
It's something quite un-nerving
Ten years he's always done
his best
It isn't to disturbing

He travels with me everywhere
To points throughout the nation
And many people never see
His disturbing vibrations

Sometimes I wish he'd go away
But that is just a whim
He'd never make it on his own
He'd probably take me with him

“It could be worse”, I tell myself
I am well medicated
I can still accomplish things
If I stay dedicated

My monkey doesn't drink
or smoke
He's not a party hack
Some would conclude he's not
much trouble
But he's always on my back

Submitted by Jerry Younggreen

CHANGES AT CNI MOVEMENT DISORDERS CENTER

Dr. Lauren Seeberger will be leaving practice at CNI the end of May 2006 to relocate with her husband and family out of state. We wish Dr. Seeberger and her family the best and will miss her tremendously at the Movement Disorder Center.

We are pleased to announce that Dr. Alan Diamond will start as Medical Director of CNI Movement Disorder Center on August 1, 2006.

Dr. Diamond is a neurologist who specializes in movement disorders including Parkinson's disease, DBS, Huntington's disease, Dystonia and other movement disorders.

Dr. Diamond is currently in private practice in Arkansas, prior to private practice, he did his fellowship in Movement Disorders at Baylor College of Medicine under the direction of world renown specialist Dr. Joseph Jancovic.