



ISNS Case Study

Parkinson's Disease

By Dr. Norbert Ketskés, M.D., and Dr. Christina Rahm Ph.D.

Parkinson's Disease is a neurodegenerative brain disorder that causes unintended or uncontrollable movements, such as shaking, stiffness, and difficulty with balance or coordination. Parkinson's disease is a slowly progressive disease, which causes a gradual loss of nerve cells in the brain that produce the neurotransmitter dopamine. Because dopamine carries signals to the part of the brain that controls movement and coordination, decreased dopamine levels lead to the cardinal motor symptoms of Parkinson's disease which include resting tremors, generalized slowness (bradykinesia), stiffness of the limbs (cogwheel rigidity). Progression of these symptoms results in high rates of disability and care requirements.

The most prominent signs and symptoms of Parkinson's disease occur when nerve cells in the basal ganglia, an area of the brain that controls movement, become impaired and/or die. Normally, these nerve cells, or neurons, produce an important brain chemical known as dopamine. When neurons die or become impaired they produce less dopamine, which causes movement problems associated with the disease. Scientists still do not know what causes the neurons to die. Individuals with Parkinson's disease also lose the nerve endings that produce norepinephrine, the main chemical messenger for the sympathetic nervous system, which controls many functions such as heart rate and blood pressure. The loss of norepinephrine might explain some of the non-movement features of Parkinson's, such as fatigue, irregular blood pressure, decreased movement of food through the digestive tract, and sudden drop in blood pressure when a person stands up from a sitting or lying position. Many brain cells of people

with Parkinson's disease contain Lewy bodies, unusual clumps of the protein alpha-synuclein. Scientists are trying to better understand the normal and abnormal functions of alpha-synuclein and its relationship to genetic variants that impact Parkinson's and Lewy body dementia.

Some cases of Parkinson's disease appear to be hereditary, and a few cases can be traced to specific genetic variants. While genetics is thought to play a role in Parkinson's, in most cases the disease does not seem to run in families. Many researchers now believe that Parkinson's results from a combination of genetic and environmental factors, such as exposure to toxins. Scientists are working to better understand the broad range of environmental exposures linked to Parkinson's disease. Traumatic head injuries or traumatic brain injuries, are head injuries that result in altering the level of consciousness and have been associated with an increased risk for developing Parkinson's years after the injury. There are differences in geographical distribution of Parkinson's. These could be due to the difference in environmental factors and genetic risk factors. Certain occupational categories or job titles have been associated with a higher incidence of Parkinson's. Occupational exposures to various metals have also been suggested to be related to the development of Parkinson's. Trichloroethylene (TCE) is a solvent used in many industries and is the most common organic contaminant in groundwater. Exposure to TCE was found to be associated with Parkinson's among workers whose factory job resulted in long-term exposure.

Parkinson's has four main symptoms which include tremors in hands, legs, jaw, or head, muscle stiffness, where muscle remains contracted for a long period of time, slowness of movement, impaired balance and coordination, sometimes leading to falls. Other symptoms associated with Parkinson's may include depression or other emotional changes, difficulty swallowing, chewing, or speaking, urinary problems or constipation, and skin problems. The symptoms of Parkinson's and the rate of progression differ among individuals. Early symptoms of this disease are subtle and occur gradually. For example, people may feel mild tremors or have difficulty getting out of a chair. They notice that they speak too softly, or that their handwriting is slow and looks cramped or small. Friends or family members may be the first to notice changes in someone with early Parkinson's. They may see that the person's face lacks expression and animation, or that the person does not move an arm or leg normally. People with Parkinson's diseases often develop a parkinsonian gait that includes a tendency to lean forward; take small, quick steps; and reduce the swinging of their arms. They also may have trouble initiating or

continuing movement. Symptoms often begin on one side of the body or even in one limb on one side of the body. As the disease progresses, it eventually affects both sides. However, the symptoms may still be more severe on one side than the other. Many people with Parkinson's disease note that prior to experiencing stiffness and tremor, they had sleep problems, constipation, loss of smell, and restless legs. Some people with Parkinson's may experience changes in their cognitive function, including problems with memory, attention, and the ability to plan and accomplish tasks. Stress, depression, and some medications may also contribute to these changes in cognition.

There are currently no blood or laboratory tests to diagnose non-genetic cases of Parkinson's. Doctors usually diagnose the disease by taking a person's medical history and performing a neurological examination. If symptoms improve after starting to take medication, it's another indicator the person has Parkinson's. A number of disorders can cause symptoms similar to those of Parkinson's disease. People with Parkinson's-like symptoms that result from other causes, such as multiple system atrophy and dementia with Lewy bodies, are sometimes said to have parkinsonism. While these disorders initially may be misdiagnosed as Parkinson's, certain medical tests, as well as response to drug treatment, may help to better evaluate the cause. Many other diseases have similar features but require different treatments, so it is important to get an accurate diagnosis as soon as possible.

Although there is no cure for Parkinson's disease, medicines, surgical treatment, and other therapies can often relieve some symptoms. Medicines that can help treat the symptoms of Parkinson's by increasing the levels of dopamine in the brain, affects the other brain chemicals in the brain such as neurotransmitters, which transfer information between brain cells, and help to control non-movement symptoms. The main therapy for Parkinson's is levodopa. Nerve cells use levodopa to make dopamine to replenish the brain's dwindling supply. Usually, people take levodopa along with another medication called carbidopa. Carbidopa prevents or reduces some of the side effects of levodopa therapy such as nausea, vomiting, low blood pressure, restlessness, and reduces the amount of levodopa needed to improve symptoms. People living with Parkinson's disease should never stop taking levodopa without consulting with their doctor. Suddenly stopping the drug may have serious side effects, like being unable to move or having difficulty breathing. The doctor may prescribe other medicines to treat Parkinson's symptoms,

including dopamine agonists to stimulate the production of dopamine in the brain, enzyme inhibitors to increase the amount of dopamine by slowing down the enzymes that break down dopamine in the brain, amantadine to help reduce involuntary movements, and anticholinergic drugs to reduce tremors and muscle rigidity. For people with Parkinson's disease who do not respond well to medications, the doctor may recommend deep brain stimulation. During a surgical procedure, a doctor implants electrodes into part of the brain and connects them to a small electrical device implanted in the chest. The device and electrodes painlessly stimulate specific areas in the brain that control movement in a way that may help stop many of the movement-related symptoms of Parkinson's, such as tremor, slowness of movement, and rigidity. Other therapies that may help manage Parkinson's symptoms include physical, occupational, and speech therapies, which may help with gait and voice disorders, tremors and rigidity, and decline in mental focus. A healthy diet is provided to help support overall wellness. Exercise to strengthen muscles and improve balance, flexibility, and coordination. Massage therapy is used to reduce tension, and yoga and tai chi increase stretching and flexibility.

Case Study

Patient: Male

Age: 62-years-old

History: Family history is negative and Parkinson's syndrome was diagnosed 6 months ago.

Medical History: The diagnosis of Parkinson's disease is primarily clinical, based on the patient's symptoms and a thorough neurological examination.

Symptoms: Resting tremor in his right hand, stiffness, difficulty initiating movement, slowness of movement, and impaired coordination.

His wife also reports that he has been experiencing a reduced sense of smell, and she notices a decrease in his facial expressions. His communication also slowed down.

Treatment/Method: He started out with the conventional treatment Levodopa 100 mg /Carbidopa 25 mg / Entacapone 200 mg

Proprietary Blend I: 2x6 drops, morning and evening, for 3 days, then every 3 days then increased by 1-1 drops every 3 days to 2x12

Proprietary Blend II: 1 in the morning for 7 days, then 1 in the morning and 1 in the afternoon for 7 days, then 2 in the morning and 1 in the afternoon

Proprietary Blend III: 1/2 sachet in the morning for 7 days then 1 sachet in the morning for 7 days then 1 sachet in the morning and 1 sachet in the evening

Proprietary Blend IV: 1/2 teaspoon in the morning for 7 days, then 1 teaspoon in the morning

Proprietary Blend V: 1 teaspoon in the evening

Proprietary Blend VI: 1 in the morning for 7 days then 1 in the morning and 1 in the evening

LEGEND:

Proprietary blend I: silica, vitamin c, and trace minerals.

Proprietary blend II: N-acetyl L-tyrosine, anhydrous caffeine, L-theanine, velvet bean seed, pine bark, curcumin, and vitamin d.

Proprietary blend III: black seed oil, resveratrol, turmeric, raspberry ketone, apple cider vinegar, aloe Vera, and d-ribose

Proprietary blend IV: Vitamin C, Zinc sulfate, and Vitamin D3.

Proprietary blend V: Inulin, Green Banana Flour, Apple Fiber, Bacillus Coagulans, Spirulina, Wheat Grass, Barley Grass, Alfalfa Leaf, Flaxseed, Psyllium Husk Powder, Chlorella, Broccoli, Kale, Spinach, Green Cabbage, Parsley, Aloe Vera, Cayenne Pepper, Blueberry Powder, Pomegranate Seed Powder, and MCT Coconut Oil Powder

Proprietary blend VI: B-Nicotinamide Adenine Dinucleotide (NAD+), magnesium, trace minerals, quercetin, vitamin D, vitamin C, and vitamin K2

Additional treatment: Physical therapy and exercise programs can help improve mobility, balance, and strength. Speech therapy and occupational therapy may also be beneficial in managing speech and fine motor difficulties. A special diet based on Dr. Norbert Ketskes' personal experience was also implemented.

Results: After 1 Month: reduced stiffness, tremors in the hand. His sense of smell improved and he became a little more lively.

After 3 months: His difficulty starting movements decreased and his coordination improved.

The stiffness and tremor in the hand improved further. His facial expressions became animated again. His communication has been restored. His mood has improved. Not only the family, but the patient could report on the improvements. Based on these improvements, the patient's quality of life improved.

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