Autonomic, Sleep and Other Non-Motor Symptoms in Parkinson’s Disease

This is the second of two presentations describing non-motor symptoms of Parkinson’s disease. In this video we will discuss symptoms related to the autonomic nervous system, sleep, and additional common non-motor symptoms.

Orthostatic Hypotension

Sudden drop in blood pressure upon arising from lying or sitting position, resulting in dizziness and lightheadedness

Treatment:
- Fluids, caffeine, salt
- Compression stockings
- Medication: midodrine, fludrocortisone, pyridostigmine

The autonomic nervous system controls many of the automatic body functions including control of temperature, blood pressure, urinary function, and gastrointestinal system. The neurodegeneration in Parkinson’s disease can significantly affect the control of the autonomic nervous system.

Orthostatic hypotension refers to the drop in blood pressure associated with change in position typically from lying or sitting to standing. This results in lightheadedness and
may cause fainting. This reduction in blood pressure may be caused by Parkinson’s disease and is exacerbated by anti-Parkinson medication. To improve this symptom, we usually first reduce antihypertensive blood pressure medication and then implement certain non-pharmacologic therapies including fluid intake, taking salt tablets, increasing caffeine intake, and wearing compression hose. If these measures do not improve the symptoms of lightheadedness adequately, the medications midodrine, fludrocortisone, and pyridostigmine may be used to increase blood pressure.

As Parkinson’s disease advances, bladder dysfunction becomes increasingly common. Typically this results in urinary frequency and urgency. When urgency becomes troublesome, the patient has difficulty getting to the bathroom in time, resulting in incontinence. This is usually most problematic at bedtime so reduction of fluids later in the evening may be helpful. Specific anticholinergic medication can also be helpful. The most commonly used medications include trospium, tolterodine, and fesoterodine. Typically, a bladder medication which crosses over into the brain and can worsen cognitive dysfunction in patients with Parkinson’s disease, such as oxybutynin, are avoided.
The gastrointestinal system is affected in most patients with Parkinson’s disease. Constipation is extremely common and may even develop prior to motor symptoms. For treatment of constipation, increasing fluid and fiber intake, exercise, and the use of stool softeners and laxatives are useful. Anticholinergic medication given for treatment of motor symptoms or bladder dysfunction may worsen constipation and this should be taken into account. Another common symptom is gastroparesis, or a reduced speed of stomach emptying. In most patients this does not result in symptoms, but may result in increased time for medication such as levodopa to take effect.

Erectile dysfunction affects approximately one-third of patients with Parkinson’s disease. Treatment with Viagra and similar medications can be quite helpful. Excessive sweating may also be bothersome to patients. This can fluctuate dramatically, often in accordance with worsening of motor symptoms when the patient is in the “off” state.
Insomnia occurs in many patients with Parkinson’s disease and may be worsened by stiffness, depression, and anxiety. Behavioral therapy and sleep hygiene techniques including maintaining a routine, avoiding bright lights, food and exercise prior to bedtime may be helpful. When behavioral techniques are not effective enough, use of sleeping pills or certain antidepressants may be useful.

REM sleep behavior disorder refers to dream enactment with the patient usually acting out vivid, violent dreams resulting in screaming, shouting, and fighting movements. This can cause the patient to fall out of bed resulting in injury, or the patient may accidently strike their bed partner. This may also be a premotor symptom and can begin before motor symptoms occur in Parkinson’s disease. Treatment with melatonin and clonazepam can be helpful.

Excessive daytime sleepiness may be a manifestation of Parkinson’s disease itself or can be caused directly by levodopa and dopamine agonists. Many patients who have Parkinson’s disease may also have sleep apnea, which often first may manifest as excessive daytime sleepiness. Treatment usually first relies on optimizing sleep at night, reducing or eliminating medications which were causing excessive sleepiness, treatment of sleep apnea if it exists, and use of stimulants such as caffeine or the prescription medications modafinil or armodafinil, known as Provigil and Nuvigil.
Fatigue

Fatigue is remarkably common in patients with Parkinson’s disease and, unfortunately, there is no definitive treatment. It is important to differentiate fatigue from sleepiness since the possible treatments may differ. Exercise has been shown to be helpful in patients without Parkinson’s disease and is likely helpful in patients with Parkinson’s disease. If a patient’s motor state is relatively undertreated, increasing anti-Parkinson medication may also reduce the effort associated with day-to-day activities and improve fatigue.

Sensory Symptoms

- Pain or increased sensitivity to pain
- Heaviness in limbs
- Feeling of internal tremor
- Restless leg syndrome (akathisia)
- Rigidity/cramps

In the past, it was thought that pain and other sensory symptoms were not a part of Parkinson’s disease. More recently it has become more clear that pain is an integral non-motor symptom of Parkinson’s disease and is frequently under or unrecognized. Patients with Parkinson’s disease may have an increased sensitivity to painful stimuli compared to normal individuals. Aching or heaviness in the most affected parts of the body, feelings of internal tremor, and dystonic posturing may all contribute to pain. Many patients with Parkinson’s disease may also have restlessness, called akathisia, or have typical symptoms of restless legs syndrome. Both restless legs syndrome and akathisia usually respond to an increase in anti-Parkinson dopaminergic medications.
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