Depression and Parkinson's Disease

a report by
Brian D Bell, PhD

Clinical Neuropsychologist and Assistant Professor, University of Wisconsin Hospital and WS Middleton VA Medical Center, Madison

DOI: 10.17925/USN.2008.04.01.67

Parkinson's disease (PD) is generally considered to be a neurological disorder. However, because of the frequency of mood and other psychiatric complications, PD could be considered a neuropsychiatric disease. In fact, James Parkinson himself observed in 1817 that depression is commonly associated with PD.[1]

The estimated prevalence of depression in PD varies according to the type of mood assessment applied (interview versus self-report questionnaire), diagnostic criteria or definition of depression (the number and type of symptoms required), and research setting (community-based versus neurology clinic).[1,2] However, overall the data suggest that at any given time 20–40% of individuals with PD are experiencing depression of some type. This is a higher rate than that found in the general population.[3–5] Depression can be difficult to diagnose in PD because of the overlap between symptoms of depression and PD. For example, the biological symptoms typical of depression—such as low energy, insomnia or excessive sleep, weight loss, diminished sexual function, and an emotionless face—can be directly related to the neuroanatomical disruption characteristic of PD. These symptoms are not necessarily evidence of depression and, conversely, the psychomotor slowing of depression might be accidentally overlooked in a patient with PD.[2,6]

Depression in PD could be considered an understandable reaction to a disabling chronic illness. However, some researchers believe that depression may be a part of the disease and caused by neurological changes.[2,7] This notion is supported by the fact that depression sometimes precedes the diagnosis of PD. Of course, the cause of depression in patients with PD could be a combination of a subjective reaction to the illness and the brain changes brought about by the disease.[5] The consensus is that depressive symptoms should be addressed and treated by physicians regardless of whether these symptoms are part of PD itself or due to a separate cause.[1,8,9]

The psychiatric complications of PD require attention because they can exacerbate the already considerable physical challenges brought on by the disease. In fact, an international survey of patients with PD discovered that depressive symptoms were the most important factor in patient quality-of-life ratings.[10,11] Another reason to treat depression in PD is that reports of care-giver burden correlate significantly with patients' depression and quality of life.[12]

It has been recommended that optimal anti-Parkinson symptom treatment should be the first step in the treatment of PD. It is notable that some PD medications may have an antidepressant effect of their own. The antidepressant effect of dopamine agonists such as pramipexole is probably due to stimulation of D3 dopamine receptors, whereas the drug's effect on PD symptoms is related to the D2 dopamine receptor.[3] Dopamine agonists may be helpful, in particular for patients who experience on–off motor fluctuations, with their depressive symptoms being related to the 'off' periods. When the use of an antidepressant is considered in a patient with PD, its potential adverse effects and interactions with PD drugs must be weighed against the effects of the depression itself.[3] Although it should be noted that the majority of the studies did not include a placebo control, there is evidence that antidepressant medications can have a significantly positive effect on depression in PD.[1,2,6] There are different classes of antidepressant medication. The selective serotonin re-uptake inhibitors (SSRIs) (e.g. Zoloft®, Prozac®, Paxil®, and Celexa®) are prescribed most often in PD patients with depression. In general, the SSRIs are safer and better tolerated by patients than the tricyclic antidepressants (TCAs) (e.g. Elavil®, Tofranil®, and Pamelor®). For example, the SSRIs have fewer cardiac and cognitive adverse effects and, in addition, they can effectively treat anxiety and pain, which are also common in patients with PD.[2,3,8]

Research studies have shown that PD symptoms can worsen as a result of SSRI use, but this adverse effect occurred in only a small minority of patients and was reversed after discontinuation of the medication.[8] The combination of Selegilene and SSRIs could potentially result in a deadly serotonin syndrome. One author states that when Selegilene is being taken at a dosage ≥20mg per day, it should not be used together with SSRIs.[2,3] Finally, more research is necessary to determine the best therapeutic ranges for antidepressant medications in individuals with PD.[1]

Some patients with depression either experience medication interaction effects and do not respond to pharmacotherapy for depression or are simply reluctant to take another medication. For these patients in particular, effective psychotherapeutic options would, of course, be valuable. To date, there have

Brian D Bell, PhD, is a Clinical Neuropsychologist and Assistant Professor at the University of Wisconsin Hospital and WS Middleton VA Medical Center in Madison. He has presented talks at annual meetings of the American Epilepsy Society, the International Neuropsychological Society, the Midwest Neuropsychology Group, and the Wisconsin Neurological Society. He also has published papers, many on the topics of language and memory functioning, in the *Journal of the International Neuropsychological Society*, *Psychological Assessment*, *Neuropsychology Review*, *Neuropsychologia*, *Epilepsia*, *Epilepsy Research*, *Neuropsychology*, the *Journal of Clinical and Experimental Neuropsychology*, *The Clinical Neuropsychologist*, *Archives of Clinical Neuropsychology*, and *Brain and Language*. Dr Bell's clinical experience includes assessment of patients with a wide range of neurological and psychiatric illnesses, including Parkinson's disease, epilepsy, and dementia.

E: bell@neurology.wisc.edu

been very few studies of the effectiveness of psychotherapeutic techniques such as cognitive behavioral therapy (CBT) for the treatment of depression in PD.[8] The research that has been carried out suggests that non-pharmaceutical approaches can help to improve mood, quality of life, and health outcomes. In one study, those individuals with the most severe depression seemed to benefit the most from CBT.[13] The use of coping strategies and other techniques for managing grief and other emotional distress can still be effective in this context.

The growing trend toward use of online support groups may serve patients with PD well. Communicating with a group via a computer allows patients to access support without leaving the home. For individuals who have difficulty typing, a friend or spouse could possibly help. A recent study in California found that participation in an online support group that included professional facilitators positively affected mood and quality of life in a group of patients with PD.[14]

In PD patients without dementia, electroconvulsive therapy can be an effective choice for the treatment of depression when other treatments have failed. This treatment requires close management by a psychiatrist. Regular exercise can sometimes help to improve both physical and mental health in individuals with PD.[1,15] In non-demented PD patients, electroconvulsive therapy (ECT), which requires close management by a psychiatrist, can be an effective choice for depression when other treatments have failed.[3,6] The usual cause of the onset of delusions, hallucinations, and paranoia in PD is either the addition of a new PD drug such as amantadine, a dopamine agonist, or Selegilene or an increase in levodopa. A head injury or metabolic imbalance can also be responsible for these types of behavioral change. If the dramatic change in behavior is actually due to a primary psychotic depression rather than an adverse medication or injury, both an antidepressant and an atypical antipsychotic medication are called for. At the same time, a reduction in or elimination of one or more of the patient's antiparkinsonian drugs might be necessary.[3]

Deep-brain stimulation surgery, including bilateral subthalamic nucleus surgery, can result in the appearance or exacerbation of personality, anxiety, or mood disorders in some PD patients. In particular, a history of major depression is a risk factor for a significant post-operative mood disorder, even when surgery results in marked improvement in motor functioning.[16,17] In general, it should be emphasized that current antidepressant medications and psychotherapy have shown effectiveness for patients with PD. Therefore, both the depressive symptoms and motor symptoms of the illness should be addressed.[8,18] ■

The American Parkinson Disease Association

Key Aims

The American Parkinson Disease Association (APDA) is the country's largest grassroots organization serving the 1.5 million Americans with Parkinson's disease and their care-givers in three vital areas:

- **Research**—the APDA has been a funding partner of every major scientific breakthrough since its inception 46 years ago. To date, more than $60 million has been contributed to find the cause and cure.
- **Patient and care-giver support**—through its network of information and referral centers, the APDA provides physician and services referrals and educational programs and develops and maintains support groups across the US.
- **Education**—by publishing more than a dozen publications in numerous languages and a quarterly international newsletter, sponsoring lectures and symposia, and distributing multimedia educational materials, the APDA provides the information patients and their care-givers need to make intelligent decisions and lead more productive, independent lives.

The APDA operates through a national system of chapters, volunteers who raise funds and awareness, and centers staffed by healthcare professionals who provide direct patient and care-giver support.

For further information, please visit: www.apdaparkinson.org

Contact: 135 Parkinson Avenue, Staten Island, NY 10305
T: 1-800-223-2732
E: apda@apdaparkinson.org

Source: American Parkinson Disease Association.

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