Psychiatric and Cognitive Disorders in Parkinson's Disease

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Introduction

Parkinson's disease (PD) is a frequent neurologic disorder among elderly individuals. Whereas the hallmark of the disease is the presence of abnormal movements, comorbid psychiatric and cognitive abnormalities are frequently found. The major aim for the present book was to include up-to-date information regarding the diagnosis, phenomenology, and treatment of the psychiatric and cognitive disorders of PD in one single volume.

Most patients with PD are usually cared for by internists and general practitioners, but the information about emotional and cognitive comorbid conditions is usually found in specialized neurologic and psychiatric journals. Our book is aimed at senior clinicians and trainees in internal medicine and general practice, at neurologists who may want a better understanding of their patients' "non-motor" problems, and at geriatric psychiatrists who may want to access the relevant information about emotion and cognition in PD, and update their knowledge about the motor complications and treatment of this disorder.

The second chapter provides a strong clinical background of the motor problems of PD before discussing the psychiatric and cognitive disorders related to the illness. We address the epidemiology and main clinical aspects of PD, and a clinical case is presented to illustrate the progression along the stages of the illness. There is also specific discussion of the different clinical complications that may emerge during the evolution of the disease and the subtypes of the illness. Treatment strategies for the motor disorder are specifically addressed, with discussion of emotional and cognitive benefits and complications of the different pharmacologic approaches such as the use of neuroprotective agents, levodopa (l-dopa) and dopaminergic agonists, anticholinergics, and other compounds. This chapter also includes a review of the most recent surgical treatments for PD, such as the stereotaxic

lesion or stimulation of the posteroventral-pallidum, the thalamus, and the subthalamic nucleus, with special emphasis on the potential cognitive and emotional implications of these techniques.

In the third chapter we revise the most important differential diagnoses of PD to help the clinician understand diagnostic dilemmas of the disease. We provide clinical vignettes and discuss clinical aspects and laboratory and neuropathologic findings of multisystem atrophy, progressive supranuclear palsy, and corticobasal degeneration. Special attention is given to the spectrum of Lewy body disease, and clues for the differential diagnosis between PD and other neurodegenerative conditions, drug-induced parkinsonism, and parkinsonism related to depression, stroke, and "cortical" dementias are also provided.

In the fourth chapter we discuss the most frequent cognitive deficits in PD such as deficits in executive functions, visuospatial abilities, speech, language, attention, and memory. We examine their prevalence, potential mechanisms, and neuroimaging correlates. There is also an in-depth discussion of dementia in PD. After presenting a clinical vignette, we discuss methodologic issues related to the diagnosis of dementia in PD, and review the prevalence and phenomenology of dementia in this disorder. We specifically review cognitive, emotional, motor, and neuroimaging differences between so-called "subcortical" dementias (e.g., PD) and "cortical" dementias (e.g., Alzheimer's disease (AD)), and revise the clinical correlates and mechanism of dementia in PD. Specific reference is made to neuropathologic aspects of dementia in PD, such as coexisting AD pathology, cortical Lewy bodies, and depletion of neurotransmitter systems.

In the fifth chapter we examine the prevalence and phenomenology of depression in PD. We discuss the main strategies used to diagnose an affective disorder among patients with a neurologic disorder that may "mimic" a depressive condition, and we revise the main psychiatric instruments and diagnostic criteria used to carry out the patient's evaluation. We then discuss the impact of depression upon cognitive functioning, activities of daily living, quality of life, and evolution of the motor disorder. Finally, we examine biological markers and neuroimaging correlates of depression in PD and discuss potential underlying mechanisms for this condition.

In the sixth chapter we address behavioral disorders frequently reported in PD such as anxiety, panic attacks, phobias, and apathy. We discuss clues

for the diagnosis of these problems and present illustrative cases. PD patients were reported as having "high moral standards," "moral exactitude," "great social conformism," and "inflexible social interactions." However, it was only recently that specific personality traits in PD have been investigated with standardized instruments. This chapter presents the main evidence for and against a specific personality "type" in PD.

In the seventh chapter we review the main cognitive and psychiatric side-effects of antiparkinsonian medication. We discuss the dilemma of improving the motor status of a patient while at the same time increasing the risk of behavioral problems, and examine alternatives for managing these difficult situations. The main psychiatric side-effects of antiparkinsonian medications are hallucinations, delusions, illusions, delirium, and sleep disorders. We examine their prevalence, main clinical correlates, and potential mechanisms. We then address the cognitive and emotional side-effects of specific antiparkinsonian drugs, such as l-dopa, dopaminergic agonists, amantadine, selegiline, and anticholinergic drugs.

In the eighth, and last, chapter we discuss the main somatic and psychological treatments of the psychiatric disorders of PD. The efficacy and side-effects of different types of antidepressants (e.g., tricyclics, monoamine-oxidase inhibitors, selective serotonergic reuptake inhibitors) and antipsychotic agents (e.g., clozapine, risperidone, olanzapine, quetiapine) are specifically revised, and the usefulness of other treatment modalities, from relevant social and familial interventions to electroconvulsive therapy, is discussed.

Finally, the Appendix comprises seven scales that are frequently used to rate the physical and behavioral disorders of PD, as well as deficits in activities of daily living, and quality of life.