

Movement Disorders in Dementias

Marcelo Merello • Sergio E. Starkstein
Editors

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 Springer

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*To our fathers, Jorge and Leonardo, and to
our 20 years of uninterrupted friendship.*

MM and SS

Foreword

Neurologists today need to deal in their daily practice with cognitive impairment in patients with movement disorders, particularly but not limited to those with Parkinson's disease. This book offers a somewhat opposite view, which is the occurrence of movement disorders in patients in whom dementia is the primary clinical manifestation. Movement disorders, as currently understood, comprise a large variety of conditions, not all of which are related to basal ganglia dysfunction. However, the contribution of the ascending dopaminergic projection to cognitive processing is well known, and, indeed, the now old-fashioned concept of "subcortical" dementia originated from observations in patients with progressive supranuclear palsy. On the other hand, it is now recognized that cognitive impairment very often evolves in parallel with altered gait and equilibrium and that the pathology of many neurodegenerative diseases is sufficiently widespread to impinge upon several circuits and brain regions, thus producing multiple clinical combinations. No doubt, dementia and movement disorders are a current hot topic.

Drs. Merello and Starkstein, therefore, deserve the most sincere and warm congratulation for this initiative and the outcome. This book provides a comprehensive account of a variety of different movement disorders in the setting of the major diseases and processes associated with cognitive impairment. The list of authors is impressive, as experts in the field have written each chapter. Nowadays, the world of publishing is moving quickly toward electronic editions only in what seems an inevitable trend. However, Merello and Starkstein's *Movement Disorders in Dementias* is exactly the book one wants to have on the desk to read leisurely and consult very often when thinking about specific patients with cognitive and motor impairments. I am looking forward to the smell of a new, just-printed, highly intellectual work!

Pamplona, Spain

Jose A. Obeso, MD, PhD

Preface

Since the end of the twentieth century, the cognitive and psychiatric comorbidities of movement disorders have received increasing attention. On the other hand, the study of movement disorders in dementia has been relatively neglected. To our knowledge, there are no specific books devoted to clarify the variety, mechanism, and treatment of motor problems in dementia.

It was 14 years ago that we decided to write a book on the non-motor problems of Parkinson's disease (PD). By then, research and clinical evidence were rapidly accumulating regarding the high frequency of specific cognitive deficits, affective disorders, and anxiety in PD. Apathy was also emerging as a prominent comorbid condition of PD, and the mechanism and treatment of psychotic symptoms were an area of intense investigation. We now present a book that inverts that focus, that is, it examines the motor problems in dementias due to different mechanisms.

An increasing number of studies have demonstrated a high frequency of parkinsonism and other movement disorders such as myoclonus, paratonia, and dyskinesia in Alzheimer's disease (AD). In addition, the introduction of medication to treat the cognitive impairment as well as novel antipsychotic drugs contributed to the variety and severity of movement disorders in AD. The association between dementia and movement disorders is also evident in the high proportion of patients with frontotemporal dementia and comorbid parkinsonism and the association between cognitive deficits and a variety of movement disorders such as the "alien hand syndrome" and "psychomotor" symptoms such as apraxia in corticobasal syndrome.

Cognitive dysfunction and parkinsonism are closely related, and regardless of which of them is the primary problem, the other is invariably present. For many years, dementias and parkinsonism have been separately addressed, through different specialties, by different researchers, and in different books and journals. However, emerging concepts on topics such as neurodegeneration with synucleinopathies, tauopathies, and amyloid deposit mechanisms have generated a trend to lump these disorders together.

In his masterpiece *The History of Mental Symptoms*, German Berrios asks what he considers the crucial question in the history of PD: why did it take so long for cognitive and psychiatric symptoms to be considered part and parcel of PD? The

answer to this question is that patients did not live long enough to show the non-motor comorbidities or that, following James Parkinson's description, neurologists refused to accept their presence. Perhaps a similar process occurs in dementia, with most of the focus being given to the cognitive aspects of this disorder, while the motor aspects are not so well attended. It is interesting that in his seminal paper "On the relationship between senile cerebral atrophy and aphasia," Arnold Pick already described motor problems in patients with dementia. The patient Augustus H had brisk knee reflexes and a fast clonus, a 52-year-old man developed progressive weakness of the right extremities and speech disturbance, and the third patient complained of pain in the right leg "gradually losing the use of it."

This book will mainly focus on extrapyramidal signs and symptoms in the most common or novel types of dementia and will address the issue of the artificial boundary between dementia and parkinsonism, the two most common degenerative disorders.

Recognized specialists in the field of movement disorders provided chapters on topics generally restricted to dementia experts. The first chapters address important general aspects on the relationship between motor disorders and dementia, such as the association between medications and motor problems, and motor disorders common to many types of dementia, such as gait disorders, falls, and motor manifestations of psychiatric complications of dementia. The following chapters provide an in-depth analysis on the relationship between motor and cognitive symptoms, addressing their common pathogenesis and specific treatments.

The book was timely written in 1 year, which warrants up-to-date information and views. We hope we have covered the topic widely enough, so that the book will appeal to a wide readership, including general practitioners, gerontologists, and neurologists. We expect this book to become the main reference in the field for years to come.

Buenos Aires, Argentina
Fremantle, WA, Australia

Marcelo Merello, MD, PhD
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