Memory in neurodegenerative disease

Cognitive impairment in late life is a growing clinical and public health problem, with Alzheimer’s disease the most prevalent of the progressive dementias. Memory disorders are the commonest and most disabling feature of neurodegenerative disease, and this book is the first to review in depth the neurobiological and clinical characteristics of memory and its disorders in this group of patients. In addition to Alzheimer’s disease it presents current information about memory disorders in Huntington’s and Parkinson’s diseases and in other neurological conditions such as progressive supranuclear palsy, Creutzfeldt–Jakob disease and HIV-associated dementia.

The contributors are among the most distinguished working in this field. They present the neuroanatomical and neurochemical basis of memory disorders in neurodegenerative disease, and review the contribution of neuroradiology and neuropathology to the understanding of memory and amnesia. Different types of memory are differently affected in these conditions, and the clinical and neuropsychological implications are thoroughly explored. Diagnosis, assessment and treatment issues are discussed, as are ethical and legal considerations and topics of emerging interest such as the early detection of dementia, preserved cognitive functions and neurosurgical interventions. The book is in three parts, each with an integrative summary from a leading authority.

Bringing together biological, cognitive and clinical information, this book will be an essential reference for neuropsychologists, neurologists and psychiatrists, experimental psychologists and other neuroscientists. As memory disorders are so fundamental to neurodegenerative disease, it also serves as an authoritative and up-to-date overview of the dementias and the prospects for treating them.

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Memory in Neurodegenerative Disease

Biological, Cognitive, and Clinical Perspectives

Edited by

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Every effort has been made in preparing this book to provide accurate and up-to-date information which is in accord with accepted standards and practice at the time of publication. Nevertheless, the authors, editors and publisher can make no warranties that the information contained herein is totally free from error, not least because clinical standards are constantly changing through research and regulation. The authors, editors and publisher therefore disclaim all liability for direct or consequential damages resulting from the use of material contained in this book. Readers are strongly advised to pay careful attention to information provided by the manufacturer of any drugs or equipment that they plan to use.
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Preface

Many volumes are dedicated to studies of memory, which might be considered the essence of the rich tapestry of life. Some volumes describe normal memory, others disordered memory. This book is designed to fill a gap by focusing specifically on memory in neurodegenerative conditions. The explosion of neuroscience research dealing with this topic has left many seeking a single source which might familiarize them with the basics of research outside their own area of expertise. Although no book can be everything to everyone, and cover every relevant topic, this book attempts to bring together biological, cognitive and clinical perspectives, so that neuropsychologists, neurologists, psychiatrists and neuroscientists can familiarize themselves with allied research outside their immediate area of expertise. An effort is made to present research of recent and emerging interest, for example, preclinical detection of dementia, the description of prospective memory and the renaissance of surgery for movement disorders due to neurodegenerative processes. Often neglected topics, such as ethical and legal issues, are also addressed.

I thank my wife, Kristy Straits-Tröster, for her immense patience and understanding while bearing countless solitary hours during the completion of this project. My parents, Guy and Christine Tröster, continue to understand that work load sometimes necessitates putting up with an ‘alien’ son, and their understanding and inspiration is, as always, greatly appreciated. The invaluable assistance of Julie Fields in the completion of this volume is most gratefully acknowledged, as is the encouragement and support of Dr Richard Barling, Director of Medical Publishing at Cambridge University Press, who demonstrated great faith in taking on this project. Tremendous gratitude also goes to the editorial and production staff at Cambridge University Press, and especially to Mr Joe Mottershead, without whose professionalism and arduous effort this volume might still be in press several years from now. I also extend my thanks and deep appreciation to the authors contributing to this book. Not only did they all deliver superb chapters in a short time frame, but they patiently endured my editorial whims and rewrites. A final word of gratitude goes to William Bartholome, MD, and Mr Don Lambert, who familiarized me with ‘Grandma’ Layton’s inspiring art.
To my family

For their love, support, patience, and above all, encouragement

To the many thousand individuals participating in the research that is the subject of this book

For giving selflessly of themselves in the hope of helping others