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Preface

Research on dementing illnesses is in the midst of an agitated period. During the past 50 years, it has progressively matured from a primarily social service problem to the clinicopathological definition of a wide spectrum of diseases, evaluation of measures of cognition, analysis of brain microstructure, and, more recently, visualization of the pathological substrates such as b-amyloid and tau protein in vivo. Despite these impressive developments in diagnostic tools, biomarkers, and imaging modalities, we still ignore the etiology of the more frequent clinical syndromes leading to the irreversible loss of cognitive functions, namely Alzheimer's disease, Lewy body disease, vascular and frontotemporal dementia. Recent epidemiological work highlights the complex relationships among these entities by demonstrating the high frequency of mixed conditions in very old people and indicating that they may share common risk factors. Moreover, the old and still unresolved question of the limits between normal and pathological aging is to date complicated not only by the description of several transitional forms of mild cognitive impairment characterized by the predominance of brain compensation phenomena that allow for preserving cognitive performances and social adaptation despite an often substantial biological compromise but also by poor response to currently available substitution treatments. Paralleling the difficulty to formulate clear pathogenetic hypotheses, an accelerated pace of compounds entering clinical trials are now available mainly for Alzheimer's disease. Most agents still target clinical end points associated with mild to moderate forms of the disease rather than focus on modulation of the underlying pathologies. Although there are obvious practical but also ethical reasons for this, meaningful progress in other areas of medicine such as cardiology and oncology has targeted and monitored improvement or abatement of pathology as the primary end point as a successful disease-modifying strategy.

In this rather uncertain context, new evidences from basic and clinical sciences should be available in a simple and comprehensive form for general practitioners and mental health professionals. In fact, the pivotal role of clinicians assuming the day-to-day hard work with demented patients and their families may be reinforced by a bet-

ter integration of current knowledge in the field of dementia pathogenesis, diagnostic procedures and therapeutic possibilities. Avoiding an overspecialized approach, this book aims to provide such an updated view of the disorders likely to be encountered in a daily practice and reviews the major issues presented by each clinical entity in terms of disease pathophysiology, overlap of conditions, diagnosis, therapeutic possibilities and recommendations about patient management issues. To facilitate reading for a nonspecialist, each section is focused on a major form of dementia and is organized following the same scheme reviewing the pathophysiology of the disease, its diagnostic challenges, its characteristic neuroimaging features, and therapeutic interventions. We also hope that this book will reach an additional goal, that of bridging the gap between clinical practice, advanced imaging, recent therapeutics, and basic sciences in order to be an excellent guide for mental health professionals working in the field of dementia.

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