# Contents

# Preface: Patient-Centered Care and Cognitive Dysfunction

John E. Morley

# An Overview of Cognitive Impairment

# John E. Morley

Cognitive decline occurs in all persons during the aging process. Eventually, this can result in mild cognitive impairment and dementia. There are more than 100 causes of dementia. A multifocal approach to slowing cognitive decline (Mediterranean diet, exercise, computer games, socialization, and treatment of cardiovascular risk factors) appears to be effective.

#### Screening for Cognitive Impairment in Geriatrics

Ziqi Wang and Birong Dong

There are many instruments for screening cognitive impairment. The common tools for screening cognitive impairment are categorized into 4 groups (very brief, brief, self-administered, and test batteries) in geriatrics. There are some tests used for specific tests of 6 cognitive domains (learning and memory, language, executive function, complex attention, and social cognition) by following the DSM-V criteria. Different settings, stages, conditions, and specific people need some specific tools for screening cognitive impairment. It must be noted that there is some harm in screening for cognitive impairment in geriatrics.

# **Reversible Dementias**

# Milta O. Little

As the worldwide prevalence of dementia increases, there is a greater and more urgent need for all health care providers to understand how to evaluate and manage cognitive impairment. Many people presenting with a dementing illness have one or more reversible underlying conditions that worsen prognosis and, if treated, can improve cognitive function. This article reviews the major potentially reversible dementias, including the basic workup and management of each condition.

#### Mild Cognitive Impairment in Geriatrics

#### Eric G. Tangalos and Ronald C. Petersen

Mild cognitive impairment remains a clinical diagnosis, aided by history, neurologic examination, screening mental status examination, and secondary testing. It can be difficult to distinguish from normal aging without understanding a patient's prior level of intellectual function and new complaint. Geriatricians encounter patients with mild cognitive impairment in all long-term care settings. Making the diagnosis allows patients and their families to understand limits and develop strategies to maximize function. Etiologies associated with mild cognitive impairment include 537

ix

505

515

degenerative and vascular processes, psychiatric causes, and comorbid medical conditions. Treatable medical conditions may also present as mild cognitive impairment and have reversible outcomes.

#### **Alzheimer Disease**

John E. Morley, Susan A. Farr, and Andrew D. Nguyen

Alzheimer disease is due to increased amyloid- $\beta$  coupled with low progranulin. Several brain imaging techniques are helpful in the diagnosis. Drugs available for treating Alzheimer disease have limited clinical utility. Cognitive stimulation therapy is an effective therapy for persons with moderate Alzheimer disease.

#### Lewy Body Dementia

Angela M. Sanford

Dementia with Lewy bodies (DLB) is the second most common neurodegenerative dementia following Alzheimer disease. It stems from the formation of Lewy bodies, which contain aggregates of the misfolded protein,  $\alpha$ -synuclein. These deposit in areas of the nervous system and brain, leading to neuronal cell death and causing clinically apparent symptoms. Because of its clinical overlap with other forms of dementia, DLB is often underdiagnosed and misdiagnosed. There is currently no cure for DLB, and treatments are aimed at ameliorating specific symptoms.

# Traumatic Brain Injury, Chronic Traumatic Encephalopathy, and Alzheimer Disease 617

Roula al-Dahhak, Rita Khoury, Erum Qazi, and George T. Grossberg

Traumatic brain injury (TBI) is a major health and economic burden. With increasing aging population, this issue is expected to continue to increase. Neurodegenerative disorders are more common with aging population in general regardless of history of TBI. Recent evidence continues to support a relation between a TBI and neurocognitive decline later in life (such as in athletes and military). This article summarizes the pathologic and clinical effects of TBI (regardless of severity) on the later development of dementia in individuals 65 years or older.

#### **Behavioral Problems and Dementia**

Ladislav Volicer

Behavioral problems decrease the quality of life of people with dementia and their care providers. Three main consequences of dementia are functional impairment and, in some cases, also mood disorders and psychosis. These consequences, alone or in combination, result in 3 main behavioral problems: apathy, agitation, and rejection of care/aggression. Nonpharmacologic management strategies include meaningful activities and individualized comfort care, for example, Namaste Care. If needed, pharmacologic management should concentrate on the treatment of main dementia consequences, especially depression, instead of treating secondary symptoms, for example, insomnia. Use of antipsychotics should be minimized, but antipsychotics may be necessary for augmentation of antidepressants. 591

603

....

vii

# **Cognitive Stimulation Therapy for Dementia**

# Harleen Rai, Lauren Yates, and Martin Orrell

Cognitive stimulation therapy has been proved to be both an effective and enjoyable psychological treatment for people with dementia. Over the past 20 years, cognitive stimulation therapy has grown from a national, localized treatment in the United Kingdom to a more global phenomenon currently being used in more than 25 countries around the world. Much has been accomplished during the cognitive stimulation therapy journey, and there is still much to be explored; it is a dynamic field. This article provides an overview of cognitive stimulation therapy by elaborating on its background, evidence, international work, and future directions.

# **Cognitive Frailty in Geriatrics**

# Hidenori Arai, Shosuke Satake, and Koichi Kozaki

Since the operational definition of "cognitive frailty" was proposed in 2013 by the International Academy of Nutrition and Aging and the International Association of Gerontology and Geriatrics, several studies have shown the prevalence and outcomes of cognitive frailty. The prevalence of cognitive frailty is quite low in the community settings when the original definition is applied but higher in clinical settings. In longitudinal studies, cognitive frailty is a risk for disability, poor quality of life, dementia, and death. For cognitive frailty, multimodal interventions would be effective to reduce the risk of adverse health outcomes in older people.

#### Nutrition and Alzheimer Disease

#### Shirley Steffany Muñoz Fernández and Sandra Maria Lima Ribeiro

We gathered some theoretical and practical concepts related to the importance of nutrition in the prevention and management of Alzheimer disease (AD). Besides playing a role in brain development and functioning, some nutrients exert special control in the development of AD, because of their participation in neurotransmitter synthesis, their modulation in epigenetics mechanisms, and their action as antioxidants. In addition, some nonnutrient food-derived substances have shown potential in the control of neuroinflammation and consequently in the prevention of AD. Finally, it is important to be aware of the nutritional status and food intake patterns of the patient with AD. 677