Treatable and Potentially Preventable Dementias

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Foreword

An accompaniment of increases in life expectancy is demographic aging and growth in the number of persons with dementia. Worldwide, it is estimated that there are 47 million persons with dementia, and by the year 2050 it is expected that this number will reach over 130 million. Dementia exacts a high financial and personal toll. In the United States, the yearly per person monetary cost attributable to dementia is in the range of US $41,000 to $56,000 with a total estimated annual cost of up to $215 billion. The expected rise in the number of persons in the community with cognitive impairment and dementia places substantial challenges on the delivery of medical and other services, and on family members who are tasked with caregiving responsibilities. As the "super-aging" phenomenon continues in developed countries, innovative public health policy will be needed to address housing, user-friendly community environments, and specially tailored community services to help improve the quality of life of our elderly and those with cognitive impairment and dementia.

Over time, a major shift in scientific thought is being embraced by some in relation to how we conceptualize dementias of later life, such as Alzheimer disease and vascular cognitive impairment, and a number of the leading causes of mortality. Thanks in large part to the insight and work of Vladimir Hachinski, we acknowledge shared common mechanistic pathways of inflammation and oxidative stress that link many of the leading causes of mortality including the dementias, the importance of lifestyle and traditional cardiovascular risks for many of these same diseases, the common finding of a vascular component in the major dementias, and the importance of screening for vascular risks and treating them. Thus, major dementias may be preventable.

Treatable and Potentially Preventable Dementias provides a refreshing viewpoint and paves the way for a major shift in how we think about dementias of later life and manage them. One will need to discard nosologic "bucket thinking" (i.e., neurodegenerative versus vascular classification buckets) and join those who have moved mechanistically upstream to the "brain-at-risk" stage to intervene. An excellent example of potential preventability of cognitive impairment is the Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER). This multidomain intervention, designed to maintain cognitive vitality, included at-risk elderly in the general population and resulted in hope to slow or prevent cognitive decline by vascular risk modification. *Treatable and Potentially Preventable Dementias* will challenge practitioners to approach dementias of later life in a different manner. The text comes on the heels of an Institute of Medicine (IOM) report on understanding progress and opportunities for action in cognitive aging to preserve brain health. The IOM report emphasizes physical activity and management of cardiovascular risks to help maintain cognitive vitality.

Treatable and Potentially Preventable Dementias, edited by Vladimir Hachinski, a visionary, is written by many well-known scientists in the field, and is timely and authoritative. It is a foremost textbook in the field as it explores means to maintain brain health. The book provides a practical format for transfer of information and is designed for those who deal with stroke, cognitive impairment, or both.

Philip B. Gorelick

Preface

Cerebrovascular disease and Alzheimer disease often occur together, but are studied apart. Stroke physicians have yet to embrace the fact that most cerebrovascular disease is asymptomatic, affecting not the body but the mind. Similarly, dementia doctors have yet to acknowledge that all major dementias have a vascular component, ranging from 61 percent in frontotemporal dementia to 80 percent in Alzheimer disease, which doubles the chances of silent brain pathology manifesting as dementia. This creates a wide gap between what we know and what is applied, offering a great opportunity to make a difference. This book aims to help fill the gap and realize the opportunity.

We also address the neglected topic of treatable components of dementia, enlarging the range of what physicians can do for their patients. Our approach is founded on a simple premise: of all the common mechanisms of dementia, the only treatable and preventable one is the vascular. The vascular cognitive impairment approach consists of identifying the vascular risk and protective factors, beginning with the asymptomatic "brain at risk" stage, through to the warning, and stroke stage and in individuals with cognitive impairment.

The book is aimed at neurologists, geriatricians, internists, psychiatrists, physiatrists, general practitioners, and all physicians dealing with stroke, dementia, and those at risk for both. We begin with a review of the basics, describe typical patients and presentations, and provide clear guidelines in diagnoses, management, and prevention. Extensive figures, tables, and diagrams complement the text and ease understanding. Although the book rests on an extensive scientific background, the main facts and conclusions are presented in a summarized, practical manner meant to be applied for the benefit of a growing number of patients.