

Preface

The intent of *Vascular Dementia: Cerebrovascular Mechanisms and Clinical Management* is to address the many recent advances in cardiovascular and cerebrovascular medicine and the impact of these on the lives of older adults by examining the state-of-the-art research on vascular dementia (VaD). A distinguishing feature of this work is its interdisciplinary nature. We have assembled work from contributors in multiple related fields, including both human and animal studies, in order to advance our collective understanding of VaD. A second distinguishing feature is that we have devoted one-third of our text to the examination of the interactions between VaD and Alzheimer's disease (AD). We believe that this combined approach will enhance patient care, as well as promote future research.

One may ask whether yet another summary of work in the field of VaD is necessary, given the number of review papers and recent texts devoted to the topic. However, it is important to note that research conducted over the recent "Decade of the Brain" has brought to light both consensus and controversy regarding the identity of VaD, and as a result the field is in constant flux. No better example of this could be scripted than the topics of discussion at a recent international conference on VaD. Attended by many prolific contributors to the field, the debates were charged and the range of discussion was provocative. In one open forum debate, the very existence of VaD as a construct was under question. Data from autopsy studies were presented which argued that pure VaD was such a rare phenomenon that the construct barely warranted clinical and research attention. By contrast, in a separate debate, the discussion focused on whether all cases of sporadic AD were manifestations of VaD. This bipolar conceptualization of VaD is the primary impetus behind our book.

In addition, though AD has been the central focus of research for several decades, the pendulum has begun to move towards a greater interest in cerebrovascular disease. This likely reflects the ever-growing population of older adults with cerebrovascular disease, as well as studies conducted in recent years describing important interactions between vascular disease and the expression of cognitive deficits in AD. There is now a growing consensus that clear, clinical, and pathological distinctions between these two conditions sometimes cannot be made in individual patients. We are certainly not the first group to describe this pending paradigm shift, as others (i.e., Roman, Hachinski, et al.) have offered this observation in public forum. However, it is from our own observations and empirical studies that we came to appreciate this conceptualization of dementia research, and eventually concluded that the time was right to synthesize the literature in an effort to move science forward.

Vascular Dementia: Cerebrovascular Mechanisms and Clinical Management is divided into six sections. Part I is focused on introducing VaD as a construct. Part II describes the basic mechanisms associated with aging that may have an important role in the development of VaD. Part III identifies the impact of VaD on cognitive status, psychiatric health, and the ability of patients to complete important activities of daily living. Part IV describes the application of neuroimaging methods to investigate VaD, with particular attention directed toward both functional and structural imaging methods. Part V is devoted to the topic of interactions

between VaD and AD. Finally, Part VI reviews pharmacological management of VaD. This section also addresses the impact of VaD on perceived quality of life of patients and caregiver burden, two rarely addressed issues in the scientific community.

We developed the book to be of interest to both clinicians and basic scientists. The topics covered are broad in nature and capture work from both the bench and the exam room. Chapters are also provided that address issues likely new to those who practice or conduct research within a circumscribed specialty area. The contributors have skillfully identified the important discoveries of the previous years, explored where this field of research is currently headed, and emphasized the critical topics that require a more intensive research focus. Overall, we hope the book will serve as a valuable reference for the current state of knowledge regarding VaD as well as a guide for future studies.

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