

## FOREWORD

Stroke continues to be a leading cause of mortality and morbidity worldwide. It affects nearly 795,000 patients in the United States, resulting in increased disability and health care costs, and resource utilization. Stroke prevention and treatment require a multidisciplinary team of experienced providers to ensure appropriate stroke prevention strategies are performed, acute therapies are provided to eligible patients, as well as rehabilitation and recovery strategies are implemented. Therefore, it is of paramount importance to focus on all these aspects of stroke care to improve patient outcomes.

Over the years, we have witnessed a significant transformation in acute stroke treatment. In 1995, the NINDS tPA trial showed a significant benefit of alteplase in improving the functional outcomes of patients with acute ischemic stroke and 20 years later, in 2015, several randomized controlled trials proved the benefit of mechanical thrombectomy using stent retrievers in patients with acute ischemic stroke due to a proximal large artery occlusion.

We have also seen significant progress in primary and secondary stroke prevention strategies. Numerous epidemiological studies have identified risk factors for stroke and national and international guidelines have provided recommendations on targets and treatment strategies to control these risk factors. This has translated into a lower stroke risk. In the field of stroke rehabilitation, ongoing research is testing the use of innovative techniques such as transcranial magnetic stimulation and stem cells to enhance stroke recovery.

This book touches upon several critical aspects of stroke care, such as diagnosis (neuroimaging in perinatal, pediatric, and adult populations), clinical care (approach to stroke in young adults, surgical treatments for stroke, and prevention of non-cardioembolic stroke), stroke related complications (memory impairment and unilateral spatial neglect), as well as stroke in the setting of the novel sars-cov-2 virus. As such, this book is of tremendous value to a wide audience seeking information on challenges in stroke care faced by clinical providers and highlights potential areas of research for stroke researchers.

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