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In Collaboration with
A. Berenstein

Neuro- vascular Neuro- ophthalmology

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To my wife, Geri, and my children, Dana and Matthew,
whose time I stole to write this book.

Preface

Neuro-ophthalmologic complications frequently result from disorders which alter the intracranial and intraorbital circulation. Due to widespread systems involved in sensory visual and cognitive visual functions and eye movements, visual disturbances are typically found in the common vascular disorders such as atherosclerosis, migraine, and aneurysms. Neuro-ophthalmologic dysfunction can occur as part of a larger syndrome or as the predominant clinical abnormality resulting from common or rare local or systemic vascular disorders. Many of the concepts concerning the diagnosis and treatment of neurovascular disorders have been facilitated by evolving techniques of neuroimaging, such as magnetic resonance imaging; methods for measuring systemic coagulation and inflammation; and improved capability to perform superselective catheterization of normal and abnormal blood vessels and vascular lesions. The neuro-ophthalmologic evaluation of clinical signs and symptoms often provides accurate localization and diagnosis of these lesions. Many of these clinical abnormalities, such as visual field defects and ocular misalignments, can be quantified and followed in order to assess either the natural history of the disorder or the effects of therapies.

No one medical speciality can effectively manage these neurovascular neuro-ophthalmologic disorders alone. The complexity of diagnosis and treatment planning requires a multidisciplinary team. This approach, which brings ophthalmologists, neurosurgeons, neurologists, and neuroradiologists together to confer in order to diagnose and treat these patients, has been pioneered at New York University Medical Center by Joseph Ransohoff, M.D. Dr. Ransohoff's guidance and inspiration has led to the formation of a NYU Neurovascular Service, which has evolved and developed new treatments for these often complex problems.

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M. J. KUPERSMITH
A. BERENSTEIN

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