Handbook on Neurovascular Ultrasound
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Preface

This volume of Frontiers of Neurology and Neuroscience is devoted to neurovascular ultrasound, which has shown fascinating developments in the last years. Written by international experts it reviews the present knowledge and presents research topics of diagnostic and therapeutic neurovascular ultrasound.

The first chapter gives an overview about physical and technical principles of ultrasound. Then, arterial wall imaging, endothelial function testing and modern assessment of atherosclerotic obstruction of the carotid and vertebrobasilar systems are described. Subsequently, typical ultrasound findings in cervical artery dissection, dural fistula, glomus tumor and vasculitis are reported. The next chapters describe diagnostic and therapeutic transcranial ultrasound and clinical applications of transcranial Doppler monitoring, and in the last chapter future developments are presented.

I hope that this volume will be useful in the daily work and stimulate sonographers to use this fascinating and essentially non-invasive technique, which allows the real-time assessment of the human cerebral vessels.

Ralf W. Baumgartner