Complications of Neuroendovascular Procedures and Bailout Techniques

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Preface

Although it is well known that complications during neurointerventional procedures happen even in the most experienced hands, conversations about these events are scant, as it may be hard to acknowledge them, or the memories may be uncomfortable and quickly buried. We would like to congratulate and thank all the authors for their contribution to this book, the purpose of which is to share the experience of experts in the field, as evidence-based medicine for many of these procedures is lacking. Ultimately the goal is to improve the outcomes of our patients and contribute to a rapidly growing field.

This book is intended for those performing neurointerventional procedures. It is detailed but concise, to be used as a quick reference for tips to help with prevention or early detection of complications and/or to be prepared to face them when they happen. Such knowledge will help in avoiding common mistakes when time is crucial.

It is comprehensive but not complete, as new devices are constantly being developed, and new neurointerventional techniques described. Given the dynamic nature of this subspecialty, it would be impossible for an updated edition of the book to cover the latest technology by the time of its publication. Devices may soon become obsolete and techniques abandoned. We emphasize, however, that basic safety principles will not change, and good planning and preparation will provide the operator with the required confidence to deal with adversity, even if complications are unforeseen. The keen operator will adjust and come up with new bailout techniques.

Our patient population is characterized by severe cerebral and cardiac vascular disease. Patients often present with a prior history of cerebrovascular events predisposing them to adverse events during the neurointerventional procedure. A significant proportion of periprocedural complications related to neurointerventional procedures can be mitigated by appropriate preprocedural planning and preparation. Therefore we have included a chapter that covers perioperative planning and a chapter that covers the neurocritical care aspects of these patients. Although they need only a small incision for access, neurointerventional procedures have become a potential source of exposure to cumulative radiation for both patients and operators. We therefore decided to include a radiation safety chapter. Not only is this a hot topic at present, but it is our commitment to provide safety knowledge for the short and long term, and to keep operators conscious of the potential dangers.

We hope this work helps to provide operators with insight into treatment conditions, so that proper judgment, planning, and preparation of a structured procedure becomes a comfortable journey, and dealing with common and uncommon scenarios will result in the desired clinical outcome for our patients.