
Mastering Endovascular Techniques

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Mastering Endovascular Techniques

Tips and Tricks in Endovascular Surgery

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To

Professor Brian Hopkinson

*pioneer in Endovascular Surgery, humanitarian, charismatic academic,
teacher, mentor, and friend.*

*Thank you Brian for supporting me on my first trainee post at the QMC in
Nottingham, UK, and beyond.*

George Geroulakos



European Union of Medical Specialists

SECTION AND BOARD OF VASCULAR SURGERY



Foreword

Porto, January 2024

According to the official UEMS definition, Vascular Surgery is the clinical and scientific discipline concerned with the diagnosis, treatment and prevention of diseases affecting arteries, veins and lymphatics excluding vessels of the brain and heart.

Nowadays Vascular Surgery is not just a mono-speciality but is also a key component of multi-specialist teams working in the treatment of various pathologies.

Proper diagnosis and treatment are, of course, dependent on adequate training of dedicated surgeons, and since vascular surgery is a speciality highly dependent on maximum aptitude, it is becoming abundantly clear that the practice of vascular surgery strictly requires a well-structured training programme, considering the inherent risks associated with vascular medicine malpractice.

The treatment of vascular diseases by minimally invasive techniques have undergone explosive advances in the last decade. This progress in understanding and available treatments has come with the cost of increasing complexity.

The Editors of this book are to be congratulated for bringing together many world leading experts in the endovascular techniques to produce a text which provides a cutting-edge view of the current state of the different tips and tricks in endovascular surgery. “Mastering Endovascular Techniques” will be an invaluable up-to-date source of information and a must-have volume for all specialists interested in this field and in particular for trainees. This book will help candidates to better prepare for the FEBVS examination and I gladly endorse this initiative.

Armando Mansueta
Secretary General
UEMS Section and Board of Vascular Surgery

Foreword

It is a distinct pleasure for me to write a foreword for this book that provides a description of and a tribute to the mastery of endovascular techniques in all aspects of vascular disease. It has been close to 30 years since I recognized the potential impact of endovascular treatments on the specialty of vascular surgery. At that time, I estimated that in 10–15 years 40–70% of the open operations we were then performing would be replaced or improved by endovascular procedures. Most others at the time thought it was a ridiculous prediction. Surprisingly however, I proved to be wrong on the low side, as more than 70% of today's vascular procedures are exclusively or partially performed via endovascular approaches. In addition, technology, research, evidence, and techniques are rapidly evolving and constantly improving. As a result, a dedicated Master's program in Endovascular Techniques and a dedicated "Master of Endovascular Techniques" volume are the natural consequence of the "endovascular revolution" or this evolution toward a much-needed focus on endovascular education.

This book represents a nearly all-inclusive treatise for the initiation and development of endovascular skills and techniques. It also addresses cutting-edge innovation in vascular territories previously considered outside the realm of endovascular treatment (e.g., the aortic arch, pedal arteries, deep veins, and pulmonary arteries). Importantly, it also addresses the medical judgment issues necessary in the application or restriction of the techniques described and illustrated. The target readership includes all vascular surgeons, angiologists, interventional radiologists, and cardiologists and all their vascular trainees who need to master vascular interventions. Other specialists with an interest in endovascular treatments will also find this book useful.

The chapter authors have been carefully selected to represent a roster of multidisciplinary innovative thought leaders in the endovascular field. Acknowledging the role of multidisciplinary care and that not one specialty is best in endovascular skills, the editors have a reasonably balanced representation of an international faculty of vascular surgeons, interventional radiologists, interventional cardiologists, and neuro-interventionalists.

The future of endovascular treatments is bright, and they will certainly evolve even more in the years and decades to come. Evolution never stops. Darwin wrote, "I have called this principle, by which each slight variation, if useful, is preserved, by the term Natural Selection." Natural selection in techniques, devices, and methodologies will continue to apply ensuring that our patients receive the best possible treatment for their vascular conditions. This is progress and this is what this book is all about. It is a testament to the ingenuity and constant pursuit of excellence on the part of care givers and their engineering and industry colleagues everywhere.

I congratulate the editors of this volume for their effort. I am sure that this book will inspire and guide current practitioners as well as the next generation of endovascular specialists.

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Frank J. Veith

Preface

This book is a unique collection of real-life case scenarios that highlight the diversity of problems and solutions that may be encountered in endovascular surgery.

The ambition of this book is to provide the reader with a clinical, scientific, and pragmatic approach to endovascular techniques. It is specifically aimed at vascular surgery and interventional radiology residents who wish to take the European Vascular Surgery Certification Examination, the American Boards in Vascular Surgery, the European Board of Interventional Radiology examination, and the national training examinations. It will also be of great interest to established surgeons and interventional radiologists who will be able to find in it an update of scientific data and help in their daily practices.

The different chapters have been organized according to the pathology and locations of arterial and venous cardiovascular diseases and the approaches for fistulas.

Each chapter follows a uniform organizational chart, including: (1) the presentation of a clinical case on which the reader can reflect on the diagnosis and the course of action to be taken, (2) a review of the literature oriented towards the clinical case and describing the different explorations, therapeutic choices, and their results, (3) the authors' choices are then reported and accompanied by justification of their choice and the result, and (4) finally, the "toolbox" describes the materials used by the authors to carry out the acts described. Extensive references are provided to reassure the reader that the management follows the principles of evidence-based medicine.

Currently the evolution of technology and medical equipment, the publication of innovative research in medical journals and its rapid dissemination by the Internet, the participation in numerous international congresses bringing together recognized experts, and the webinars organized by vascular societies or by public and private institutions fulfill the need for continuous medical education. We believe that in this background, traditional textbook teaching remains relevant. Our book accomplishes our goals by summarizing in a single volume the entire vascular pathology that can be managed by endovascular techniques. No doubt it will feature prominently in your office and facilitate your practice.

We are grateful to our international faculty of authors who have contributed generously their knowledge and time to this project and our publisher Springer for advice and support.

These recommendations from the military strategist SUN TZU (around 500 years BC) should be kept in mind for the successful strategy of an endovascular intervention.

"The General who wins his battles spends a lot of time preparing for them. Whoever loses them is in too much of a hurry. Long deliberations lead to victory, haste to defeat, leave without thinking and you will be crushed." These recommendations from the military strategist Sun Tzu (around 500 years BC) should be kept in mind for the successful strategy of an endovascular intervention.

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