Core Topics in Vascular Anaesthesia
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Preface

Vascular surgery and anaesthesia have undergone great changes during the past decade so that this book is very different from previous books describing the anaesthetic and perioperative management of vascular surgical patients. Endovascular repair has been widely adopted for the elective repair of abdominal aortic aneurysms and is increasingly being used in the treatment of ruptured aneurysms. Advanced fenestrated and branched stent grafts have been introduced for the treatment of suprarenal and thoracoabdominal aneurysms, and ‘hybrid’ repair – the combination of endovascular and open surgery – now offers another alternative to the treatment of complex aneurysms. However, all of these procedures are accompanied by their own risks for the patient and challenges for the surgeon and anaesthetist. The number of elderly patients with comorbidities presenting for vascular surgery and their expectations of what medical care can provide have increased and many patients continue to require open surgery. This book provides extensive coverage of the current perioperative management of both endovascular and open vascular surgical procedures including aneurysm surgery, carotid surgery and revascularisation and amputation for limb ischaemia.

Patient assessment before surgery, and monitoring during surgery, have advanced greatly in recent years. Cardiopulmonary exercise testing (CPET) has become widely used, often as part of anaesthetist-led pre-assessment clinics which aim to help the surgeon and patient decide whether the benefits of intervention outweigh the risks. The chapter on preoperative risk assessment gives a clear description of the role of CPET in patients being considered for surgery. Advances in intraoperative monitoring that are discussed include the use of transoesophageal echocardiography and minimally invasive cardiac output monitoring.

Our understanding of normal haemostasis and how it is disturbed during surgery has also advanced greatly, while new anticoagulant drugs have been introduced and the risks of blood transfusion have become more widely appreciated. The causes, diagnosis and treatment of coagulation abnormalities in vascular surgery patients are described including the value of point-of-care testing of haemostasis. Modern transfusion practice and blood conservation are discussed as is the controversial area of intravenous fluid therapy during surgery.

Much has been published in recent years on reducing the risk of perioperative cardiac complications and on the benefits and risks of drug therapy including beta-blockers, coronary artery stents and coronary artery bypass grafts before vascular surgery. However, this also remains an area of controversy. The chapter on reducing perioperative cardiac risk provides a clear review of the literature and recommendations for practice.

The contributing authors are acknowledged experts in their fields and we would like to thank them for the time and effort that they have put into producing contributions that are not only informative but also interesting and stimulating. And, finally, we would like to thank our publishers for their support and patience.