

# Preface

Venous thromboembolism in any of its kinds of presentation, pulmonary embolism and deep vein thrombosis, represents a major public health problem, affecting hundreds of thousands of people each year. Patients undergoing major orthopedic surgery have a particularly high risk for developing venous thromboembolism, and the need for thromboprophylaxis, most commonly pharmacological prophylaxis, has become standard of care for many years.

In this field, the rationale for thromboprophylaxis has been widely demonstrated, as seen in the decrease of venographic and symptomatic deep vein thrombosis and symptomatic, asymptomatic, and fatal pulmonary embolism. But, due to the natural history of venous thromboembolism in patients undergoing major orthopedic surgery (mainly joint arthroplasty or hip fracture surgery), venous thromboembolism is still one of the most common causes for readmission to the hospital after surgery. Furthermore, venous thromboembolism continues to be reported in too much patients within the 2–3 months after the patient discharge, being most of them symptomatic.

From these preliminary statements, the question could be why venous thromboembolism is so prevalent between patients on orthopedic surgery although everybody knows that its prevention is one of the cornerstones of the care of these patients. The answer is multiple, including the difficulty to include the prevention protocols into the routine process of care, the need for improving the effectiveness of some protocols or drugs and the controversies in other ones, the historical lack of collaboration between all clinicians involved in the care of patients, the fear to the related bleeding of the administration of more effective drugs and protocols, and the doubts for thromboprophylaxis in some low- or moderate-risk procedures.

There are several guidelines available for the use of thromboprophylaxis in orthopedics published as international consensus by scientific societies (as the American College of Chest Physicians, ACCP, which updates its recommendations every 4 years) or under the support of some government (such as the National Institute of Clinical Excellence (NICE) and the Scottish Intercollegiate Guidelines Network (SIGN)) or by teams of expert authors in peer-reviewed prestigious journals. Existing guidelines should be often updated because new evidence emerges, new drugs demand a place in the protocols (as new oral anticoagulants), new

effective protocols demonstrate their ability for the incorporation in the existing rules (as the extension of prophylaxis in hip arthroplasty), or the consensus moves to change the interpretation of previous studies. In certain sense, guidelines need to be updated to remain alive.

Is it necessary to review in a book all these questions to improve the application of thromboprophylaxis with the final objective to be better in this field? Probably, the book you have in your hands has been born with this high objective, with a panel of expert authors from some different medical specialities which gives to the chapters a multidisciplinary approach.

The book reviews the main topics in thromboprophylaxis around orthopedic surgery, from a general scope of the problems with the disease highlighting them in orthopedics to the new specific protocols involving, for example, new oral anticoagulants. The prevalence of the venous thromboembolism in each procedure (from “easy” to “hard” surgeries, with different rates of related thrombosis) and the risk factors to bear in mind in each one (related and nonrelated with the orthopedic procedure) are also revised. A chapter focuses on the diagnosis and treatment of venous thromboembolism, which is commonly “forgotten” in many books addressed to orthopedic surgeons and anesthesiologists. The methods for thromboprophylaxis have three specific chapters: the most common drugs used and recommended when pharmacological prophylaxis is needed, new drugs which are arising day by day and which management will be of main importance in a close near future, and mechanical methods, recommended both as additional when possible and for sole indications when the risk of bleeding could move us to minimize the real risk of thrombosis. Anesthetic implications for thromboprophylaxis and, also, main implications of the application of antithrombotic protocols in the anesthetic practice are covered by another chapter. In our opinion, it was very important to divide the orthopedic procedures according to their own thrombotic risk, so having their own protocols for thromboprophylaxis, high-risk, day surgery procedures, and “special” surgical procedures are included in three different chapters, from three different authors with complementary views. Finally, in the last chapter, we review the problems involving the perioperative management of anti-aggregated and anticoagulated patients, with a special part in hip fracture surgery.

So, a wide scope of the topic was made with a great effort from all the authors and the invaluable support from Springer. I want to thank all of them for their confidence, aid, hard work, time (much time), exciting recommendations, and final result.

We hope this book will aid all of us in our daily practice, and, perhaps, the patients could benefit of our wish as doctors: to give them the best to improve their health as much as possible.

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