Preface

It is now well established that pathologic thrombosis plays a central role in the pathogenesis of acute coronary syndromes (ACS), ischemic complications of percutaneous coronary intervention (PCI), venous thromboembolic disease, and embolic complications of arrhythmias and various cardiomyopathies. Born out of the understanding of the integral role of thrombus formation across the spectrum of cardiovascular diseases is the burgeoning field of antithrombotic therapies. Rigorous investigation of individual or various combinations of the available antithrombotic regimens including fibrinolytic agents, antiplatelet therapies (aspirin, the thienopyridines, glycoprotein IIb/IIIa inhibitors), and anticoagulant therapies (unfractionated heparin, low-molecular-weight heparins, direct thrombin inhibitors, and synthetic factor X inhibitors) has lead to a marked improvement in outcomes for patients with a thrombotic event. Nevertheless, a substantial morbidity and mortality remains associated with these thrombotic events. This realization has fueled the rapid expansion of the available armamentarium to combat pathologic thrombosis.

Antithrombotic Drug Therapy in Cardiovascular Disease will serve as a resource for individuals charged with caring for patients across the spectrum of cardiovascular diseases. This text is a comprehensive, up-to-date overview of the pathophysiology, including the genetics, of arterial and venous thrombosis followed by detailed overviews of the use of antithrombotic therapies for managing patients with various thrombotic disorders. Antithrombotic Drug Therapy in Cardiovascular Disease, a compilation of work by thought leaders in the field, is broken down into seven parts which will provide rapid access to various therapies used for each of the major classes of thrombotic disorders commonly encountered by clinicians.

The first part of Antithrombotic Drug Therapy in Cardiovascular Disease is comprised of four chapters that will provide a comprehensive overview of the basic principles of thrombosis. Chapters 1 and 2 review the key components of thrombosis, the platelet and the coagulation cascade, respectively. Chapter 3 then develops the link between inflammation, a process demonstrated to be involved in atherogenesis, and thrombosis. Chapter 4 then provides a comprehensive view of the genetics of thrombosis.

Parts II–IV then provide data and clinical recommendations for the use of antithrombotic therapies for common atherothrombotic disorders including stable coronary artery disease (Part II, Chaps. 5 and 6), non-ST-segment elevation (NSTEMI) ACS (Part III, Chaps. 7–10), and ST-segment elevation myocardial infarction (STEMI) (Part IV, Chaps. 11–13).

Part V provides data and recommendation for the use of various antithrombotic therapies as adjuncts to interventional procedures. Chapter 14 focuses on the use of antithrombotic therapies for PCI, while Chapter 15’s focus is on carotid and peripheral interventions. Chapter 16 will provide a detailed review of monitoring of the various antithrombotic therapies in the peri-interventional period.

Part VI focuses on venous thromboembolic diseases. This part of Antithrombotic Drug Therapy in Cardiovascular Disease will provide the data necessary to manage patients with deep vein thrombosis (DVT) and pulmonary embolism (PE) in an evidence-based fashion. Chapter 17 focuses on prophylaxis
and treatment for patients with DVT/PE. Chapter 18 synthesizes the data on the use of fibrinolysis for PE. Chapter 19 completes the section with a detailed, yet concise overview of the recommended durations of therapy for patients with venous thromboembolic diseases.

The final part of Antithrombotic Drug Therapy in Cardiovascular Disease provides detailed overviews of the use of antithrombotic therapies in several clinical conditions commonly encountered in the field of cardiology including atrial fibrillation (Chap. 20), valvular heart disease (Chap. 21), and cardiomyopathy (Chap. 22). Chapter 23 focuses on the pathophysiology and management of heparin-induced thrombocytopenia. Finally, an analysis of the increasingly encountered scenario of aspirin and clopidogrel resistance will be addressed in Chapter 24.

In summary, this textbook will provide detailed, up-to-date data regarding the use of the currently available antithrombotic therapies for commonly encountered clinical situations in cardiology.

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