Book review

Antiplatelet and anticoagulation therapy

Edited by Albert Ferro & David E. Garcia. Published by Springer, New York. 2013. 247 pp, £27.99. ISBN 978-1-4471-4296-6; ISBN 978-1-4471-4297-3 (eBook)

As a clinician, I found that the book edited by Albert Ferro and David A. Garcia provided not only all the updated information necessary to guide therapeutic options but also a deep and comprehensive insight into the mechanisms of the action of antiplatelet and anticoagulant drugs along with an open discussion on the main controversy in the field of antithrombotic therapy. All these points have been addressed in five chapters by recognized experts in their field, with an updated, thorough and extremely detailed analysis of the available evidence.

The book is timely, because we have new therapeutic opportunities with novel antiplatelet and anticoagulation agents that promise improvements in efficacy and tolerability; promises and also uncertainties, when these drugs are used on a large scale in the real world. In addition, we still have unanswered questions concerning the efficacy and safety of drugs such as coumarins, heparins, aspirin and the ADP receptor P2Y₁₂ inhibitors thienopyridines, drugs that have for decades been the only therapeutic options.

The book opens with an overview of the mechanisms of platelet activation and its modulation, followed by a comprehensive description of kinetics, mechanisms of action and proofs of efficacy of current and novel inhibitors of platelet function. The so-called resistance to the antiplatelet activity of aspirin and P2Y₁₂ inhibitors is dissected in the second chapter, with an open-minded view of the present scientific discussion. Variable activity, as assessed in platelet functional tests, has been advocated as evidence for failure in treatment and cause of an excess in cardiovascular events. Differences in bioavailability, which may be due to genetic polymorphisms in metabolizing enzymes, are a likely explanation. However, whether genetic testing or the analysis of platelet function is necessary for monitoring prior to during treatment has yet to be proved.

The chapter dedicated to anticoagulant agents mirrors in its structure that on antiplatelet drugs, containing an exhaustive description of the kinetics and mechanisms of the action of coumarins, heparins and the new direct thrombin and Factor Xa inhibitors, accompanied by data concerning appropriate doses and evidence of efficacy in the clinical setting. The strength of new anticoagulant agents is pointed out, because they have more predictable pharmacokinetics and direct inhibitory

effects on critical steps in the coagulation cascade. At the same time, issues such as dosing in patients with renal failure, the need for monitoring and optimization of the antithrombotic activity vs. the risk of haemorrhage are clearly discussed.

The second part of the book contains the two chapters dedicated to antithrombotic prevention and therapy in cardiovascular and thromboembolic diseases. The description of the recommended prevention and treatment for acute coronary syndrome and stroke is synthetic, but extremely accurate. The same can be said for the chapter dedicated to deep vein thrombosis, pulmonary embolism and atrial fibrillation. The dilemmas that we face concerning the criteria for risk assessment in individual patients, appropriate choice and combination of antithrombotic agents, duration and intensity of treatment, as well as monitoring and safety issues are carefully and convincingly discussed, with a rational interpretation of the information derived from clinical trials and updated guidelines.

The book is written in clear language, and the reader is also aided by a large number of figures, tables and diagrams summarizing all the major notions. It is intended as a reference guide to be used by cardiovascular professionals in daily clinical practice, but can be seen also as a systematic essay that allows the reader to be guided, step by step, to a thorough comprehension of clinical pharmacology of antithrombotic agents and their use in the treatment of cardiovascular and thromboembolic diseases.

Competing Interests

The author has completed the Unified Competing Interest form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and declares: P.M. had no support from any organization for the submitted work; no financial relationships with any organizations that might have an interest in the submitted work in the previous 3 years; no other relationships or activities that could appear to have influenced the submitted work.

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