Cardio-Renal Clinical Challenges
Historically, cardiology and renal medicine have been regarded as separate entities and managed by independent specialist teams as a result. This new book is timely as it has become clear that an increasing number of patients are found to suffer from diseases that affect both systems. This does not occur simply by chance. Cardiovascular and renal diseases share many common risk factors and co-morbidities such as hypertension, diabetes and inflammation. These become more prevalent and cause disease progression with increasing age. Cardiovascular risk factors, together with the metabolic consequences of renal impairment, have a complex and very powerful adverse impact on the arterial wall. These effects include early arterial stiffening with medial calcification and internal changes of atherosclerosis. As a result, many patients with chronic kidney disease (CKD) now die of cardiovascular complications. Similarly, the outlook for patients who develop cardiac events, such as myocardial infarction, is much worse if they also have renal impairment. These patients represent major clinical challenges for their medical teams, for both prevention and treatment. Furthermore, there is currently little “evidence-based” medicine to guide practitioners. *Cardio-Renal Challenges*, edited by Prof. Goldsmith, brings together in a single text the views of experts on the management of a range of these problems which are frequently encountered in clinical practice. Several chapters in the first part focus on the metabolic consequences of CKD, including FGF23, calcium and phosphate, and vitamin D metabolism. Contributors also address the management of cardiovascular complication in CKD patients such as arrhythmia, sudden death, heart failure and anticoagulation issues. The second part moves on to focus on patients who present with heart disease, but who also have CKD whose management is equally challenging. Chapters in this part cover topics such as systemic and pulmonary hypertension, and renin angiotensin system (RAS) blockade. The third and final part of the book is thought provoking and challenges the reader to consider new approaches that will be required in the future for prevention, risk stratification and treatment of complex long-term diseases. The editor and the various authors should be congratulated for delivering an integrated body of work which is highly relevant to a broad medical audience, and which aims to improve patient care. It should also stimulate thinking that is not “silo based” and encourage new research from collaboration between experts from both the cardiac and renal communities.

London, UK

John Deanfield
Preface

Population ageing together with the prolonged survival of cohorts of chronically, co-morbidly challenged patients as a result of better medical and surgical treatments has meant that the two previously silo’d disciplines of cardiology and kidney medicine now find more and more of their time being spent in fruitful collaboration managing complex patients who previously would have perished hastily from their cardiac and renal problems.

Cardiorenal insufficiency is more than just an association of cardiac and renal disease, as both share many of the factors causing either and hastening disease progression of the other, such as vascular dysfunction, atherosclerotic vascular damage, inflammation, hypertension and heart failure, often worsened by physical inactivity, obesity and diabetes mellitus. Unfortunately, these challenging patients are typically not the ones we enter into the big complex randomised controlled trials of interventions, and so the evidence-base for the decisions we need to make is much too slender for comfort. In this setting, we have to rely on opinion and consensus as much as we do on high-grade evidence.

The idea of this book was to help synthesise recent knowledge and information with direct clinical relevance, comparing, contrasting and collating information which previously would have been restricted to only one of the two disciplines. There are two nice examples – the first is the vexed issue of whether or not a patient with advanced CKD and who has atrial fibrillation should be treated with warfarin. There are no trials featuring this cohort of patients. Another example is the conditions we know as “fluid” or “volume” excess. Quite what this represents, and how best to assess this in terms of the “heart” and the “kidney” components, is still remarkably tricky to achieve a consensus on. Our chapter authors in this book make some important and highly pertinent observations on both of these tricky clinical areas.

We have divided the book into three sections: one dealing with cardiac manifestations and challenges in kidney patients, another on kidney manifestations in cardiac patients, and the third with new healthcare approaches and ideas for the second decade of the twenty-first century.

In the end we tried to choose issues and concerns of direct relevance to practicing cardiologists, nephrologists, pharmacologists and internists – these are the people above all who are faced with a very unwell cohort of patients, and also with an incomplete if not contradictory evidence-framework upon which to base therapeutic clinical decisions.

We hope you will find the book both stimulating and useful!

London, UK

David Goldsmith
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