Adel E. Berbari Giuseppe Mancia *Editors* 

# **Cardiorenal Syndrome**



# Mechanisms, Risk and Treatment



Cardiorenal Syndrome

Adel E. Berbari · Giuseppe Mancia (Eds.)

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Mechanisms, Risk and Treatment



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### Preface

It has long been known that a close relationship exists between chronic kidney disease (CKD) and cardiovascular disease (CVD), which has led to the adoption of the terminology "cardiorenal syndrome". In recent years, the relationship between CKD and CVD has been shown to be even closer because of the demonstration that renal function acts as a sensor of global (or total) CVD risk. It is thus now well documented that from the initial to the advanced stages of renal disease, the cardiovascular system is involved. Primary disorders of CKD are associated with an enhanced progression of CVD, even when renal function is only mildly impaired. A significant number of patients with CKD die of CVD complications before they progress to end-stage renal failure. This excessive CVD risk is attributed to a high burden of both conventional and kidney (uremia)-related factors as well as to a wide spectrum of clinicopathologic entities. Conversely, primary CV disorders can initiate and perpetuate functional renal impairment and progressive CKD. Overall, the presence of renal dysfunction is an ominous sign of poor outcome in patients who develop ischaemic syndromes or undergo any type of surgical intervention.

Although a large number of clinical studies and reviews has addressed the cardiorenal syndrome, the editors deemed it appropriate to provide readers with a book that comprehensively addresses all the complex interactive aspects of the cardiorenal relationship, i.e. from pathophysiology to epidemiology, diagnosis and treatment. We believe that understanding the mechanisms linking CKD and CVD is essential also to have more clear perspectives on the future therapeutic approaches to this deadly association.

We express our deep gratitude and warm appreciation to the experts who kindly contributed to the various chapters of this book.

Beirut-Milan, June 2010

Adel E. Berbari Giuseppe Mancia

# Contents

Sect	tion I	Chronic Kidney Disease and Cardiovascular Disease Interrelationships	1
1	Links h Disease Adel E.	etween Chronic Kidney Disease and Cardiovascular A Bidirectional Relationship Berbari	3
2	<b>Cardio</b> Moham	renal versus Renocardiac Syndrome mad Sarraf, Amirali Masoumi, Robert W. Schrier	15
Sect	tion II	Crosstalk between the Cardiovascular System and the Kidney	35
3	Non-Pr Albert l	ressure-Related Deleterious Effects of Excessive Dietary Sodium Mimran	37
4	Regula in Heal in the I Marta F Raul R. Sergio I	tion of Vascular and Renal Cells by Common Mediators th and Disease: Role of the Renin–Angiotensin System Pathophysiology of Hypertension and Cardiovascular Disease Ruiz-Ortega, Raquel Rodrigues-Díez, Sandra Rayego, Rodrigues-Díez, Carolina Lavoz, Esther Civantos, Gisselle Carvajal, Mezzano, Alberto Ortiz, Jesus Egido	49
Sect	tion III	Chronic Kidney Disease as a Risk for Cardiovascular Disease	65
5	Cardio Josè A.	renal Continuum García-Donaire, Luis M. Ruilope	67

6	Definition and Classification of Stages of Chronic Kidney Disease:Screening for Chronic Kidney DiseaseTariq Shafi, Joseph Coresh	81
7	Cardiovascular Disease Risk Factors in Chronic Kidney Disease: Traditional, Nontraditional, and Uremia-related Threats Juan J. Carrero, Peter Stenvinkel	91
8	Increased Levels of Urinary Albumin: A Cardiovascular Risk Factor and a Target for Treatment Dick de Zeeuw, Hiddo J. Lambers Heerspink	105
9	<b>Microalbuminuria and Kidney Disease: An Evidence-based Perspective</b> Rigas G. Kalaitzidis, Pranav Dalal, George L. Bakris	117
10	Cardiometabolic Syndrome Manjula Kurella Tamura, Tara I. Chang	131
11	Diabetes Mellitus: Is the Presence of Nephropathy Important as a Cardiovascular Risk Factor for Cardiorenal Syndrome? Hussein H. Karnib, Fuad N. Ziyadeh	145
Sect	ion IV Spectrum of Cardiovascular Disease in Chronic Kidney Disease	159
Sect	ion IV       Spectrum of Cardiovascular Disease in Chronic Kidney Disease         Cardiovascular Disease:       Coronary Artery Disease and Coronary Artery Calcification         Srinivasan Beddhu	159 171
Sect 12 13	ion IV       Spectrum of Cardiovascular Disease in Chronic Kidney Disease         Cardiovascular Disease:       Coronary Artery Disease and Coronary Artery Calcification         Srinivasan Beddhu       Cardiomyopathy in Chronic Kidney Disease and in End-stage Renal Disease Frank A. Benedetto, Francesco Perticone, Carmine Zoccali	159 171 175
Sect 12 13 14	ion IVSpectrum of Cardiovascular Disease in Chronic Kidney DiseaseCardiovascular Disease:Coronary Artery Disease and Coronary Artery CalcificationSrinivasan BeddhuCardiomyopathy in Chronic Kidney Disease and in End-stage Renal Disease Frank A. Benedetto, Francesco Perticone, Carmine ZoccaliPathophysiological Mechanisms and Prognostic Significance of Renal Functional Impairment in Cardiac Patients Massimo Volpe, Marco Testa	<ol> <li>159</li> <li>171</li> <li>175</li> <li>189</li> </ol>
Sect 12 13 14 15	ion IVSpectrum of Cardiovascular Disease in Chronic Kidney DiseaseCardiovascular Disease:Coronary Artery Disease and Coronary Artery CalcificationSrinivasan BeddhuCardiomyopathy in Chronic Kidney Disease and in End-stage Renal Disease Frank A. Benedetto, Francesco Perticone, Carmine ZoccaliPathophysiological Mechanisms and Prognostic Significance of Renal Functional Impairment in Cardiac Patients Massimo Volpe, Marco TestaStroke. Mario F. Rubin, Raymond R. Townsend	<ol> <li>159</li> <li>171</li> <li>175</li> <li>189</li> <li>205</li> </ol>
Sect 12 13 14 15 Sect	ion IVSpectrum of Cardiovascular Disease in Chronic Kidney DiseaseCardiovascular Disease:Coronary Artery Disease and Coronary Artery Calcification Srinivasan BeddhuCardiomyopathy in Chronic Kidney Disease and in End-stage Renal Disease Frank A. Benedetto, Francesco Perticone, Carmine ZoccaliPathophysiological Mechanisms and Prognostic Significance of Renal Functional Impairment in Cardiac Patients Massimo Volpe, Marco TestaStroke. Mario F. Rubin, Raymond R. Townsendion VMechanisms of Cardiovascular Complications	<ol> <li>159</li> <li>171</li> <li>175</li> <li>189</li> <li>205</li> <li>217</li> </ol>

17	Endothelial Dysfunction, Nitric Oxide Bioavailability, and Asymmetric Dimethyl Arginine Carmine Zoccali	235
18	<b>Pathophysiologic Link between Atherosclerosis and Nephrosclerosis</b> Elena Kaschina, Thomas Unger	245
19	Aortic Stiffness, Kidney Disease, and Renal Transplantation Sola A. Bahous, Michael Delahousse, Michel E. Safar	255
20	<b>Disturbed Calcium–Phosphorus Metabolism/Arterial Calcifications:</b> <b>Consequences on Cardiovascular Function and Clinical Outcome</b> Gérard M. London, Bruno Pannier, Sylvain J. Marchais	269
21	Role of Neurohormonal Activation in the Pathogenesis of Cardiovascular Complications in Chronic Kidney Disease Andrea Stella, Giovanna Castoldi	279
22	Impaired Autonomic Blood Pressure and Blood Volume Control inChronic Renal FailureGuido Grassi, Raffaella Dell'Oro, Fosca Quarti-Trevano, Giuseppe Mancia	291
23	<b>Role of Novel Biomarkers in Chronic Kidney Disease: Urotensin II</b> Francesca Mallamaci, Daniela Leonardis, Maria Borrajo	299
24	<b>Role of Novel Biomarkers in Chronic Kidney Disease: Renalase</b>	309
Sect	ion VI Regression/Progression of Chronic Kidney Disease	317
25	Diabetic Kidney Disease Josep Redon	319
26	Nondiabetic Kidney Disease Paolo Cravedi, Piero Ruggenenti, Giuseppe Remuzzi	341
Sect	ion VII Therapeutic Modalities	357
27	Approaches in the Management of Patients with Chronic Kidney Disease and Cardiovascular Disease Eberhard Ritz	359

28	Trends in the Management of Cardiac Patients with Renal		
	Functional Impairment	371	
	Edward A. Ross, Amir Kazory		
Sub	ject Index	387	

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