

PREFACE

Secondary Hypertension: Clinical Presentation, Diagnosis, and Treatment reviews the essential clinical, diagnostic, and treatment aspects of secondary hypertension. The need for such a book is great as knowledge in this field has progressed rapidly and new and unique forms of secondary hypertension are being described on a regular basis. However, such traditional disorders as renal artery stenosis, aldosteronism, and pheochromocytoma have remained major considerations when secondary hypertension is suspected and still occupy a significant part of our time as specialists in hypertension. The discovery of secondary hypertension is important; it provides a potential cure for the patient, but at other times provides physiological information on which the clinician can base drug therapy. This book, therefore, covers in detail the forms of secondary hypertension likely to be considered in persons with suggestive clinical features or resistant hypertension.

Our knowledge regarding most forms of secondary hypertension has grown significantly and our conventional impressions of some of these have certainly changed. The availability of magnetic resonance imaging has helped us in the evaluation of coarctation of the aorta and renal artery stenosis. Reliable biochemical tests allow us to screen relatively easily for a variety of endocrine causes of hypertension. In terms of treatment, we have a vast array of drugs available to treat hypertension, but also interventional therapy directed at the form of secondary hypertension, e.g., surgery or anti-aldosterone drugs. Finally, it is becoming clear that some disorders contribute more often to hypertension than previously believed; this is the case with obstructive sleep apnea and possibly primary aldosteronism. There is a need for a book collating and updating knowledge in this area; the causes and management of secondary hypertension span several traditional disciplines, including internal medicine, nephrology, cardiovascular medicine, endocrinology, and pulmonology. Each chapter gives a concise approach to its topic and therefore can be read on its own.

Chapter 1 discusses the most common reason that an evaluation for secondary hypertension is performed: refractory hypertension. With today's lower goals for blood pressure, we may need to re-examine how we define refractory hypertension. In Chapter 2, Dr. Ehud Grossman and Dr. Franz Messerli consider the exogenous causes of hypertension. They

review old and new culprit substances that raise blood pressure and discuss possible mechanisms for their undesirable actions.

Part II reviews renal disease and secondary hypertension. In Chapter 3, Dr. Robert Toto tackles the area of renal disease and hypertension. Hypertension is almost universally found in the presence of renal disease and may have a role in the progression of intrinsic renal disorders. Dr. Toto reviews current approaches to evaluating and managing hypertension in this setting. Dr. Sumeska Thavarajah and Dr. William White (Chapter 4) provide a comprehensive account of diagnostic strategies for renovascular hypertension and renal artery stenosis. Chapter 5 is devoted to the role of interventional therapies such as balloon angioplasty and stenting in the management of renovascular hypertension. In Chapter 6, Dr. Vincent Canzanella reviews important information regarding the medical treatment of renovascular hypertension and emphasizes that the majority of patients can be controlled medically. A debate continues in the literature about the relative merits of medical vs interventional treatments for renovascular hypertension. Finally, secondary hypertension caused by excessive renin production, as in renin-producing tumors, is reviewed by Dr. Timothy Reudelhuber in Chapter 7.

Part III covers adrenal medullary and cortical causes of secondary hypertension. Dr. William Young (Chapter 8) reviews expertly the diagnostic strategy for primary aldosteronism, and Dr. Emmanuel Bravo (Chapter 9) reviews the treatment aspects of primary aldosteronism. They emphasize the advantages of ambulatory screening of hypertensive patients without hypokalemia as well as the fact that most patients with bilateral adrenal hyperplasia can enjoy excellent blood pressure control with medical treatment. The laparoscopic surgical removal of aldosteronomas is detailed by Dr. Mihir Desai and Dr. Inderbir Gill (Chapter 10) so as to make it understandable to both physicians and surgeons. In Chapter 11, Dr. William Kendrick, Dr. Jean-Michel Achard, and Dr. David Warnock then review the other forms of low-renin hypertension, including monogenic forms. They emphasize the fact that all these disorders cause hypertension through sodium retention. The last chapter in this section, by Dr. Judith Whitworth, Dr. George Mangos, and Dr. John Kelly (Chapter 12), reviews the mechanisms, clinical evaluation, and treatment of hypertension from Cushing's syndrome, resulting from a variety of pathological entities.

Part IV on adrenal medulla and hypertension is given detailed consideration because pheochromocytoma can be a malignant condition. This section not only considers pheochromocytoma, but other disorders mimicking it. In Chapter 13, Dr. Emmanuel Bravo leads the reader through

a superlative account of when to suspect and how to screen for pheochromocytoma. Dr. Carl Malchoff, Dr. Dougald MacGillivray, and Dr. Steven Shichman (Chapter 14) review the current management of pheochromocytoma, including preoperative management and care of advanced cases. In Chapter 15, Dr. Otto Kuchel reviews a number of conditions that may mimic pheochromocytoma, so-called pseudo-pheochromocytoma, and also reviews the differentiating features of these disorders.

In their chapter, Dr. Empar Lurbe and Dr. Joseph Redon (Chapter 16) provide an excellent review of secondary hypertension in children and adolescents. Obviously, the younger a child with hypertension is, the more likely that a secondary form of hypertension will be discovered. Finally, Chapter 17 by Dr. Thomas Pickering and Dr. Mona Yacoub reviews the normal hemodynamic and other changes during sleep, considers the relationship of sleep apnea to hypertension and its complications, and brings us up to date on its clinical features, diagnosis, and treatment.

We have invited contributors who are easily recognizable as leaders in the field of hypertension. They have worked hard to expertly and concisely review traditional and established causes of secondary hypertension as well as new and less well known ones. Each chapter merits multiple reads and can act as a starting point for anyone seeking an up-to-date, scientifically accurate review of a particular area in secondary hypertension. Of course, we are grateful to the authors who have worked hard on this book and provided us with excellent work. Special thanks to Diane Webster from the editorial office of Blood Pressure Monitoring at the University of Connecticut Health Center for helping with chapter preparation.

We also thank Paul Dolgert at Humana Press for recognizing the importance of this book and the need for it. We hope you find *Secondary Hypertension: Clinical Presentation, Diagnosis, and Treatment* enjoyable and scientifically current.

George A. Mansoor, MD, FRCP (EDIN)