

Preface

The prevalence of hypertension is almost three times as high as that of diabetes mellitus type 2, with both conditions being major risk factors for stroke, ischemic heart disease, cardiac arrhythmias, and heart failure. The exact prevalence of hypertension related to hormonal derangements, a.k.a. endocrine hypertension, is not known but estimated to affect less than 15% of hypertensive patients. Recent scientific discoveries have increased our understanding of the pathophysiologic mechanisms of hypertension. For instance, there is accumulating evidence on the vitamin D, testosterone, and growth hormone deficiencies as potential risk factors for development of metabolic syndrome, including its constituent hypertension, and cardiovascular disease. In addition to insulin resistance, obesity-associated hypertension may play a role in these conditions, as prevalence rates of obesity have reached up to 34% in several populations. As it is true for many other disorders, better understanding of disease mechanisms may help improve diagnosis and offer affected patients novel targeted therapies.

For many conditions related to endocrine hypertension—for instance, adrenal tumors hypersecreting aldosterone or cortisol—identifying the cause may even lead to curative therapy if undertaken in a timely fashion and in the absence of additional underlying risk factors for hypertension, such as obesity and/or metabolic syndrome. The challenge remains when to assign an endocrine cause in a hypertensive patient and *Endocrine Hypertension* hopefully will assist in this endeavor.

The first part of *Endocrine Hypertension* is dedicated to adrenal hypertension, with the first chapter providing an excellent review on primary aldosteronism, the most frequent cause of hypertension in syndromes of mineralocorticoid excess (Chap. 2). Chapters 3, 4, and 5 discuss rare adrenal disorders linked to glucocorticoid action, such as Cushing's syndrome, primary generalized familial or sporadic glucocorticoid resistance (Chrousos syndrome), and congenital adrenal hyperplasia. Chapter 6 reviews the topic adrenal incidentalomas and hypertension, an important aspect in the era of modern imaging. Catecholamine excess from pheochromocytoma and paraganglioma is discussed in Chap. 7.

The second part of *Endocrine Hypertension* concerns nonadrenal potential causes of hypertension, such as growth hormone excess or deficiency, primary

hyperparathyroidism, vitamin D deficiency, testosterone deficiency, insulin resistance, obesity-associated hypertension, and the role of central mineralocorticoid receptors and cardiovascular disease. It should also be mentioned that hypothyroidism can lead to volume-dependent blood pressure elevation with low plasma renin concentrations (Stabouli S, et al., *Expert Rev Cardiovasc Ther* 2010;8(11):1559–65; Ittermann T, et al., *J Clin Endocrinol Metab* 2012;97(3):828–34; Cai Y, et al., *Hypertens Res* 2011;34(10):1098–1105).

The editors of *Endocrine Hypertension* are grateful to the authors for their hard work and the precious time that they spent to produce their outstanding, state-of-the-art chapters. At these hard times, scholarly activity such as this has become difficult, with the ever increasing pressure to publish primary data necessary to generate research grants. *Endocrine Hypertension* will hopefully be a useful resource not only to adrenal investigators and fellow endocrinologists and diabetologists, but to translational scientists and clinicians from cardiology, pediatrics, general internal medicine, family medicine, geriatrics, urology, and reproductive medicine/gynecology.

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