

Preface

Investigations into the etiology and manifestations of Cushing's disease have served as a model for basic and clinical research in both endocrinology and neurosurgery since Cushing's original monograph in 1932. He worked from careful clinical observation back to underlying pathology; others, including Fuller Albright, elucidated the fundamental hormonal mechanisms. Even today, the complex interrelationships between cortisol dynamics and a wide spectrum of endocrine – e.g., the “metabolic syndrome” – and nonendocrine – e.g., depression – disorders continue to be described.

In this book, we review the pathogenesis, diagnostic algorithm, and treatment options for this complex disease, as presented by leading experts in the field. Dr. Aron discusses the fascinating history of Cushing's disease as well as its historical significance to both endocrinology and neurosurgery in Chap. 1. Dr. Melmed and colleagues present both their and others' work on the molecular pathogenesis of the disease in Chap. 2 while Drs. Cheunsuchon and Hedley-Whyte illustrate the anatomic pathology in Chap. 3. The diagnosis of Cushing's syndrome remains a major challenge; Dr. Nieman depicts the current diagnostic algorithm in Chap. 4 while Drs. Kaltsas and Chrousos review the differential of pseudo-Cushing's syndromes in Chap. 5. Cyclical hypercortisolemia can be extraordinarily difficult to diagnose; Drs. Tritos and Biller discuss its evaluation in Chap. 6. Dr. Findling and colleagues present their current approach to the differential diagnosis of Cushing's disease in Chap. 7. The source of the hypercortisolemia is localized by a combination of endocrine and radiographic techniques; Drs. Rapalino and Schaefer portray the imaging findings in Chap. 8.

The mainstay of treatment remains surgical removal of the corticotroph adenoma; current techniques and results are described by Drs. Tierney and Swearingen in Chap. 9. Dr. Vance reviews the postoperative management and assessment of remission in Chap. 10. If surgery is unsuccessful, adjunctive treatment is required. Dr. Loeffler and colleagues explain radiotherapeutic options in Chap. 11, and Dr. Petersenn describes recent exciting developments in medical therapy in Chap. 12. Even with initially successful surgical treatment, the disease will sometimes recur; the management of this difficult situation is reviewed by Dr. Kelly and colleagues in Chap. 13.

Although rare, Cushing's disease in the pediatric population is important to recognize, as its clinical manifestations and impact on growth can be severe; Dr. Savage and associates characterize its diagnosis and treatment in Chap. 14. Drs. Kaushal and Shalet review silent corticotroph adenomas as a distinct clinical entity in Chap. 15. The diagnosis and management of Cushing's disease during pregnancy can be especially difficult; this is highlighted in Chap. 16 by Drs. McCarroll and Lindsay. Although bilateral adrenalectomy is less frequently employed in treatment than several decades ago, postoperative progression of the underlying corticotroph tumor remains a potential complication of this approach, and is reviewed by Dr. Bertagna and associates in Chap. 17. Finally, the long-term psychological manifestations of hypercortisolemia can be significant even after disease remission; this important topic is discussed by Dr. Sonino in Chap. 18.

We would like to thank our colleagues for their excellent contributions, Ms. Ellen Green of Springer for her editorial assistance, and Dr. Shlomo Melmed, as senior editor of the series, for his initial invitation. All of us remain students of this fascinating disease.

Boston, MA, USA

Brooke Swearingen
Beverly M.K. Biller

Cushing's Disease

Swearingen, B.; Biller, B.M.K. (Eds.)

2011, XII, 264 p., Hardcover

ISBN: 978-1-4614-0010-3