

Cambridge University Press

978-0-521-50999-2 - Core Topics in Endocrinology in Anaesthesia and Critical Care

Edited by George M. Hall, Jennifer M. Hunter and Mark S. Cooper

Frontmatter

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Foreword

The clinical interface between endocrinologists/diabetologists and anaesthetists/intensive care physicians and the joint management of their patients is more than a marriage of convenience. Endocrinologists are all too aware that patients with underlying endocrine disease bring additional anaesthetic risks and concerns. Examples include patients with acromegaly and hypopituitarism, thyrotoxicosis and pheochromocytoma. Perhaps one of the most common concerns necessitating cross-referral in hospitals is the patient with established diabetes mellitus. The optimal management of such a patient in terms of metabolic control and insulin therapy across anaesthesia and in an intensive care setting is of paramount importance.

But the area has moved on much further: research advances over the last 5 years have highlighted how careful metabolic control of patients on intensive care units can significantly improve outcome. This is particularly true in the management of hyperglycaemia and hyponatremia and may also now include the concept of relative adrenal insufficiency. For the

endocrinologist/ diabetologist, therefore, it is essential that this knowledge now becomes embedded in their evidence-based clinical practice. For the anaesthetist and the intensive care physician, a greater appreciation of the endocrine basis for abnormal biochemical results in patients within intensive care units is equally important if improvements in patient morbidity and mortality are to be realised. In this timely publication, Professors Hall and Hunter and Dr Cooper have solicited and edited 18 topical chapters from experts in the field that will address all of these issues. Section 1 details the perioperative care of patients with endocrine disease; Section 2 – the care of patients with diabetes; and Section 3 – endocrine disorders that arise in the critically ill patient. To have this information under one cover is an admirable achievement and one that will be of immense value to medical practitioners involved in managing sick patients.

Paul M Stewart MD FRCP FMedSci
Professor of Medicine

Preface

Endocrine disorders are a disparate group of diseases of complex pathophysiology. Some of these disorders, such as diabetes mellitus, are increasingly common in the developed world. Diabetic patients can present at any age to anaesthetists of all grades and in every subspecialty. In this specialist anaesthetic text, there is a detailed discussion of all aspects of an anaesthetist's involvement with diabetes, be it in paediatric, obstetric or intensive care practice, or when these patients undergo routine surgery. For greater understanding, an outline of the pathophysiology of diabetes mellitus is provided.

Thyroid dysfunction is another common endocrine disorder of which all anaesthetists have significant experience. It is essential for anaesthetists to understand the many different diseases that affect this gland, be they malignant or autoimmune, how such diseases are managed medically and how they affect anaesthetic practice.

Other endocrine disorders are far less common than diabetes mellitus and thyroid disease. The challenges for any anaesthetist with the rarer disorders of the adrenal, pituitary and parathyroid glands, or with endocrine disorders of the gut, are very different from

managing a diabetic patient. No practitioner will have great experience of anaesthetising such patients. Thus it is apposite to have contributions from well recognised experts in these areas brought together into one text.

Only recently have endocrine disorders in critically ill patients been given detailed consideration. This book considers not only the topical subjects of glucose control in the critically ill and the critically ill diabetic patient, but also the very rare disorders of the thyroid gland that present to intensivists. Fluid and electrolyte imbalance, the effects of critical illness on adrenal physiology and the role of glucocorticoid replacement are considered. Understanding of such disorders is incomplete, but in this text we update all anaesthetists involved in acute medicine in these complex areas.

To increase the understanding of the pathophysiology and medical management of such patients, it has been most advantageous to have a distinguished endocrinologist as a co-editor. We hope that Mark Cooper's significant contributions will enhance anaesthetists' understanding of the multidisciplinary approach that is required in the management of the complex endocrine patient perioperatively.