

are not endocrine in origin. The volume concludes with seven chapters on disorders of bone and calcification that are not associated with hypercalcemia or hypocalcemia, and in which abnormality of endocrine function is doubtful or entirely lacking.

Volume IV is concerned with the adrenal cortex and medulla and their diseases. After four chapters on the physiology of the several adrenocortical steroids and of ACTH, there is a series of chapters on Cushing's disease, Cushing's syndrome, and primary and secondary aldosteronism. The next large section of this volume discusses states of adrenocortical insufficiency, both spontaneous and induced. The adrenogenital syndrome in children and adults is then discussed in two chapters under the general heading "Dys-adrenocorticism." The volume concludes with a consideration of the adrenal medulla and its diseases and a section on pharmacologic therapy of nonendocrine diseases with adrenocortical steroids and ACTH.

There are numerous examples of the difficulties of organization of material concerned with multiple endocrine glands that are interrelated in numerous ways. For example, the material on Cushing's disease and Cushing's syndrome is divided between Volumes I and IV. One wonders whether the organization would not have been better if all of this material had been placed in the sections of Volume IV dealing with diseases of the adrenal cortex. This seems justified since all of the manifestations of the condition result from an excess of adrenocortical steroids in the body even though the more remote origin in some cases might be in the anterior pituitary or hypothalamus.

Generally speaking, Danowski has done an excellent job of presenting a mammoth amount of material on clinical endocrinology and allied fields in a very useful manner. Inevitably, most of the criticism that might be leveled at the work will be related to the truism that no one individual can be an expert on all aspects of clinical endocrinology even though he were to spend full time in this area of medicine. Some of the topics discussed are so uncommon or minute that it is not possible for one physician to have a wealth of clinical experience with them. Consequently, much of what appears in a work such as this must reflect a careful review of the literature to supplement personal experience that is necessarily limited. What the intrepid author finally writes may convey a hint, perceived by relatively few readers, that he actually has not lived in intimate and recurring contact with some of the diseases under discussion. This inescapable fault is perceptible in some parts of these volumes. Withal, it must be stated that Danowski has dealt with the broad area of medical knowledge embodied in clinical endocrinology probably as expertly and thoroughly as any single contemporary author possibly could. The work should be useful to almost all levels of students of clinical endocrinology.

FUNDAMENTALS OF DIABETIC MANAGEMENT. By James M. Moss, M.D. \$4.75, 70 pp., Springfield, Illinois, Charles C Thomas, 1962.

This book is happily slender in an age of verbose and overweight volumes that often are too expensive. The book attempts much by covering nearly the entire field of diabetes from "definition" to "treatment" and "complications" in seventy six-by-nine-inch pages. The illustrations are some-

times amateurish but enthusiastic and adequate. In a book of this size and with its multiplicity of topics it is difficult to do more than define and outline the conditions and their treatment, but in spite of these limitations seven pages are devoted to diet, four and one-half to oral hypoglycemic agents and seven pages to insulin.

In general, the author's conclusions are sound although one might argue with statements such as (*p.* 3): "diabetes is probably no more common than in the past . . ." This is contrary to most authorities who feel that the sum of generations of heredity, plus increased optimal nutrition plus the longer life of diabetics add up to a greatly increased number of diabetics. Some of the section on physiology is sketchy in the light of recent knowledge, but the tempo of new findings has been so accelerated that it is difficult to keep any printed book up to date. However, if this concentrated volume is truly aimed at junior medical students as indicated on the jacket, a more thorough development of the physiology area is warranted. One could argue with the author's criteria for diabetes (*p.* 8): "If the blood sugar is over 100 mg. per 100 ml. before a meal or over 140 mg. per 100 ml. two hours after a large meal the patient has diabetes," but the author, in his attempt to generalize for a young audience, is entitled to those beliefs which result from his own experience. He seems very optimistic in the section on oral hypoglycemic agents. For example, he speaks with more positiveness than even the manufacturer concerning the mode of activity of phenformin. At best, this subject is ill-defined and controversial. If the suggested range for phenformin therapy up to 300 mg. per day is taken seriously by many physicians, the curve of gastrointestinal-upset-incidence may climb markedly, although admittedly some of these statements are attenuated later in the chapter. The statement "satisfactory diabetic control . . . in 80 per cent of new patients with mild diabetes," etc., (*p.* 27) means precisely nothing without some definition of criteria. The section on insulin is strong but the chapters concerning "complexities" (chapter 4) and "degenerative complications" (chapter 5) suffer from the writing foot race of trying to get too much distance in too short a space of time.

The measure of a book is (1) the degree of achievement of its announced purpose and (2) its general usefulness not only to the audience at which the book is aimed but also to other readers who may be interested in this subject. This book is a comprehensively, honestly written rapid summary of a vast and continually changing field. It is a good book and to a large degree achieves its aim, but it is not quite sophisticated enough for the modern medical student, not detailed enough for the practicing physician and too complex for the average patient. The author has attempted the well-nigh impossible feat of compressing the machinery and technical aspects of a cruiser into the space of a motor-boat. One is not sure which audience would best benefit from this hybrid. However, for the quick scanner, this book will give a glimpse at the vast horizon in a straight-forward and honest fashion.

KONJUNCTIVALKARRENE VED DIABETES MELLITUS. By Jørn Ditzel. Scandinavian University Books, Munksgaard, Copenhagen, 1962.

This manuscript was written in 1961 in Copenhagen by

the author and is based on studies carried out during his appointment as a research associate at the Baker Clinic Research Laboratory in the Department of Medicine, Harvard University Medical School, New England Deaconess Hospital and the Joslin Clinic, Boston, Massachusetts, from 1952 to 1953 and from 1955 to 1958.

The aim of the investigation was to study the changes in the conjunctival vessels of diabetic and healthy individuals in an effort to determine whether any difference could be detected in diabetics as compared with healthy individuals which would allow one to consider these changes to be a part of a specific diabetic angiopathy. The studies were based primarily on qualitative and semiquantitative biomicroscopic observations and on quantitative measurements of vessel calibers on flash photographs of the conjunctival vessels.

The entire manuscript is divided into seven chapters and represents the summary of the observations carried out on 550 individuals, 327 of whom were diabetic and 223 of whom were asymptomatic apparently healthy subjects.

Chapter 1 is essentially a review of the literature dealing with diabetic vascular disease and presents the most essential reasons available in the literature for support of the hypothesis of a generalized specific diabetic angiopathy. At the onset of the investigation in 1952 no study had been made of the conjunctival vessels in relation to the question of the existence of a generalized diabetic angiopathy.

Chapter 2 gives an account of the material used in this investigation and a detailed description of the methods employed. There is also a discussion of the anatomy of the conjunctival vessels and of the characteristics of these vessels which were studied.

Chapter 3 concerns the investigation of the changes in the conjunctival vascular bed of 175 healthy and 220 diabetic subjects. They were grouped according to sex and age and the studies were all done as a blind test. The selection of the subjects for study was made by a colleague so that the observer was unaware of the diagnosis or medical history of the subjects. Final analyses were done after all observations had been concluded.

Chapter 4 deals essentially with the conjunctival changes in relation to the duration of the diabetes in seventy diabetic children.

Chapter 5 reviews the findings in the conjunctival changes in sixty younger diabetics with diabetic nephropathy or retinopathy or both. Flash photographs of larger pairs of vessels in the conjunctiva were taken on forty-seven younger diabetics and forty-eight healthy individuals at two moments of the day, morning and afternoon, with subsequent measurements on a negative film. The data accumulated are analyzed in Chapter 6.

Chapter 7 compares the results obtained in the present investigation with the existing literature on the subject. The author concludes from his findings that there is a specific and diabetic angiopathy consisting essentially of severe conjunctival changes of greater frequency in children with diabetes of longer duration than those with diabetes of a shorter duration and secondly that severe conjunctival changes are more frequent in diabetics with retinopathy or nephropathy than in diabetics without those late diabetic vascular mani-

festations. In addition, his data allow one to believe that in diabetics the conjunctival changes differ in various ways from those occurring in healthy individuals and that these changes can be considered a part of a specific diabetic angiopathy.

Excellent illustrations are present as well as diagrams enabling the reader to understand each of the changes which have been studied. Although the text is written primarily for a Scandinavian audience, nevertheless there is an excellent summary of each chapter in English at the end of the manuscript. A thorough bibliography on the subject is included. Although there may be some who will differ with the conclusions, one must agree that the author has based his studies on careful detailed observations carried out in a well-designed fashion. The observations appear clear-cut. The data are presented succinctly and represent a vast study on the conjunctival vessels as related to diabetes.

**METABOLIC AND ENDOCRINE PHYSIOLOGY: AN INTRODUCTORY TEXT.** By Jay Tepperman, M.D. \$7.50, 214 pp., Year Book Medical Publishers, Chicago, Illinois, 1962.

Since publications relating to endocrinology and metabolism are increasing exponentially, the casual reader in these fields is continuously challenged to select articles and volumes which provide the most information in both an efficient and yet enjoyable manner. This book, totaling 214 pages including index, satisfies both requirements. It presents a coverage of all the major subdivisions of endocrinology after an introductory chapter, a chapter on methodology and levels of metabolic organization and a chapter on the hypothalamohypophysial relay system, which includes the neurohypophysis and its functions.

These prefatory chapters are followed by chapters on male and female reproduction, thyroid, adrenal cortex, adrenal medulla, endocrine pancreas, energy balance and finally a chapter on the parathyroids. Each is succinctly written and introduced by a table presenting the historical landmarks pertaining to that particular field. This is then followed by an up-to-date treatment of the biochemistry and physiology, and here Dr. Tepperman has not only faced the difficult challenge of presenting what could be a confusing and complicated mass of information, but has succeeded in trimming and organizing the essential facts into a most logical sequence. This is then followed by pertinent clinical comments which serve only to underscore the theme put forward in the discussion of the physiology and biochemistry. The presentation is thus expertly woven into a fabric, as well-understood by the first-year student in physiology as by the practitioner trying to refresh and augment his basic understanding of disease processes.

The presentation is all the more supported by extremely simple but clever illustrations interrelating the various mechanisms on which endocrine and metabolic functions are based. Of particular merit to students of diabetes mellitus are the chapters on "Endocrine Pancreas" and "Energy Balance," these being the specialty of the author and thereby undoubtedly the most outstanding in a book that is already outstanding. This reviewer has attempted several times to present this information and can only admire the clarity and ease whereby the author has presented the information in these two chapters.