

ture, characteristics and treatment of uncomplicated diabetes are described. These sections are followed systematically by thorough discussions of various complications and associated diseases, the four chief authors taking turns in assignment with assists in special fields by others in the group. One previous major author is now missing.

On the whole a thorough job of revision has been accomplished. There are few sections which do not show, at the very least, minor insertions, deletions and elaborations. This reviewer is impressed the most by several radical changes, all decidedly for the better. First, there is Dr. Marble's concise summary, to a large extent new, of the physiology of diabetes, the intermediate chemistry of carbohydrate metabolism, the action of insulin, endocrine relationships, and forms of experimental diabetes. Then there is the valuable new chapter of the pathology of diabetes by Drs. Shields Warren and Philip Le Compte. A beautiful page of colored microphotographs is included here. These authors shrewdly call attention to the possible role of the mucoproteins in the pathogenesis of vascular and renal complications of diabetes, as Dr. Root has done elsewhere.

The title of the book is too modest. Much more than the treatment of diabetes mellitus is described between its covers. The chapter on treatment has been rewritten in a more practical and simplified form. Good justification for seeking control of glycosuria and hyperglycemia as perfectly as possible is given convincingly by Dr. Joslin.

Dr. Root has brought the important section on vascular and renal complications of diabetes into current focus. Certainly the mechanism of their causation is as yet unknown, but a valuable service has been rendered by the fact that this competent and experienced authority has assembled most of the known facts in one place.

The section on skin disorders has been rewritten by Dr. Marble and that on urinary tract disease by Dr. Styron. Surgery in diabetic patients, the behavior of gangrene and its treatment, and Dr. McKittrick's indications and techniques for the important transmetatarsal amputation, by virtue of which many serviceable feet are now saved, are described in considerable detail.

Dr. White relates her experiences with diabetic children and pregnant women. She re-emphasizes the importance of hormonal imbalance in the production of high rates of fetal mortality and maternal toxemia, and of improvement in these rates by means of treatment with estrogens during pregnancy. She calls attention to the comparative mildness of the diabetes in

other series in which fetal mortality and maternal morbidity have been low even without the use of hormones.

It is difficult to be critical of such a wealth of information recorded so faithfully. Some, including this reviewer, have felt that too free use of actuarial methods has detracted from the descriptive value of the study. Just because a group of diabetics shows given characteristics, on the average, it does not follow that every person in the group will exhibit these characteristics, of course. Yet one often gains the impression that the authors would have the reader believe that this is so. Probably this is only a method of teaching what the usual pattern is. Certainly no better teachers exist than these authors.

Dr. Joslin's group deserves the grateful thanks of all who are interested in diabetes. This precious accumulation of facts about the disease, the complete reviews of the literature to supplement personal observations and the conscientious revisions of the textbook periodically are contributions of lasting merit. No student of the disease can afford not to possess this newest version of a standard and now famous work.

DIABETIC GLOMERULOSCLEROSIS: *The specific renal disease of diabetes mellitus.* By Harold Rifkin, M.D., Louis Leiter, M.D., Ph.D., and James Berkman, M.D. \$3.50 98 pp. Illustrated. Charles C. Thomas, Springfield, Illinois, 1952.

This small monograph of about 100 pages reviews the recent literature pertaining to diabetic glomerulosclerosis and details the clinical and laboratory findings in 44 cases diagnosed during life at the Montefiore Hospital in New York. The numerous illustrations are excellent. The tables are well organized, easily read and informative. The value of the book is enhanced by an alphabetically arranged bibliography and an index which includes both subjects and authors.

The topic is introduced by an account of a typical advanced case. There follow a half-dozen case reports, including autopsies, illustrating the ways in which this picture may be altered and even obscured by accompanying and sometimes independent conditions such as hypertensive disease, arteriosclerosis, congestive failure and glomerulonephritis.

The specificity of the glomerular lesions for diabetes has been questioned by some. The authors believe that, although there may be uncertainty on this score with respect to early or minimal lesions, the more severe forms, in which the majority of the glomeruli are involved with spherical hyaline bodies, are practically

pathognomonic of diabetic renal disease. Regarding the composition of these nodules, reference is made to the likelihood that, in view of their affinity for the periodic acid-Schiff reagent as reported by McManus, they contain a glycoprotein. The fact that the microaneurysms of the retina have similar staining reactions is noted, but the intriguing possibility raised by this fact, namely that the glomerular and the retinal lesions may have a common pathogenesis, is not given the attention it deserves.

Clear thinking concerning the underlying causes of the syndrome is evident in several places. For example, ". . . the majority of reports emphasize that the most frequent occurrence of diabetic glomerulosclerosis is among patients in the sixth and seventh decades of life, but so is the highest incidence of diabetes." In discussing the relationship between the duration of diabetes and the occurrence of the renal disorder, the authors emphasize, and document, the difficulty of determining onset and hence duration of diabetes. Refuting the idea that long duration is a necessary precursor, they cite the finding by Derow and Schlesinger (1949) of advanced intercapillary glomerulosclerosis in the right kidney of a diabetic woman only four years after the absence of such lesions had been established in the left kidney which had been removed for suspected tumor. In considering the relationship of the specific renal lesion to the degree of control of diabetes they state, quite properly, "The question of control is obviously related to the duration of diabetes because the longer the latter the more tedious and difficult the former."

For the most part the clinical data are similar to those of other investigators. The causes of death among autopsied patients are divided equally between uremia and cardiovascular disease, the two together accounting for 85 per cent of such deaths.

The chapter on laboratory aids in diagnosis is especially valuable in pointing out that in doubtful or complicated cases the finding of doubly refractile fat in the cells or casts of the urinary sediment is the best single indicator of diabetic glomerulosclerosis, provided glomerulonephritis can be excluded. None of the patients with generalized arteriosclerosis and hypertensive renal vascular disease showed this finding. The exclu-

sion of glomerulonephritis may be difficult, but helpful criteria are given for this purpose.

Although recognizing that intercapillary glomerulosclerosis cannot be said to be entirely preventable at present, the authors are impressed by the recent studies of the Joslin group which demonstrate a significantly higher incidence of this and other vascular disorders in patients whose diabetes has been poorly controlled as compared with those under good control.

LIVER INJURY. *Transactions of the Tenth Conference, May 21-22, 1951. F. W. Hoffbauer, Editor. Pp. 320, \$3.75. Josiah Macy, Jr. Foundation, New York, 1951.*

Volumes recording the transactions of the Macy Conferences have become known among scientific readers for their interesting presentation of factual data and speculations by outstanding investigators in the field under discussion. The conferences, and the volumes, owe much of their success to an informality which serves to break down barriers to exchange of ideas among the participants.

This volume on liver injury has the same quality of informality as its predecessors. It includes several sections, each composed of one or two opening presentations by able investigators and discussion by the other participants. Material on serum proteins and lipids is introduced by Roy H. Turner; lipotropic factors by Camillo Artom and David Cayer; experimental ischemia of the liver and hepatic coma by A. M. Rappaport; micro-anatomy of the hepatic vascular system by B. G. Maegraith; effect of insulin on the liver in normal and diabetic man by Sheila Sherlock, A. G. Bearn and B. Billing and liver disease in Jamaican children by Kenneth R. Hill.

Of particular interest to the reader who is concerned with diabetes are the studies of Sheila Sherlock and associates of the University of London on the effect of insulin on the production of glucose by the liver in 43 normal and 39 diabetic subjects. For these studies catheterization of hepatic vein was employed. Sherlock's presentation forms the basis for considerable stimulating discussion of hepatic physiology in diabetes.