

5. *Prediabetes and early detection of diabetes*

There was no standard definition for prediabetes. Clinical criteria rather than genetic ones were selected, for example, women with a history of repeated abortions and/or large babies, etc. Unfortunately Dr. Hoet could not attend this session. Westwerdt (Hamburg) discusses it from the obstetrical point of view. Oberdisse (Düsseldorf) reports his experience with the cortisone glucose tolerance test in women with a history consistent with prediabetes. Otto and Mauren (Münster) measured pulse waves in young diabetic patients and in normal children and found no difference. Therefore, they doubt if this method will have any value in detection of prediabetic patients. Jahnke reports on glucose tolerance test alone and with steroid preparation and on the sodium tolbutamide test in patients over forty years of age. Of seventy-three unselected patients examined by all three tests, glucose tolerance test was abnormal in half, cortisone-glucose tolerance test abnormal in one third, tolbutamide test abnormal in 10 per cent.

In summary, although much of the material presented has been published elsewhere or is in press, it represents a good synopsis of the fast-moving subject of diabetes research.

DIE ZUCKERKRANKHEIT. By F. Bertram and H. Otto. (In German.) \$7.40, 164 pp. Georg Thieme Verlag, Stuttgart, West Germany, 1963.

Like Joslin, the German diabetologist Bertram published, during his lifetime, a "manual" for diabetic patients (eleven editions) and a textbook on diabetes (four editions). Professor Bertram died in 1960. A former associate, H. Otto, has taken on the task of continuing this tradition and has been responsible for the fifth edition of the textbook. As the fourth edition was issued in 1947, important changes have been made, most of them by Bertram. This volume contains chapters on: physiology and experimental diabetes (twenty five pages); pathology (three pages); classification, symptomatology and complications of diabetes (fifty pages), and treatment (seventy pages). There are several excellent colorplates illustrating diabetic retinopathy and necrobiosis. The bibliography consists of 110 titles, of which one is of 1963, one of 1962, and less than ten are of 1961. There is a good subject index.

This book is primarily intended for the German-speaking physician interested in handling diabetic patients. Therefore, its main emphasis lies on clinical aspects and treatment of diabetes drawing from a large personal experience and the literature. This practical orientation probably explains why in the section on physiology there is no mention of assays of insulin in blood, results of which have deepened our understanding of diabetes as well as of the mechanism of action of certain oral hypoglycemic agents. In discussing experimental diabetes in the animal world, it is erroneously stated that

there exists no spontaneous or hereditary diabetes. The chapter on pathology is meager and does not mention any results obtained with electronmicroscopy. The discussion of factors responsible for diabetes centers of course on heredity, obesity, pregnancy, infection, etc., but there is also a discussion on the diabetogenic effects of nicotine, alcohol, ingestion of canned food, etc., under the heading of harmful effects of civilization. For diagnosis of diabetes by oral glucose tolerance test, it is suggested that not the full glucose load of 100 gm. be given but rather 1 gm. of glucose per kilogram of body weight. Unfortunately, no data are presented comparing both doses. Furthermore, it is urged that capillary rather than venous blood glucose be measured during a glucose tolerance test, possibly a misprint. For assessment of diabetic ketoacidosis no mention is made of the easy serum acetone test.

The treatment of diabetes is presented in detail, discussing diet, the various types of insulin and oral agents such as tolbutamide and phenformin. (Chlorpropamide is not commercially available in Germany.) It is urged that the diet be low in fat, never exceeding 70 gm. and to make up calories by carbohydrates, up to 400 gm. if necessary. No data are shown to support the beneficial effect of such a diet on prevention or delay of late complications. There is an intriguing statement alleging lack of late complications in patients with severe brittle diabetes, and again no follow-up studies are presented. For diabetic patients on insulin, the following are the suggested guidelines for blood glucose values: fasting under 180 mg. per 100 ml., following meals not above 250 mg. per 100 ml., and the total twenty-four-hour urinary glucose excretion not to exceed 20 to 30 gm. This seems to be dictated by fear of insulin reactions. Patients on dietary regimen alone or diet with oral agents should be regulated in such a way as to have close to normal blood glucose values.

To initiate a diabetic on insulin, the following rule of thumb is suggested: one unit of insulin for each 2 gm. of urinary glucose. The over-all mortality rate for diabetic acidotic coma is given as 10 to 15 per cent. There is much worry about the psychic well-being of diabetic patients. In this vein, patients are not encouraged to test their urine for sugar or acetone so they are not reminded of their diabetic condition. But aren't they reminded when taking insulin or following a diet?

The above comments are presented to point out certain points of controversy, here as well as abroad, and to challenge our thoughts. In most aspects of management of diabetic patients, the authors are following established principles and their results appear not to be strikingly different.

This book is clinically oriented and contains much practical information for the physician interested in clinical diabetes. It offers no outstanding features attractive to the reader familiar with the available American texts on diabetes.