BASIS OF THE PRESENT CLASSIFICATION OF DIABETES

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ABSTRACT

The present classification of diabetes most widely used is that recommended by the National Diabetes Data Group and subsequently endorsed by the World Health Organization. This classification is primarily a clinical classification of diabetes because in most instances the etiology is unknown. The need for a standardized classification arose out of the recognition that diabetes was a syndrome rather than a single disease and the different terminologies which emerged. While certain types of diabetes can be classified according to specific etiology or associations with specific syndromes, the vast majority cannot. Insulin-dependent and noninsulin-dependent diabetes usually represent syndromes whose etiopathology is believed to differ and their clinical characteristics are usually distinctive. As evidence of etiological heterogeneity has increased there has been a tendency to adopt the terms Type I and Type II diabetes to indicate different etiologies, although the original usage of these terms was as a clinical classification to differentiate between insulin dependent and non-insulin-dependent disease. At present the use of the four terms to describe the common types of diabetes leads to confusion, which could readily be resolved by arriving at agreed definitions for each of these terms. While the NDDG-WHO classification has served to standardize terminology and stimulate research into the different causes of diabetes, some further refinement of the classification, together with some additional definition of terms, should be considered.

The classification of diabetes most widely used at the present time is that suggested by the National Diabetes Data Group (NDDG) in
the United States in 1979,\textsuperscript{15} which was subsequently recommended by the World Health Organization (WHO) Expert Committee on Diabetes Mellitus in 1980.\textsuperscript{20} It should be stressed that this classification was intended to be a uniform framework for clinical and epidemiological research, and that the classification would almost certainly have to be modified on the basis of new knowledge in the future.

HISTORICAL BACKGROUND

History undoubtedly plays an important part in shaping current concepts and this has certainly been true in arriving at the current classification of diabetes. There would probably be little reason for discussion of the subject today if the etiology of all that is now considered to be diabetes were established. Unfortunately, this is not the case. Consequently, we are presently torn between a classification scheme which incorporates what we do know about etiology; descriptions of what we recognize on clinical grounds as being related, but which is of uncertain or unknown etiology and which may be heterogeneous; and the extent to which we believe we can safely venture in classifying individual subjects into the categories which we define.

Although diabetes has been recognized for over 2000 years and in spite of the fact that it has emerged as one of the most common chronic diseases, it is in only a minority of cases in which the etiology is sufficiently clear that the cause can reasonably be stated as known. In the vast majority the common feature is chronic hyperglycemia of unknown or uncertain etiology.

DIABETES AS A SYNDROME

The recognition of diabetes as more than a single disease goes back for more than a century. Bouchardat, in 1875,\textsuperscript{3} proposed a classification of diabète maigre and diabète gras to distinguish between two syndromes which he recognized as having a different prognosis and in which different forms of clinical management were indicated. This distinction appears to have been lost in the early part of the present century where the tendency was to consider "mild" and "severe" forms of the disease. This concept was followed by attempts to explain the differences in terms of the numbers of diabetes genes inherited, or in terms of the age of onset of the condition. These concepts in turn led to the introduction of terms such as "brittle" and "stable" diabetes and "juvenile" and "maturity onset" diabetes, but the idea that these subgroups represented a spectrum of one and the same disease pervaded. During the 1930's, however, the concept of Secondary diabetes to describe diabetes associated with hemachromatosis, acromegaly, chronic pancreatitis,