Response to Fajans

Dr. Fajans (1) raises relevant and important issues with regard to maturity-onset diabetes of the young. His suggestions are well taken, and in the next printing of the Expert Panel Report (January 1998), the appropriate changes in the document will be made.

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Response to the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus

The landmark report of the American Diabetes Association's Expert Committee on the Diagnosis and Classification of Diabetes Mellitus (1) is welcomed. It recommends a shift from the present phenotypic classification to one based on etiology and emphasizes earlier detection and possible prevention.

The diagnosis of undifferentiated gestational diabetes mellitus (GDM) is reviewed in detail and included as a single diagnosis in group IV of the proposed classification. Pregnancy provides a free stress test for latent diabetes, but it is the underlying mechanism that determines the type for the individual patient. Since there are two definite etiologic types of GDM, each of which carries different implications for the prevention and for the management of diabetes, we suggest that they be recognized in the classification as the following:

IV. Gestational Diabetes Mellitus (GDM)
   A. Type 1 associated, leading to absolute insulin deficiency
   B. Type 2 associated, with predominantly insulin resistance

A wide range of islet cell and anti-GAD antibodies has been reported in patients during and after pregnancy complicated by GDM, varying with population and geography (2,3). The timing of the test may be important. However, the reliability of autoantibody testing in pregnancy remains unknown because of the alterations in maternal immune status to prevent rejection of the fetus and placenta. The timing of the test may be important, and testing after the pregnancy may prove more reliable. However, long-term (2–11 years) clinical studies (4) have reported that in specific populations, up to 20% of women with previous GDM have type 1 diabetes because of markedly decreased plasma C-peptide response to glucose infusion. Further work is clearly needed in this area. Thus, general screening with tests for anti-islet antibodies may not be cost-effective for all pregnant women with GDM. However, a case can be made for testing those subjects with risk factors for this type of diabetes, particularly a family history of type 1 diabetes or autoimmune disease, and without those for type 2. Methods of arresting type 1 diabetes are effective in mice, but not yet in humans. There are now, however, ongoing trials of prevention to which patients may be referred. These issues and other recommendations for women with GDM are discussed in more detail in the report of the recent 4th International Workshop Conference on Gestational Diabetes to be published shortly in *Diabetes Care*.

It seems equally important to recognize GDM associated with type 2 diabetes. Presumptive diagnosis may be made on the basis of risk factors such as a family history, central obesity, particularly visceral abdominal, and the various aspects of the metabolic syndrome of insulin resistance. Measurement of the insulin/glucose (I/G) ratio may be useful in differentiating from type 1–associated GDM.

Thus, all in all, it seams reasonable to us to include the distinction of the two etiologic types of GDM, even though we do not yet have all the answers.

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2. Catalano PM, Tyzbir ED, Sims EAH: Incidence and significance of islet cell antibodies in women with previous gestational diabetes. *Diabetes Care* 13:478–482, 1990
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4. Damm P, Kuhl C, Bertelsen A, Molsted-Pedersen L: Predictive factors for the development of diabetes in women with previous gestational diabetes mellitus. *Am J Obstet Gynecol* 167:607–616,1992

Response to Sims and Catalano

Drs. Sims and Catalano (1), who have contributed much to our understanding of the pathophysiology of gestational diabetes mellitus (GDM), have proposed that the classification for GDM include two separate types, indicating whether the woman who has had GDM is more likely to go on to develop type 1 or type 2 diabetes later in life. Certainly, most women with GDM are at greatest risk for the development of type 2 diabetes. The detection of autoantibodies during and after pregnancies complicated by GDM seems to be associated with an increased risk for type 1 diabetes in the years following pregnancy, as shown in several studies, including the recent publication by Füchtenbusch et al. (2). However, as implied by Drs. Sims and Catalano, this body of knowledge is still evolving. Hopefully, increasing information