RESPONSE TO COMMENT ON DURAN ET AL.

Introduction of IADPSG Criteria for the Screening and Diagnosis of Gestational Diabetes Mellitus Results in Improved Pregnancy Outcomes at a Lower Cost in a Large Cohort of Pregnant Women: The St. Carlos Gestational Diabetes Study. Diabetes Care 2014;37:2442–2450

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We sincerely appreciate the comments from Addison and Belalcazar (1) on our study (2) and their concern with the risk of hypoglycemia after initiation and intensification of insulin therapy. To address this issue, we would like to point out that:

1. The treatment of gestational diabetes mellitus (GDM) and glycemic control targets remained unchanged during both study periods (2). Insulin therapy was initiated or the dose increased when blood glucose levels were >95 mg/dL (5.3 mmol/L) for fasting and preprandial values or >140 mg/dL (7.8 mmol/L) for 1-h postprandial levels, as currently accepted (3). Thus, the hypoglycemic risk as based on target glycemic values remained unchanged when using International Association of the Diabetes and Pregnancy Study Groups criteria (IADPSGC). However, a large number of women were able to benefit from nutritional therapy and attain optimal blood glucose levels, thus reducing GDM morbidity.
2. During both study periods, 80% of women with GDM remained within glycemic targets with diet alone. These figures are considerably higher than those previously reported (4,5). The absolute number of women who required insulin to achieve the same goals of glycemic control increased by a factor of 2.8 when applying IADPSGC. However, the most relevant change was in the insulinization regimen. The total number of women who required bolus prandial insulin remained stable, with a substantial increase in the number of women requiring basal insulin (0.5–8.3%) and, to a lesser extent, basal bolus insulin (2.7–5.2%). The risk of hypoglycemia is lower with basal insulin than bolus insulin therapy.
3. In our study, no episode of severe hypoglycemia was reported during either period, and the number of asymptomatic or symptomatic hypoglycemic episodes was minimal, although not registered. For basal insulin, the average insulin dose prescribed to reach glycemic targets was 6.4 vs. 5.4 IU/day and for bolus prandial insulin, 8.3 vs. 9.2 IU/day (Carpenter-Coustan criteria vs. IADPSGC, respectively). These figures are clearly different from those women with pregestational diabetes mellitus as referred to by Addison and Belalcazar (1).
4. In accordance with our protocol, following initiation of insulin therapy with 2 IU, insulin dose was only increased by 2 IU every 3–5 days, and not earlier, to avoid hypoglycemia. Glucagon prescription was considered when the daily insulin dose was >20 IU/24 h, a situation that only occurred in two patients identified with Carpenter-Coustan criteria and in two patients identified with IADPSGC. For prevention and treatment of hypoglycemia in patients on insulin, we recommend 200 cc of fruit juice (10% carbohydrate content) to provide 20 g of carbohydrate when the women are considered to be at low risk for severe hypoglycemia. Therefore, the cost of hypoglycemia prevention and treatment was not affected by the use of the new criteria.

In summary, our study shows that the introduction of IADPSGC for the diagnosis of GDM was cost-effective and remains so when taking the costs of maternal hypoglycemia into account. Given the health benefits, our results support the adoption of IADPSGC.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

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