



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

Diabetes Care 2015;38:e67–e68 | DOI: 10.2337/dc14-2839

Brandi Addison and
L. Maria Belalcazar

We read with interest the article by Duran et al. (1) that showed an improvement in pregnancy outcomes and a reduction in health care costs with the implementation of the International Association of the Diabetes and Pregnancy Study Groups criteria (IADPSGC) for the diagnosis of gestational diabetes mellitus (GDM) when compared with the traditional Carpenter-Coustan (CC) criteria. The inclusion of women with a lesser degree of dysglycemia with the IADPSGC was associated with a more than threefold increase in the prevalence of GDM (11% with the CC criteria and 36% with the IADPSGC) and, importantly, with a more than threefold increase in the proportion of screened mothers placed on insulin therapy (7.1% in the IADPSGC group and 2.23% in the CC criteria group). The higher prevalence of GDM and insulin use in the IADPSGC group, to which a larger fraction of screened pregnant women were exposed, asks that treatment-associated risks, particularly in relation to hypoglycemia, be included in the analyses of outcomes and cost.

Hypoglycemia is of particular concern when new approaches lead to the implementation of insulin therapy in a larger fraction of the population. The frequency of hospitalizations from medication-induced hypoglycemia is

increasing as more aggressive targets for glucose control are implemented (2). Hypoglycemia requiring emergency assistance is associated with significant economic and personal cost (3). There is a paucity of data on the prevalence of maternal hypoglycemia and its complications in women treated for GDM. In pregnant women with type 1 diabetes on intense insulin therapy, the frequency of severe hypoglycemia may reach 71% (4). Coma, seizures, vehicular accidents, and maternal deaths have been attributed to hypoglycemia and hypoglycemic unawareness in these mothers (4). In its presentation of a meta-analysis to the Federal Motor Carrier Safety Administration, the ECRI reports a 12–19% increase in the risk of auto collision while driving for any individual with diabetes, without differentiating individual level of risk, when compared with the general population (5). The single most significant factor associated with driving collisions for drivers with diabetes appears to be a recent history of severe hypoglycemia, regardless of the type of diabetes or the treatment used (5).

Duran et al. (1) acknowledge that the IADPSGC identify a group of mothers at moderate to low risk of poor pregnancy outcomes as having GDM. As the intensity

of insulin management increases, including the initiation of insulin therapy, so does the risk of hypoglycemia. The St. Carlos Gestational Diabetes cohort has unique data on outcomes and costs before and after implementation of the IADPSGC. Information on maternal hypoglycemia and its complications and related costs is needed before the study conclusions support the hypothesis that the implementation of the IADPSGC for the identification of GDM is cost-effective and provides the increased number of women with mild GDM with more benefits than risks.

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

References

1. Duran A, Sáenz S, Torrejón MJ, 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
2. Lipska KJ, Ross JS, Wang Y, et al. National trends in US hospital admissions for hyperglycemia and hypoglycemia among Medicare beneficiaries, 1999 to 2011. *JAMA Intern Med* 2014;174:1116–1124
3. Leese GP, Wang J, Broomhall J, et al.; DARTS/MEMO Collaboration. Frequency of severe hypoglycemia requiring emergency treatment in

type 1 and type 2 diabetes: a population-based study of health service resource use. *Diabetes Care* 2003;26:1176–1180

4. Sacks DA, Feig DS, Liu IL, Wolde-Tsadik G. Managing type 1 diabetes in pregnancy: how near normal is necessary? *J Perinatol* 2006;26:458–462

5. American Diabetes Association. Diabetes and driving. *Diabetes Care* 2014;37(Suppl. 1):S97–S103