RESPONSE TO COMMENT ON FOUSSARD ET AL.

Skin Autofluorescence of Pregnant Women With Diabetes Predicts the Macrosomia of Their Children. Diabetes 2019;68:1663–1669

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We were interested in the comment from Cosson et al. (1) on our recent report about high skin autofluorescence (sAF) in hyperglycemic mothers of large-for-gestational-age (LGA) newborns (2). Several reasons can explain why Cosson et al., and previously de Ranitz-Greven et al. (3), failed to detect a relationship between sAF and macrosomia.

The first explanation is the low number of participants, 100 in de Ranitz-Greven et al. (3) and 148 in Cosson et al. (1), which can lead to an underpowered study and a lack of statistical power, versus 343 in our study (2). It should be noted that odds ratios for LGA and other complications were >1, although not significant, in the study from de Ranitz-Greven et al. (3). Odds ratios for the association between sAF and macrosomia were not communicated in the comment by Cosson et al. (1).

Secondly, the patients studied by Cosson et al. (4) were mainly women of non-Caucasian origin, which differs from our participants. Their sAF values (mean 2.0 ± 0.5) were higher than those of our patients, close to the level measured in mothers of macrosomic newborns in our study. Higher sAF was indeed reported in women of North African, Eastern Mediterranean, and Asian origins (5). Moreover, the relation between early HbA_{1c} and pregnancy complications is stronger in non-Caucasian women (6); as Cosson et al. adjusted their analyses on HbA_{1c}, this probably reduced the link between sAF and macrosomia more than in our participants (2).

An interesting point in the previous report by Cosson et al. (4) is that it included some normoglycemic women, with lower sAF, at 1.79 ± 0.32 arbitrary units, than hyperglycemic women. At first sight, it seems surprising that the presumably lower birth weights of their newborns did not allow detection of a higher sAF in mothers of macrosomic newborns. However, there were only a few of them. As the women underwent oral glucose tolerance tests, which are only performed for high-risk pregnancies according to French guidelines (overweight, age >35 years, familial history of diabetes, or personal history of previous gestational diabetes mellitus or macrosomic infant), they should not be considered as normal pregnancies, despite normoglycemia. Further studies will be required to extend our findings to normoglycemic pregnant women and provide answers to the next important questions: can skin autofluorescence predict macrosomia outside the context of hyperglycemia, and can it predict gestational diabetes mellitus?

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

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