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Letter to the Editor

Heterogeneity of gestational diabetes – Do we take MODY into consideration as much as we should?

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We read with interest the article by Ryan DK et al. focused on early screening and treatment of gestational diabetes (GDM) in "high-risk women" that has been published recently in the journal [1]. We do not have any critical remarks directly to the study itself but in connection with this topic we consider it important to highlight an area of Maturity Onset Diabetes of the Young (MODY) which is closely connected and usually overlooked.

MODY comprises the group of 14 (yet recognized) specific types of diabetes with autosomal dominant inheritance, with the mutations in gene encoding glucokinase enzyme (*GCK*) and genes encoding transcription factors – hepatocyte nuclear factor 1α (*HNF1A*) and 4α (*HNF4A*) being the most prevalent [2].

The prevalence of *GCK*-MODY among pregnant women diagnosed with GDM may reach 5% [3]. In *HNF1A*-MODY or *HNF4A*-MODY it is lower – up to 1% [3]. The correct diagnosis of MODY is, however, important, as management of *GCK*-MODY and *HNF4A*-MODY during and after pregnancy is different from other forms of GDM (e.g. in prevention of developing foetal macrosomia in *GCK*-MODY [4] and *HNF4A*-MODY, in preventing neonatal hyperinsulinemic hypoglycemia in the offspring of parents with *HNF4A*-MODY[5], and in the subsequent management of diabetes therapy specific to each

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MODY type [2]). *HNF1A*-MODY is not associated with the above mentioned risks, as hyperglycaemia caused by *HNF1A* gene mutation can be managed with insulin or sulfonylurea derivatives and thus results in normal size-infants [2]. Nevertheless, poorly controlled diabetes (of any type) increases the risk of perinatal complications concerning both, the mother and the baby.

GCK-MODY and also *HNF1A*-MODY or *HNF4A*-MODY can be distinguished from GDM by conducting a detailed analysis of their usual features (a mild fasting hyperglycaemia, a small increment in the 120th minute during an oral glucose tolerance test (oGTT), a near normal HbA1c and BMI, a positive family history [2], and current pregnancy-specific screening criteria (combination of pre-pregnancy BMI < 25 kg/m^2 and fasting glucose ≥ 5.5 mmol/L during pregnancy [4])). However, it should be mentioned that the validity of BMI, HbA1c, oGTT findings and family history as discriminatory markers has been questioned [3]. Later, during regular check-ups post partum or in subsequent pregnancy, other criteria, such as foetal macrosomia and insulin requirement only during pregnancy with subsequent control on diet [4], may additionally lead to suspicion of *GCK*-MODY.

Thus, in our opinion, MODY should be considered in differential diagnosis of GDM more routinely.

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Conflict of interest

The authors declare that they have no conflict of interest.

Compliance with ethical standards

This article does not contain any studies with human participants or animals performed by any of the authors.

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.diabres.2018.11.009.

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