

Fetal Abdominal Obesity Detected at 24 to 28 Weeks of Gestation Persists until Delivery Despite Management of Gestational Diabetes Mellitus (*Diabetes Metab J* 2021;45:547-57)

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First, fetal abdominal obesity (FAO) has been detected as early as 21 weeks of gestation in our unpublished results which was submitted elsewhere. Considering that FAO is mainly associated with fetal hyperinsulinemia and that an increase in fetal pancreatic insulin production is observed as early as 10 to 14 weeks of gestation in the mother with pre-gestational diabetes mellitus (GDM) [1], we assume that interventions such as lifestyle modifications related to diet and exercise should be initiated well before or early in pregnancy to reduce the risk of FAO. Further studies are necessary to clarify this.

Secondly, at the time of diagnosis of GDM, the risk of FAO in young and non-obese GDM was not higher than the risk in women with normal glucose tolerance (NGT), but the risk of FAO was significantly increased in those who were older and/or obese with GDM [2]. Near term, although the risk of FAO in young and non-obese GDM was not higher than in NGT subjects, the risk of FAO in older and/or obese subjects with GDM was persistently higher than in NGT subject despite treatment [3]. We suggest that the risk of FAO in young and


non-obese GDM remained as low as NGT with appropriate treatment, but that the increased risk for FAO in older and/or obese GDM was not improved. Fetal hyperinsulinemia was already established at diagnosis of GDM in high risk older and/or obese women and was thought to persist until delivery, resulting in FAO near term.

Finally, this study has limitations mainly due to its retrospective nature. Because we focused on whether FAO in high-risk women with GDM improves or persists under the current best practice guidelines, there is not enough data on factors affecting fetal growth such as maternal lipid profile [4], as you mentioned. More extensive research is needed to explain the findings we observed.

In conclusion, FAO associated with fetal hyperinsulinemia begins much earlier during pregnancy than other issues related to large for gestational age or macrosomia. Therefore, interventions before or during early pregnancy are recommended to prevent FAO.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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