CONTINUED EXCESSIVE WEIGHT GAIN DURING GDM TREATMENT INCREASES THE LIKELIHOOD OF INSULIN INITIATION AND HAVING AN LGA INFANT

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Background: Women with Gestational Diabetes Mellitus (GDM) have commonly exceeded Institute of Medicine (IOM) weight gain targets by first presentation to diabetes services.
Aim: Determine whether continued excessive gestational weight gain (cEGWG) is associated with greater likelihood of insulin initiation and Large-for-Gestational-Age (LGA) infants.
Methods: Prospectively collected (1992-2015) data from GDM pregnancies managed by Australasian Diabetes in Pregnancy Society guidelines were analysed. Women received two dietetic appointments, with weight measured at each 1-2 weekly multidisciplinary clinic visit. Inclusion criterion: exceeding IOM weight gain targets (according to self-reported pre-pregnancy BMI) at presentation: ≥18.1kg (BMI ≤18.5kg/m^2); ≥16.1kg (18.5-24.9kg/m^2); ≥11.6kg (25.0-29.9kg/m^2); ≥9.1kg (≥30.0kg/m^2). cEGWG was assessed incrementally: ≤0kg, 0.1-2kg, 2.1-4.0kg, 4.1-6.0kg, 6.1-8.0kg, >8.0kg. Exclusions: last recorded weight >4 weeks pre-delivery; managed for <3 weeks. cEGWG was included in multivariable logistic regression models adjusted for confounders predictive of insulin therapy and LGA. Outcomes: insulin therapy initiation, mean insulin dose and LGA rates.
Results: Of 3345 pregnancies, 776 met criteria. Mean±SD: age 31.8±5.6 years; GDM diagnosis 27.7±4.2 weeks, pre-pregnancy BMI 29.2±6.0kg/m^2; weight gain at presentation 16.3±5.0kg; total maternal weight gain 18.0±5.8kg; weight gain during GDM treatment 1.7±3.2kg. cEGWG was an independent predictor of insulin initiation, higher mean insulin dose and LGA (all p<0.0001). Incremental increases in cEGWG were associated with 24.7% (95%CI 11.0-40.1) and 30.4% (95%CI 16.8-45.7) increased likelihood of insulin initiation and LGA respectively.
Conclusions: cEGWG during GDM treatment was associated with a greater likelihood of insulin therapy initiation and having an LGA infant. Research evaluating strategies to minimise excessive weight gain are warranted.

References:

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