

Does Maternal Weight Gain in Gestational Diabetes Affect Fetal Growth?

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BACKGROUND

Management of GDM includes dietary modifications and restrictions that often result in stunted maternal weight gain. Well controlled mothers with GDM are often concerned that lack of weight gain may negatively impact fetal health.

STATISTICS

- ANOVA
- t-test
- Chi-square
- Fisher exact test
- Multiple logistic regression.

Association of Weight Gain with Birth Weight Percentiles

	I N=17 BW <10%	II N=119 BW 10-75%	III N=31 BW 76-90%	IV N=31 BW >90%
Total Weight gain	28.29 ± 11.89	26.7 ± 13.4	33.9 ± 10*	30.7 ± 11.4
Weight gain per week	0.37 ± 0.56	0.43 ± 0.6	0.74 ± 0.58**	0.67 ± 0.74**

*p < .05 vs II

**p < .05 vs. I and II

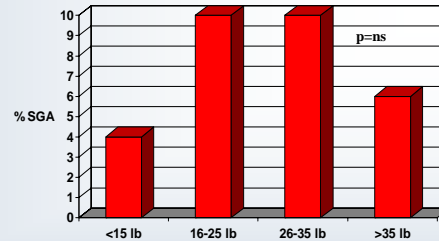
HYPOTHESIS

Limited third trimester weight gain in GDM is associated with a decreased risk of LGA without increasing the risk of SGA.

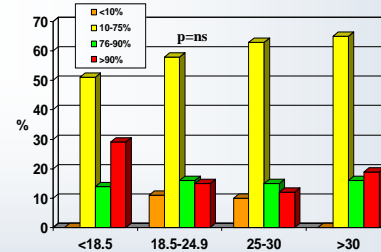
MATERIALS AND METHODS

- Retrospective chart review of 199 patients with GDM diagnosed in second or third trimester managed prospectively in the Diabetes in Pregnancy Program
- Women with Pregestational diabetes excluded
- GDM defined using Carpenter Coustan Criteria with at least 1 abnormal value on GTT
- Patients were in the Diabetes in Pregnancy Program at least 8 weeks
- Data were stratified by pre-pregnancy BMI categories
- Total weight gain was determined for the entire pregnancy
- Weight gain per week was determined for the duration of GDM management

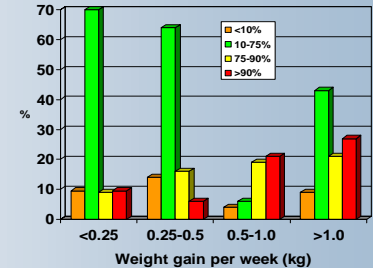
Incidence of SGA by Weight Gain



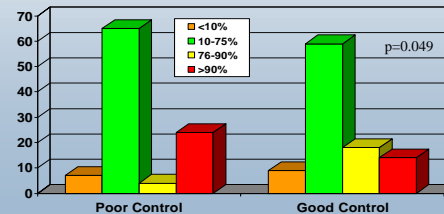
Distribution of Birthweight Percentile by BMI



Distribution of Birthweight Percentile by Weekly Weight Gain



Distribution of Birth Weight Percentile by Level of Glycemic Control



CONCLUSIONS

Improved glycemic control in GDM decreases the risk of LGA and may be associated with limited weight gain without increasing the risk of SGA.