

Gestational Diabetes: The influence of maternal weight gain on the newborn weight

Dualib P., Sanchez V.H., Morais L., Patz B., Mattar R.

Introduction

- In order to control hyperglycemia in patients with gestational diabetes it is recommended weight control and diet with low glycemic index.
- It is concerned that insufficient or excessive weight gain can influence on newborns small for gestational age (SGA) or large for gestational age

Objective

- To analyze on the population of women with gestational diabetes the gestational weight gain and its effects on the newborns weight according to the initial body mass index.

Methods

- Patients with gestational diabetes and single pregnancy attended at de Diabetes Center at UNIFESP-Brazil .
- The body mass index was classified according to the World Health Organization criteria; Underweight (<18), Normal Range (18 -24,9), Overweight (25 - 29,9) and Obese (>30). Weight gain was considered according to the NIH criteria for each range, considering adequate weight gain: U: 9,5 a 18Kg, N: 11,5 a 16 Kg, Ov: 7 a 11Kg, O: 5 a 9 Kg

Methods

- Lower and higher values were considered insufficient or excessive.
- Considering the initial BMI, the newborn weight was evaluated according to the maternal weight gain.

Results

- 413 pregnancies were analyzed, 1 was underweight, 92 normal range, 142 overweight and 178 obese.
- 128 had insufficient weight gain, 130 normal weight gain and 155 excessive weight gain.

Conclusion

- Patients with overweight and obesity who had excessive weight gain had more newborns LGA.
- It wasn't observed a relation between low weight gain and SGA.

Results – baseline characteristics

	Age	BMI	Weight Gain
Normal weight	33,6 + 6,3	22,7 + 1,7	11,8 + 4,5
Overweight	32,8 + 5,5	27,5 + 1,5	10,5 + 5,2
Obese	34,3 + 5,3 *	34,9 + 4,7	9,1 + 5,9 *

*p: 0,06 ANOVA * p: 0,05

	SGA	NGA	LGA
Normal weight	8%	90%	2%
Overweight	6%	85%	9%
Obese	6,5%	81%	12,5%

p:0,14 Pearson

	Weight gain	N	SGA	%	LGA	%
Normal	Insufficient	55	3	5,4	1	1,8
	Excessive	14	3	21,4	1	7,1
Overweight	Insufficient	32	2	6	4	12,5
	Excessive	63	2	3	7	11
Obese	Insufficient	41	5	12	2	4,8
	Excessive	77	2	2,6	13	16,8

-2 normal weight women who had SGA and excessive weight gain babies were hypertensives
-2 overweight women who had LGA and insufficient weight gain had hypertriglyceridemia