PHARMACOLOGICAL TREATMENT OF GESTATIONAL DIABETES

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Problem statement

Gestational Diabetes (GD) is associated with several maternal/fetal complications and its adequate metabolic control may allow to minimize them. Currently, the two most oftenly used pharmacological agents are: metformin and insulin. The latter is considered first line because of its safety and efficiency. However, metformin, for its convenience, lower price and better performance in pregnancy weight gain control is a frequently used alternative.^{1,2}

Some studies associated metformin with a slight increase in the risk of prematurity and lower birth weight.³

The aim of this study was to evaluate maternal and neonatal outcomes according to the pharmacological therapy used (metformin versus insulin).²

Methods

- ❖ Retrospective analysis of singleton pregnancies with GD with delivery in our hospital.
- ❖ Period of study: 04/2015 – 07/2019.
- ❖ Cases without pharmacological treatment were excluded.
- ❖ Maternal characteristics, pregnancy outcomes and neonatal outcomes were assessed.
- ❖ 2 dichotomic variables were created:
 - ❖ Maternal outcomes: preterm delivery, hypertensive complications, 3rd degree laceration, cesarean section;
 - ❖ Neonatal outcomes: macrosomia, large for gestational age (LGA); small for gestational age (SGA); apgar index (AI) <7 at 5' minute, need for oxygen therapy or intubation, admission to the neonatal intensive care unit (UCIN).

Results

Outcome	Group 1	Group 2	p value
Maternal age (mean, years)	34,76	34,62	p=0.87
Gestational age (mean, weeks)	38,8	38,2	p=0.03
Composed maternal outcomes (n,%)	20 (76,9%)	39 (84,8%)	p=0.53
Macrosomia (n,%)	1 (2,0%)	3 (3,9%)	p=0.65
Admission to UCIN (n,%)	1 (2,0%)	5 (6,6%)	p=0.40

- ✓ No differences were found in maternal characteristics between the two groups.
- ✓ No differences were found in hypertensive complications of pregnancy, type of delivery, labor induction rate, urgent/emergent cesarean section, birth trauma, birth weight, rate of macrosomia or LGA or composed maternal outcomes between groups.
- ✓ Prematurity rate was higher in group 2 (0 vs 11,8%, p=0.011).
- ✓ When considering a composed neonatal outcome, group 2 had worse outcomes (34,2% vs. 15,7% p=0.025), with no differences reported in a composed maternal outcome.

Conclusions

In our study, individual maternal and neonatal outcomes were similar between the two groups. However, considering the composed adverse neonatal outcomes, pregnant women with GD treated with insulin had worse outcomes.

In this way, our results, although using a small sample, don't allow to confirm previous studies.

References

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