

Maternal and Neonatal Outcomes According to Different Therapies for Gestational Diabetes Mellitus

Rozeta Shahinaj^{1*}, Brunilda Hasanbelli², Denis Shkullaku²

¹ University Hospital of Obstetrics and Gynecology “Queen Geraldine” of Tirana, Albania

² University of Medicine, Tirana; Albania

Abstract

Objective: The aim of this study is to evaluate and compare various maternal and newborn outcomes associated with different therapeutic approaches utilized in the management of Gestational Diabetes Mellitus (GDM).

Materials and Methods: The present investigation employed a retrospective comparative study. The study population consisted of 48 pregnant women diagnosed with GDM who gave birth at the University Hospital of Obstetrics and Gynecology 'Queen Geraldine' in Tirana, between January 2018 and December 2022. We collected the data from the medical charts of these patients. The analysis of maternal and neonatal outcomes was conducted with respect to the treatment administered, namely

insulin treatment or dietary treatment. The maternal and neonatal outcomes that were assessed included birth weight, mode of delivery, gestational age at delivery, blood glucose levels in both mothers and neonates, and the Apgar score at 5 minutes.

Results: The study sample comprised a total of 48 pregnant women. There was a statistically significant difference in the mean birthweight between the two groups, with the first group having a mean birthweight of 3863g and the second group having a mean birth weight of 3300g (t 2.50682, $p < 0.007$). There was no significant statistical difference observed between the two groups in terms of the mode of delivery (χ^2 0.0274, $p < .86$), gestational age at

delivery (36.42 weeks vs 37.07 weeks, t 0.80, $p < 0.21$), the mean blood sugar level in neonates (56.03 mg/dl vs 62.07 mg/dl, t 0.96, $p < 0.16$), and Apgar score at 5 minutes (8.53 vs 8.32, t 1.00, p -value 0.16). There was a statistically significant difference in the mean blood sugar levels between the two groups of mothers 152.52 mg/dl in the insulin treatment group and 115.67 mg/dl in the dietary treatment group, (t 1.76, $p < 0.04$).

Conclusion: In conclusion, our study highlights the need for a more comprehensive understanding of the implications of different therapeutic approaches for GDM, particularly in the context of maternal and neonatal outcomes. Further research is essential to delve into the complexities of this issue and provide a more accurate assessment of the effectiveness of insulin treatment in pregnancy.

Keywords: GDM, insulin treatment, neonatal outcomes.