Online publication ahead of print, AJMHS Vol 52, 2020

Correlation of HbA1c with a Basic Math Test in Gestational Diabetes

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Abstract

Background: A good metabolic control in Gestational Diabetes Mellitus (GDM) is crucial to avoid complications in the mother and the offspring. A limitation to reach a desired HbA1c in GDM is the education level of the mothers.

Aims: The aim of this study was to determine the correlation between the HbA1c and the points obtained in a basic mathematical test.

Study Design: cross-sectional study.

Methods: This was a pilot study, prospective and cross-sectional. Pregnant women, older than 18 years old, diagnosed with GDM were invited to participate resolving a mathematical test of ten questions. HbA1c was done in the first consultation. Spearman correlation test was used between HbA1c and the punctuation of the mathematical test.

Results: 31 patients with a mean age of 29 ± 6.7 years old accepted to participate. The education level was as follows: 5 (16.12%) with Primary School, 20 (64.51%) with High School, 2 (6.45%) with Preparatory School, 2 (6.45%) with technical studies and 1 (3.22%) that finished the University. The Spearman test showed a negative correlation between the mathematical test and the HbA1c (r^2 = -0.395, $P \leq 0.001$).

Conclusion: A low mathematics knowledge limits the expectation to get an optimal metabolic control in GDM.

Key-words: Gestational Diabetes, Glycated Hemoglobin A, Mathematical Concepts.

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