PREDICTIVE VARIABLES OF GLP-1 LEVELS IN THE POSTPARTUM REASSESSMENT OF WOMEN WITH A HISTORY OF GESTATIONAL DIABETES

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INTRODUCTION

The diversity pattern of GLP-1 secretion in healthy subjects and patients with carbohydrate metabolism disorders need to be identified and characterized to analyze individual responses to GLP-1.

OBJECTIVE

To study the GLP-1 pattern of secretion after an oral glucose tolerance test (OGTT) in women in postpartum reassessment of previous gestational diabetes (GDM). To evaluate clinical and laboratory parameters that can influence GLP-1 secretion.

RESULTS

A year after delivery

<table>
<thead>
<tr>
<th>TOTAL (n=48)</th>
<th>NORMAL OGTT (n=23)</th>
<th>PATHOLOGICAL OGTT (n=25)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>35.04 ± 4.9</td>
<td>5.32 ± 0.33</td>
<td>5.61 ± 0.39</td>
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<tr>
<td>BMI (kg/m²)</td>
<td>29.76 ± 6.5</td>
<td>1.6 ± 0.8</td>
<td>2.8 ± 1.6</td>
</tr>
<tr>
<td>Waist (cm)</td>
<td>94.3 ± 14.8</td>
<td>160.35 ± 32.25</td>
<td>174.24 ± 30.16</td>
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<tr>
<td>Δ BMI (kg/m²)</td>
<td>0.39 ± 2.4</td>
<td>47.52 ± 11.44</td>
<td>49.68 ± 13.21</td>
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<tr>
<td>SBP (mmHg)</td>
<td>117.8 ± 12.3</td>
<td>97.93 ± 26.9</td>
<td>102.79 ± 20.78</td>
</tr>
<tr>
<td>DBP (mmHg)</td>
<td>77.2 ± 9.5</td>
<td>79.35 ± 13.7</td>
<td>110.78 ± 57.03</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- Women with GDM history and prediabetes/diabetes diagnosis in postpartum reassessment, do not differ in GLP-1 secretion after OGTT compared to healthy subjects.
- The parameters related to GLP-1 response in postpartum OGTT are BMI, triglycerides, HDL-C and insulin AUC.

MATERIAL AND METHODS

- 48 women with a history of GDM were assessed one year after childbirth determining clinical and analytical characteristics and OGTT with 75g.
- We measured glucose, insulin and GLP-1 (baseline, 30’, 60’, 120’). Women were classified according to the results of OGTT as healthy and prediabetic/diabetic patients.
- A general descriptive analysis, Mann-Whitney test, bivariate correlations for quantitative variables (Pearson) and multiple linear regression analysis were performed. The area under the curve (AUC) was calculated using the method of Riemann.

Dependent variables

- GLP-1 AUC (pmol/L)
- ΔGLP-1 (pmol/L)

Predictive independent variables

- Age
- Waist
- BMI
- SBP
- DBP
- OGTT AUC
- TGs
- HOMA-IR
- HOMA-B
- Insulin AUC

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