

Levels of Selected Adipokines in Women with Gestational Diabetes and Type 2 Diabetes, Their Relationship to Metabolic Parameters

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Abstract : Introduction: Adiponectin, adipocyte-fatty acid-binding protein (A-FABP), and Wnt1 inducible signaling pathway protein-1 (WISP-1) are adipokines particularly associated with insulin resistance. The aim of the study was to compare their levels in women with gestational diabetes (GDM), type 2 diabetes mellitus (T2DM) and healthy controls and determine their relation with metabolic parameters. Methods: Fifty women with GDM, 50 women with T2DM, and 35 healthy women were included in the study. In addition to adipokines, anthropometric, lipid parameters, and markers, insulin resistance, and glucose control were assessed in all participants. Results: Compared to healthy controls only significantly lower levels of adiponectin were detected in women with GDM, whereas lower levels of adiponectin, higher levels of A-FABP and of WISP-1 were present in women with T2DM. Women with T2DM had also lower levels of adiponectin and higher levels of A-FABP compared to women with GDM. In women with GDM or T2DM adiponectin correlated negatively with body mass index (BMI), triglycerides (TG), C-peptide and positively with HDL-cholesterol; A-FABP positively correlated with BMI, TG, waist, and C-peptide. Moreover, there was a positive correlation between WISP-1 and C-peptide in women with T2DM. Conclusion: Adverse adipokines production detecting dysfunctional fat tissue is in women with GDM less presented than in women with T2DM, but more expressed compared to healthy women. Acknowledgment: Supported by AZV NV18-01-00139 and MH CZ DRO (FNOL, 00098892).

Keywords : adiponectin, adipocyte-fatty acid binding protein, wnt1 inducible signaling pathway protein-1, gestational diabetes, type 2 diabetes mellitus

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