

## **The Correlation between Insulin Resistance and Urotensin II in Patients with Gestational Diabetes Mellitus**

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### **Abstract**

**Gestational diabetes mellitus is glucose intolerance of varying degree with onset or first detection during pregnancy, it can cause long and short term morbidities in both the mother and the child, such as shoulder dystocia, preeclampsia, and high blood pressure. The most powerful endogenous vasoconstrictor peptide, urotensin II, and its receptor are involved in the etiology of gestational diabetes mellitus.**

**Aim of the study: The study's goal was to see if there is a link between Urotensin II levels and insulin resistance in pregnant women with gestational diabetes.**

**Patients and method: A case-control study that was conducted in obstetrics and gynecology department at Baghdad Teaching hospital from the first of January 2019 to the end of December 2019. A sample of 80 pregnant women participated in the study fulfilling inclusion criteria. 40 of them diagnosed with gestational diabetes mellitus by (2 hours 75 gm. Oral glucose tolerance test) and 40 women as control group.**

**Results: The mean age of the gestational diabetes mellitus group was  $29.8 \pm 6.9$  years and control was  $29.7 \pm 6.6$  years with no significant differences. The study showed highly significant increase in fasting Insulin, fasting blood glucose, Homeostatic Model Assessment for Insulin Resistance (HOMA-IR), of the GDM group than that in the group without disease. Significant difference was found regarding high-sensitivity C-reactive protein hs-CRP ( $p=0.004$ ). The level of Urotensin II in subjects with gestational diabetes was ( $109 \pm 33.22$ ) highly**

increased than that in healthy subjects ( $78\pm 22.6$ ). There is a positive correlation between circulating Urotensin II levels with fasting insulin, and HOMA-IR. While negative correlation found with fasting blood glucose.

**Conclusion:** The level of UII was found to be raised in gestational diabetes pregnant women

**Keywords:** Diabetes; insulin resistance; urotensin II.