

## Study the Effect of Uric Acid level in Gestational Diabetes Women and Relationship with other Biochemical Parameters

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### ABSTRACT

Gestational diabetes (GDM) is a type diabetes mellitus that first appears or is identified during pregnancy. It plays a significant role in the transmission of diabetes from generation to generation and is a leading source of morbidity in mothers and infants. The purpose of this study was to compare and analyze the impact of uric acid as a clinical predictor of GDM in pregnant women in the first, second, and third trimesters of pregnancy. Ninety Iraqi women with gestational diabetes, aged between (20-45) years participated in the study. All patients were divided into three groups: 30 women (G<sub>1</sub>) first trimester ( $\leq 12$  weeks), 30 women (G<sub>2</sub>) second trimester ( $\geq 13$ -28 weeks), and 30 women (G<sub>3</sub>) third trimester ( $\geq 29$ -40 weeks). All women underwent clinical and biochemical examinations, including glucose monitoring, uric acid, blood urea, serum creatinine, and liver function tests [alkaline phosphate, aspartate aminotransferase and alanine aminotransferase]. The results of the study indicate a highly significant increase in FBS, urea, ALP, SGOT in the comparison groups ( $P < 0.001$ ). A significant difference increases at ( $P < 0.05$ ) for the groups participating in the study such as HOMA-IR%. While uric acid had a significant increase difference at ( $P < 0.05$ ) between the participating groups. Moreover, the results have been varied in between a negative and positive relationship for uric acid and other measured parameters. Increased uric acid levels in the first trimester until the third trimester of pregnancy is associated with risks of developing GDM.

**Keywords:** *Gestational Diabetes Mellitus, Insulin resistance, Serum uric acid, Liver function tests.*

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