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Serum Uric Acid Levels and Risk of Gestational Diabetes

Increase in serum uric acid levels prior to 24 weeks of gestation has been linked to risk of gestational diabetes mellitus (GDM) in an observational study recently published in the *Journal of Clinical Endocrinology and Metabolism*.¹

Researchers retrospectively analyzed data of pregnant women with singleton pregnancies from February 2018 to June 2022 to investigate the association between serum uric acid levels before 24 weeks of gestation and subsequent odds of GDM and other adverse pregnancy outcomes.

Out of the 24,023 women included in the study, 3,204 (13.34%) developed GDM between 24 and 28 weeks of gestation. A strong association was observed between uric acid levels and risk of GDM, the primary outcome of the study. The relative risk for GDM was 1.43 among women with uric acid levels ranging from 240-300 $\mu\text{mol/L}$. The relative risk increased to 1.82 with

rise in serum uric acid levels more than 300 $\mu\text{mol/L}$. A similar association was observed between serum uric acid levels and the secondary outcomes of the study, which were GDM type A2 requiring medication for optimal glycemic control, preterm birth and GDM combined with preeclampsia.

These findings show that detection of elevated uric acid levels before 24 weeks of gestation is associated with risk of gestational diabetes. The study further suggests that "the best time to test for uric acid is before 18 weeks of gestation". Hence, monitoring of uric acid levels in early pregnancy may identify women at risk of GDM allowing early intervention.

Reference

1. Yue C, Ying C, Li X. Elevated serum uric acid is associated with gestational diabetes mellitus: an observational cohort study. *J Clin Endocrinol Metab*. 2023;108(7):e480-e486.

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