Correlation of Serum Uric Acid Levels and Type-2 Diabetes Mellitus in A Tertiary Care Hospital

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ABSTRACT:

Background: Type 2 diabetes mellitus (T2DM) is associated with insulin resistance, metabolic syndrome, and oxidative stress. Serum uric acid (SUA) levels have been linked to T2DM, but the relationship remains unclear. This study was aimed to assess the association between SUA levels and duration of diabetes, glycemic control (HbA1c), and markers of metabolic syndrome in patients with T2DM.

Materials &Methods: This hospital-based cross-sectional observational study included patients with T2DM aged ≥18 years, attending the OPD of General Medicine department. Patients with renal disorders, uricosuric drugs, renal calculi, chemotherapy, or unwilling participants were excluded.

Results: Mean age was 51.69±15.104 years, with 55.6% females. Mean duration of diabetes was 11.55±6.47 years in patients with normal SUA levels and 10.70±7.09 years in those with increased SUA levels. Significantly higher proportions of cases with raised SUA levels had HbA1c >8.5% (66.2% vs. 49.3%), whereas normal SUA levels had HbA1c <7.5% (31.3% vs. 11.7%). The association between SUA and HbA1c was statistically significant.

Conclusion: This study suggests a positive correlation between serum uric acid levels and poor glycemic control in patients with type 2 diabetes mellitus.

KEY WORDS: Serum Uric Acid; Type 2 Diabetes Mellitus; Glycemic Control; Metabolic, Syndrome; Insulin Resistance.