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**Original article:
A study of serum adenosine deaminase activity in type 2 diabetes mellitus with and without complications and its co-relation with serum uric acid level in glycemic control**

**Mon Mohan Boro1, Deepika Lahon2, Barnali B. Thakur3**

1Post Graduate Trainee, Department of Biochemistry, Gauhati Medical College & Hospital, Guwahati, Assam, India.

2MD Biochemistry, Associate Professor, Department of Biochemistry, Gauhati Medical College & Hospital, Guwahati, Assam, India.

3MD Biochemistry, Assistant Professor, Department of Biochemistry, Gauhati Medical College & Hospital, Guwahati, Assam, India.

Corresponding author: Mon Mohan Boro

**Abstract:**

**Introduction**: Diabetes Mellitus is a leading cause of death worldwide. ADA an enzyme involved in purine metabolism, is suggested to be involved in modulating bioactivity of insulin. However, its clinical importance in type 2 DM is still not conclusive. Present study was undertaken to assess and compare level of serum ADA activity in type 2 DM patients with and without complications.

**Materials and method**s: The study consisted of 80 patients with type 2 DM, admitted in Gauhati Medical College and Hospital and 40 healthy individuals as controls (Group I). The patients were further divided into two groups on the basis of HbA1c levels (Group II with HbA1c<7%; Group III with HbA1c>7%). Serum ADA, Fasting plasma glucose, HbA1c and Serum uric acid were estimated in all the groups.

**Results**: All the three parameters, FBS, HbA1c and ADA levels were found to be increased in the patients of Type 2 DM as compared to controls. The correlation of mean serum uric acid levels with HbA1c showed a bell shaped relation.

**Conclusion**: From the present study, it is concluded that there is an increase in serum ADA levels with increase in HbA1c levels. It was found that the serum uric acid levels increased with moderately increasing levels of HbA1c <7% and then decreased with further increasing levels of HbA1c >7% (a bell-shaped relation).

**Keywords:** Type 2 Diabetes mellitus, ADA, Fasting Plasma Glucose, Glycated hemoglobin, Uric acid.