

## Evaluation of Sialic Acid Levels in Type-2 Diabetes Mellitus Patients in NCR, Delhi

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### ABSTRACT

**Background:** Diabetes mellitus is one of the most common metabolic disorders which is characterized by chronic hyperglycemia, and it is associated with increased prevalence of microvascular complications. Serum sialic acid has developed as a potential risk factor for Type-2 Diabetes Mellitus. In Type-2 diabetic individuals, elevated serum sialic acid is often observed as compared to non-diabetic individuals.

**Materials and Methods:** The study conducted in NCR; Delhi was a cross-sectional analysis on 70 participants between the age group of 30 to 70 years. This included two groups of thirty-five individuals with type-2 diabetes mellitus recruited as cases (15 males and 20 females) and thirty-five individuals without diabetes taken as controls (16 males and 19 females). Fasting blood glucose and serum sialic acid in the both groups were measured.

**Results:** In the present study, serum sialic acid levels were shown to be increased in type-2 diabetes mellitus ( $76.60 \pm 7.89$ ) compared to non-diabetics ( $39.66 \pm 9.55$ ) with a statistically significant p-value of  $< 0.001$ .

**Conclusion:** On the basis of present study, it is concluded that the serum sialic levels were found to be increased in Type 2 diabetic patients of Delhi-NCR which reflect that these patients were at the risk of developing microvascular complications. Therefore, estimating sialic acid levels may aid in early diagnosis and prevention of microvascular complications caused by type 2-diabetes mellitus.

**Keywords:** Sialic acid, Type-2 Diabetes Mellitus, Hyperglycemia

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