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**Genotoxic Susceptibility among the People of different Prakriti groups having Type 2 Diabetes Mellitus**

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**Statement of Problem:** The increasing occurrence of multi-organ affecting type 2 diabetes mellitus now becomes a serious threat to public health. Ayurveda classifies human population as combination of three Doshas- Vata, Pitta, and Kapha according to their basic constitution known as “Prakriti”. The Tridoshas work in harmony to maintain good health in an individual. Any alteration of an individual’s homeostatic state of Doshas can lead to various diseases. Elevation of the doshas beyond an individual’s threshold causes specific doshic disorder. The study has been designed to investigate the clinical, anthropological and induced-genotoxic variation among the Prakriti groups having type 2 diabetes mellitus.

**Methodology & Theoretical orientation:** This study was conducted with total sixty participants (age 30-70 years), ten in each Prakriti groups having type-2 diabetes mellitus with control. The selection was conducted as per the standard Prakriti assessment chart. The differences in biochemical parameters, DNA content and damage, apoptosis, ROS generation, interaction of DNA with heavy metals were observed. GraphPad Prism 8 was used to analyze the data;  $p < 0.01$  was considered statistically significant.

**Findings:** Biochemical analysis suggested that people of Kapha is most susceptible to the renal and hepatic disorders. Whereas, significant decrease in DNA content ( $p < 0.05$ ), higher percentage of DNA damages were observed in Vata Prakriti ( $p < 0.01$ ) people having diabetes. The total cell damage and yield of ROS was also significantly higher in Vata Prakriti ( $p < 0.0001$ ) in comparison to other. The Vata and Kapha Prakriti were more prone to lead (II) and Vata and Pitta Prakriti were genetically more susceptible to arsenic metals.

**Conclusions & Significance:** The results indicate that people of Vata Prakriti are the most genetically susceptible group in comparison to others. These could help in creating personalized treatment of diabetes among individual Prakriti. A worldwide assessment is needed for better applicability.