

The Study Of Palmar Dermatoglyphics In Non-Insulin Dependent Diabetes Mellitus Patients

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ABSTRACT:

Aims and Objectives: To study the finger and palmar dermatoglyphic pattern, establish sexual differences and find out whether a specific dermatoglyphic trait/ features exists in non-insulin dependent diabetes mellitus patients and whether it is significant.

Background: Dermatoglyphics is the scientific study of papillary ridges in the palm of the hand and fingers and soles of the feet and toes. The dermal ridges and the configuration which is once formed are not affected by age, development and environmental changes in the post-natal life and so, it has the potential to predict various genetic and acquired disorders with a genetic influence. The etiology of diabetes mellitus is multifactorial with genetics playing an important role. Taking into consideration the genetic predisposition of dermatoglyphics and diabetes mellitus type-2, the study was undertaken to find out correlation between them.

Methods: The sample size is 100 patients (60 male and 40 female) of non-insulin dependent diabetes mellitus and Similarly 100 numbers of normal healthy individual (60 male and 40 female), all above 30 years of age group. The patients were selected from the medicine wards and diabetic outpatient department of Civil Hospital Ahmedabad. Dermatoglyphic prints were taken by the "INK METHOD" as described by CUMMINS (1936) and CUMMINS & MIDLO (1961). Observations thus made were compiled and tabulated. Mean and standard deviation were calculated further to test the significance of the differences of observations in different subgroup of study sample.

Results: There is statistically significant decrease in whorl pattern is seen in total cases as well as in female of NIDDM cases. Statistically significant difference in loop pattern is seen in D-IV in female ($p=0.01$) of NIDDM cases and whorl pattern is seen in D-IV in female ($p=0.01$) and D-III in right hand ($p=0.01$) of NIDDM cases.

Conclusion: Thus from the present study, it appears that there do exists a variation in the dermatoglyphic patterns in NIDDM with an advantage of being very simple and economical 'ink' method. As the specific features of dermatoglyphic patterns are present in the NIDDM, it can be used for mass screening programme for prevention of NIDDM.

Key Words: Dermatoglyphics, Non-Insulin Dependent Diabetes Mellitus

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