MATERIAL & METHODS
This study was carried out in 100 consecutive cases of diabetes mellitus attending diabetic clinic and/or patients admitted in M.L.B. Medical College Hospital, Jhansi and their 60 available first blood relatives. Diagnosis of diabetes mellitus was made according to clinical and biochemical criteria of W.H.O Expert Committee on Diabetes Mellitus, 1980.

Only those cases included in the study who developed diabetes mellitus spontaneously. The diabetes mellitus cases were divided into juvenile or early onset ($\leq 40$ years) and maturity or late onset ($\geq 40$ years) according to their age of onset of disease (Verbov, 1973; Foster, 1980). There were 50 cases of early onset diabetes mellitus (30 males and 20 females) and 50 cases of late onset diabetes mellitus (30 males and 20 females). Among first-blood relatives 40 were males and 20 females.

120 age and sex matched healthy subjects who did not have any personal or family history of diabetes mellitus and had normal blood sugar were studied as controls.

All subjects were of Indian ancestry having their grand parents born in India. Patients who had any associated conditions which are known to have abnormal dermatoglyphic characteristics were excluded.
DIFFERENT DERMATOGLYPHICAL PARAMETERS STUDIED

1. DIGIT PATTERN
2. RIDGE COUNT (TFRC)
3. AXIAL TRIRADIi
4. atd ANGLE
The Cotterman technique of taking the prints of palms and fingers comprised of first cleaning and then drying the skin of the palms and fingers of both hands. Then a small daub of printer's ink was placed on a sheet of paper and spread with a roller into a thin even film. The roller was then rolled on the outstretched palm. After ensuring that the ink had spread evenly, the palm was applied on a sheet of plain art paper and uniform pressure exerted on the dorsal aspect of the hand. The palm was then removed and the print was left to dry.

These prints were analysed with the help of a magnifying lens.

All the relatives were subjected to clinical and biochemical evaluation to find out evidence of diabetes mellitus in them and it was correlated with dermatoglyphic patterns.

The analysis of the finger and palm prints of both hands was done under the following four headings:

1- Digit patterns of the finger:
   (a) Whorl (W)
   (b) Loop (L)
   (c) Arch (A)

2- Ridge count: This was done from triradial point to point of core. A single value for an individual
was obtained as total finger ridge count (TFRC) consisting of a quantitative assessment of pattern on the fingers (Bonnevie, 1924).

3- Presence of Axial triradius and its position.

4- Value of a t d angle.

Blood sugar estimation was done by Folin-Wu method (1920).

Statistical analysis was done by test of significance with Students "t" test for quantitative evaluation and Chi-square ($\chi^2$) test for qualitative evaluation.