The objective of this study was therefore to establish the dermatoglyphic patterns and parameter values of recurrent pregnancy loss patients compare to normal individuals and to rule out statistical difference.
Materials and Methods

Ethical clearance was obtained from the institutional ethical committee at Madras Medical College - Rajiv Gandhi Government General Hospital, Chennai. The fingerprints were obtained by the method as suggested in Home office 1960 [8]. The present study has been carried out on 200 individuals all above 25 years of age group. The sample included 100 patients with confirmed recurrent pregnancy loss from Rajiv Gandhi Government General Hospital, Chennai. The fingerprints were obtained from both outdoor as well as indoor patients. While selecting patients, all cases with doubtful diagnosis of any genetic disorder were excluded. The control group constituted of 100 healthy normal females all above 25 years of age without any hereditary diseases or genetic disorder. The fingerprints were collected from the subjects, after clearly explaining the nature and purpose of the study. All the patients were asked and got their palmer dermatoglyph impression on plain white A4 paper used the ink method. In this method ink was applied on the patient’s fingers. The prints pattern of the fingers were taken by roll on technique, where the coated fingers were rolled from the one edge of the finger to the other end on a A4 paper [9]. The person fingers patterns can be documented on the sheet for further analysis. Each finger print was examined with a hand lens to identify the finger print pattern [10]. The subjects were asked to clean their hands with soap & water and to dry them but leave some moisture.

The Parameters Studied Were

- The digital pattern-loop- ulnar loop/ radial loop/ whorl/ arch

Study design

- Cross sectional study

Sample size

- 200

Results

In the present study, carried out on 100 Recurrent Pregnancy Loss cases as compared to100 controls, were analyzed for the general prevalence of different finger print patterns, of these Recurrent pregnancy loss cases 5.65% were found to have Radial loops, 52.72% were found to have Ulnar loops, 30.18% were found to have whorls and 11.45% were found to have Arches (figure-1) (Table-1).

The result obtained from the controls 5.15% were found to have Radial loops, 60.15% were found to have Ulnar loops, 28.25%were found to have whorls and 6.45% were found to have Arches (figure- 2) (Table-1). Recurrent pregnant loss cases ulnar loop was found more and there was significant decrease in frequency of Ulnar loops of recurrent pregnancy loss patients as compared to controls.(figure- 3) (Table-1).

Table 1: Distribution of Finger Print Pattern in Recurrent Pregnancy Loss Cases & Control Group

<table>
<thead>
<tr>
<th>Patterns</th>
<th>Recurrent Pregnancy Loss</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial Loops</td>
<td>5.65%</td>
<td>5.15%</td>
</tr>
<tr>
<td>Ulnar Loops</td>
<td>52.72%</td>
<td>60.15%</td>
</tr>
<tr>
<td>Whorls</td>
<td>30.18%</td>
<td>28.25%</td>
</tr>
<tr>
<td>ARCHES</td>
<td>11.45%</td>
<td>6.45%</td>
</tr>
</tbody>
</table>

Fig 1: Chart Showing Recurrent Pregnancy Loss Subjects

Fig 2: Chart Showing Control Subjects

Fig 3: Comparison of Recurrent Pregnancy Loss with Control Subjects
Discussion
Dermatoglyphics is a growing discipline and its easy and ready applicability renders it as a useful tool to the clinician. The relevance of dermatoglyphics is not to diagnose, but to prevent by predicting a disease; not for defining an existing disease, but to identify people with genetic predisposition to develop certain diseases [11]. Heredity plays an important role in the formation of dermatoglyphics patterns. The inheritance of dermatoglyphic traits was initially studied by Galton in 1892, Wilder in 1902, Penrose in 1954 and Holt in 1968 [12]. Recurrent pregnant loss cases ulnar loop was found more and there was significant decrease in frequency of Ulnar loops of recurrent pregnancy loss patients as compared to controls. (figure- 1) (Table-1) Very less research has been done on dermatoglyphic features in recurrent pregnancy loss. Hence, the present study is undertaken to find out various dermatoglyphic features in recurrent pregnancy loss patients and compare them with normal individuals.

Conclusion
There is very less study done on dermatoglyphic features in recurrent pregnancy loss. Dermatoglyphics is an upcoming integral part of forensic science and medicine. The results of our present study depicted correlation between recurrent pregnancy loss and ridges. In our present study, Recurrent pregnant loss cases ulnar loop was found more and there was significant decrease in frequency of Ulnar loops of recurrent pregnancy loss patients as compared to controls.

Reference