DERMATOGLYPHICS IN DARIER'S DISEASE

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Summary

Dermatoglyphic pattern was studied in ten cases of Darier's disease. There were no characteristic lines or distribution diagnostic of Darier's disease. The presence of numerous pin point to pinhead sized spots located mainly in the hypothenar area may be an additional point in the diagnosis of Darier's disease. The study of palm prints in the family members of Darier's disease may help in the detection of latent cases.

Dermatoglyphics is a term applied both to the configuration of ridged skin and the subject which deals with it. The ridges are sufficiently elevated in apes and man so that they can be visualised in finger prints[1]. Dermatoglyphics patterns are characteristic and unique for any individual so that it can be used for personal identification[2]. Distortion or alteration of dermatoglyphic patterns have been described in certain chromosomal abnormalities like Mongolism, Klinefelter's syndrome, and Turner's syndrome as well as in developmental defect of the heart, schizophrenia[1] and epilepsy[3]. Dermatoglyphic features may be an aid in the diagnosis of certain dermatological disorders. Certain characteristic dermatoglyphic features have been described in alopecia areata and psoriasis[1].

Darier's disease being a genodermatosis affecting predominently the skin, a study was undertaken in patients with this disease, to know whether there is any alteration in the dermatoglyphic pattern which may help in diagnosing this disease.

Materials and Methods

Ten biopsy-proved cases of Darier's disease were taken for this study. Detailed family and personal history were recorded in each case. The hands were first washed with soap and water to remove any dirt and dried. The palm prints and finger prints were then taken. These prints were analysed and compared with those of normals.

Observations

The cases belong to different age, sex and religion. Data representing sex, age of onset, and family history are presented in Table 1. Family history revealed affection in two generations in 6 cases. Duration of illness varied

TABLE 1

Age of onset in years	Sex		Family History	
	M	F	+ ve	— ve
upto 10	1	1	1	1
11 — 20	2	1	2	1
21 — 30	1	—	—	1
31 — 40	2	1	2	1
Above 40	1	0	1	—

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from 1 to 60 years. The distribution of loops, arches and whorls on the fingers were within normal limits.

There were no special lines or distribution in Darier's disease. However the lines were interrupted by small pin point to pinhead sized spots which were produced by elevations and depressions present in the palms. These spots were numerous on the hypothenar eminence and on the distal part of palm at the base of the index and middle fingers (Fig. page 110). These spots were much more than what could be seen with the naked eye. The earliest changes were also seen on the hypothenar area. In advanced cases where there was lot of hyperkeratosis, the lines on the palms were broad and few.

The palm print of an unaffected sibling of one of the cases showed these pinpoint to pinhead sized spots in the hypothenar area.

Discussion

The family tree analysis revealed the presence of this disease in two consecutive generations in 6 cases and this shows that Darier's disease is transmitted as a dominant trait. Absence of family history of similar disease in 3 generations in 4 cases suggest that this disease may also occur by mutation.

Although the palm prints and finger prints did not show any special lines or distribution of diagnostic significance the numerous spots which interrupt these lines may serve as a contributory point towards the diagnosis. The presence of these spots in an unaffected sibling shows that these spots may be an indication of the disease carrying gene. Further studies in all the family members are indicated before arriving at any conclusion.

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