DARIER'S DISEASE
(Clinical Study of 8 cases)

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Summary

Clinical observations on 8 cases of Darier's disease which is quite rare have been reported, revealing dominant inheritance and low marriage rate with histologically proved mucous membrane lesions in one case.

Darier's disease is an uncommon hereditary condition determined by an autosomal dominant gene. Its pathogenesis is unknown. It primarily involves the epidermis. The disease is characterised by a more or less bilateral symmetric eruption of small, reddish to brown papules of variable sizes. Papillomatous vegetations may occur, especially in big body folds. The lesions commonly occur on the forehead and neck, nape of the neck, over the shoulders and along the midline of the trunk. When a crust or a keratotic plug is removed from the top of a papule, a small funnel-shaped depression is seen. The lesions are at first discrete but they tend to become confluent afterwards. The scalp shows picture of severe seborrhoeic dermatitis with thick oily crusts and alopecia may result. Due to fermentation, the lesions may suppurate and emit a highly offensive odour.

In addition to its usual clinical features, many other uncommon and rare features in association with it have been described. They are mucous membrane lesions (papular, leukoplakia-like and confluent plaques), abnormal nails, hyperkeratosis palms and soles, fibrosis and cystic changes in lungs, cystic changes in bones, genital hypoplasia, low intelligence, short stature, pemphigus of Hailey and Hailey, Fordyces' disease and acrokeratosis Verruciformis (Brunauer,[1] Frost,[2] Reensteirna,[3] Haber and Forman,[4] Ganor and Sagher,[5] Niordson et al,[6] Rouchese,[7] Thambiah,[8] Sardari Lal and Velou,[9] Rook et al,[10]).

Skin biopsies were studied in 6 patients and was not available in two (Cases 3 and 4). The microscopic picture in all the six specimens was consistent with the clinical diagnosis of Darier's disease (Fig. 2). In case No. 8 mucosal biopsy taken from the buccal mucosa when examined also revealed the typical clefts and acantholytic cells in the stratum malpighii and villiformation (Fig. 3). Hyperkeratosis was not present. Acanthosis was seen. The dermis did not show any remarkable change except a moderate collection of chronic inflammatory cells.

Treatment

We followed six cases from 6 months to 2 years. We administered high doses of Vit. A, both orally and parenterally but could not find significant improvement in any of the six cases. Other

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Chart Showing Clinical Features of 8 Cases of Darier's Disease.

S. No.	Age (Yrs.)	Sex	Occupation	Duration	Seasonal variation	Family history	Extent of disease	Association
1	30	M	Shepherd	6 years onset at 24 years	Worse in summer	—	Head, neck, ears, face, chest, axillae, abdomen groins	Conjunctivitis hyperkeratosis palms and soles and hypertrophic nails.
2	12	M	Student	1 year onset at 11 years	—	—	Scalp, ears, sides of neck, body folds.	—
3	42	F	House-wife (+field work)	25 years onset at 17 years	Worse in summer	+	Generalised, warty lesions in folds and head.	Hyperkeratosis palms and soles, nail dystrophy scanty hair, malodour.
4	25	M	Farmer	15 years onset at 10 years	—	+	Generalised, warty lesions in folds and head.	Hyperkeratosis palms and soles, nail dystrophy, malodour. He developed fracture both femora due to fall from roof.
5	16	M	Student	1 year onset at 15 years	—	—	Sides of neck abdomen axillae.	—
6	20	M	Labourer	8 years onset at 12 years	Worse in summer	—	Generalised	Malodour.
7	35	F	House-wife (+field work)	15 years onset at 20 years	—	—	Generalised, warty lesions in folds and head.	Anaemia, scanty menses, scanty scalp hair, dystrophic nails, malodour.
8	26	M	Labourer	15 years onset at 11 years	Worse in summer	—	Generalised, (Fig. 1) and warty lesions in folds. Milky white papules, grouped, discrete on the mucosa of gums, cheek, palate and tongue.	Anaemia, recurrent infections, lymphadenopathy, hyperkeratosis palms and soles, dystrophy of nails and scrotum, tongue Malodour. Scanty hair on scalp, eyebrows and beard.

oral therapies tried were thyroxine, chloroquin, Vitamin C and liver extract. We could not appreciate the useful effect of any of these drugs. Local keratolytics such as acid salicylic ointment did have useful but temporary effect.

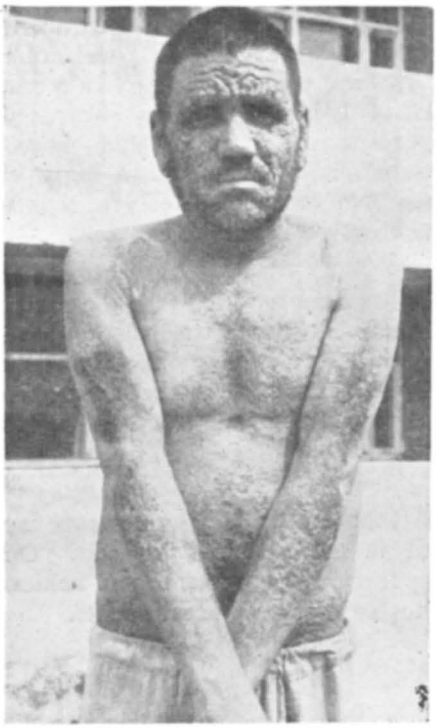

Fig. 1

Shows generalised distribution, loss of hair from eyebrows and beard area, gyrate pattern on the forehead and verrucous character of the lesions

Comments

Darier's disease is determined genetically by an autosomal dominant gene. Most pedigrees extend no more than two generations, for marriage rate and fertility in these patients are low. Many cases arise as new mutations (Rook et al[10]). This observation is noticed in the present series also. In case 3 the disease appeared after her marriage and was then noticed in her son (case 4) showing dominant

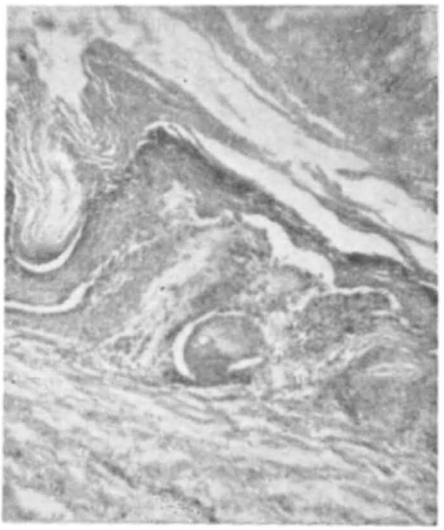

Fig. 2

Shows microscopic picture of a skin specimen; consisting of clefts, corps ronds and keratotic plug

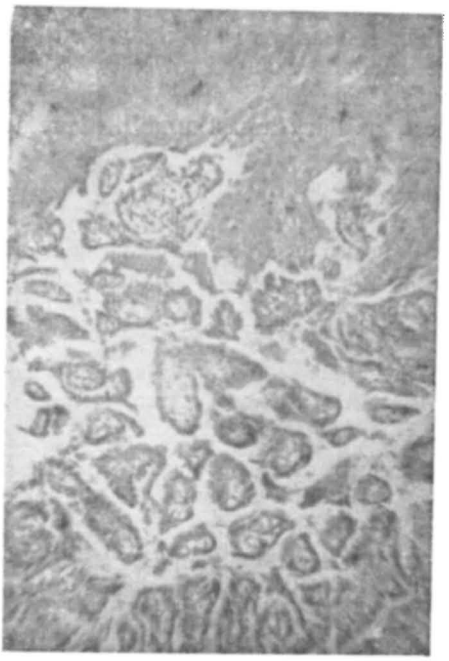

Fig. 3

Shows microscopic picture of mucous membrane (buccal mucosa) consisting of clefts, acantholytic cells and villi formation

inheritance. Both the patients suffered from generalised form of the disease. Case 7 also developed the disease after marriage but none of her children though still very young in age have shown any evidence of the disease so far. Follow up of these children may reveal the dominant inheritance. Cases Nos. 1, 4, 6 and 8 were still unmarried, though they have crossed the usual marriageable age in India. Chances of their marriage are further lowered due to the disfigurement caused by generalised form of the Darier's disease, thus limiting their generations. Case Nos. 2 and 5 are still adolescents. Their future cannot be predicted.

Onset of Darier's disease is reported between any time from childhood to thirties. The earliest onset in the present series was at 12 years and latest at 24 years. Ratio of males to females was 6 to 2.

The lesions were mainly present over the seborrhoeic areas of the body i.e. scalp, face, ears, sides of the neck, chest, axillary areas, umbilical region and anogenital region, in all the cases. The extensor surfaces were also involved in 5 cases who showed generalised distribution of the disease. One case (No. 8) showed thickening of the scalp, showing gyrate appearance. Seasonal influence was noticed only in 4 cases.

Rare features of the disease namely palmo-plantar keratoderma was noticed in 4 cases, dystrophic nails in 5 cases, loss of hair from scalp, beard and eyebrows in 4 cases and mucous membrane involvement in only one case. No other rare feature reported was observed in the series.

It has been reported that the patients of Darier's disease are susceptible to infections. We recorded this feature only in 2 cases – one was suffering from recurrent conjunctivitis and other from recurrent pyoderma.

All the traditional treatments were tried in the cases but in vain. Only temporary improvement was achieved by topical keratolytic ointments.

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