

## PSORIASIS AND ICHTHYOSIS VULGARIS IN THE SAME FAMILIES

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Occurrence of psoriasis and ichthyosis vulgaris together in 3 patients, whose family members had both or either of the conditions is being reported.

**Key words :** Psoriasis, Ichthyosis vulgaris, Co-existence.

Psoriasis and ichthyosis vulgaris, both are fairly common skin disorders. Ichthyosis vulgaris is of autosomal dominant inheritance, whereas the aetiology of psoriasis is not exactly known though genetic factors are incriminated. The occurrence of psoriasis and ichthyosis vulgaris in the same patient has not been reported so far though it is likely to have been observed. We are describing the occurrence together of psoriasis and ichthyosis vulgaris in six patients belonging to three families. Some of the other family members of these three families had either psoriasis or ichthyosis vulgaris.

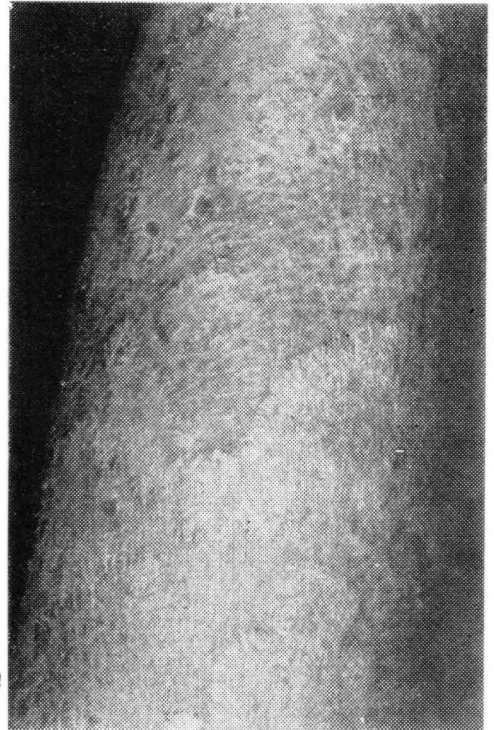
### Case Reports

#### Case 1

A 15-year-old girl developed multiple erythematous and scaly plaques on her trunk and extremities for the last 4 years, worsening in each winter. She also complained of dryness of the skin since childhood. There was no history of atopy. Examination revealed typical psoriatic plaques with positive Auspitz's sign and silvery white scales on the trunk, scalp and extremities, and dry, fine, brown scaling on extremities and trunk. Palms showed accentuation of the creases, Systemic and ophthalmic examination did not reveal any abnormality.

Skin biopsy from the psoriatic plaque showed parakeratosis, acanthosis, widening of rete

ridges and collection of polymorphs in the dermal papillae. Skin biopsy from the ichthyotic skin showed hyperkeratosis and keratotic plugging with normal dermis. All members of her family were examined. Her father had been suffering from both psoriasis and ichthyosis vulgaris for more than 20 years. An elder sister also had both the conditions. Her two brothers had only ichthyosis vulgaris. There was no history of consanguinity in the parents.



**Fig. 1.** Psoriatic plaques on an ichthyotic background.

#### Case 2

An 18-year-old student presented with scaly, erythematous plaques on her extremities, recurring in the winters for the last 7 years. She

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also complained of dryness of the skin. There was no history of atopy. The plaques of psoriasis were present on the legs (Fig. 1), thighs and elbows. Palms and soles were not involved. Dry, brownish scaling clinically suggestive of ichthyosis vulgaris was present over the trunk and extremities. There was no consanguinity in the parents. Her father had both psoriasis and ichthyosis vulgaris; one brother had ichthyosis vulgaris and the sister had only psoriasis.

### Case 3

A 28-year-old house-wife presented with a twelve-year history of recurrent scaly erythematous plaques on the scalp and trunk, aggravated in the monsoon. There was no history of atopy.

On examination she was found to have psoriatic plaques on the scalp and trunk. The Auspitz's sign was positive. She also had dry, brown scaling typical of ichthyosis vulgaris over the trunk and extremities. Systemic examination was normal. There was no consanguinity in the parents. Father had ichthyosis vulgaris and mother was psoriatic. Her brother had ichthyosis vulgaris and two sisters were normal.

Routine investigations like blood cell counts, ESR, liver function tests, urinalysis, serum uric acid, calcium and skiagram of chest in all these patients did not reveal any abnormality.

### Comments

It is interesting to note that both these conditions occurred in several members of the same family either singly or together to a varied extent. While the genetic transmission of ichthyosis vulgaris is well established, the exact aetiology of psoriasis is not known. Single family studies of psoriatics indicate a simple dominant mode of inheritance.<sup>1,3</sup> In contrast, population studies conducted by Lomholt<sup>4</sup> and Watson et al<sup>5</sup> arrived at different conclusions.

Watson et al<sup>5</sup> surveyed family history questionnaires from hundreds of patients with psoriasis and suggested that psoriasis is polygenic in its inheritance. Kimberling and Dobson<sup>6</sup> re-evaluated Lomholt's data by eliminating all the subjects whether affected or unaffected who were not personally examined by him; a single dominant mode of inheritance became apparent. Steinberg et al<sup>7</sup> analysed the families of 464 patients with psoriasis and concluded that there was no evidence for a sex-limited or sex-linked mode of inheritance. A recent large scale study of histocompatibility antigens in families with psoriasis favours a dominant mode of inheritance.<sup>8</sup> Dobson,<sup>9</sup> reviewing the controversy regarding mode of inheritance in psoriasis remarked that psoriasis is not a single disorder but the phenotypic expression of various heritable and non-heritable processes. The occurrence together of psoriasis and ichthyosis vulgaris in these families strongly supports the genetic factor in its aetiology though it is difficult to decide any particular mode of inheritance from these pedigrees.

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