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Palmar Hyperlinearity in Atopic Dermatitis

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Abstract. Hyperlinearity of the palms is a common feature of atopic dermatitis, in this study present in 15 of 40 patients (or 37 %). Previously it has been postulated to be a manifestation of a concomitant ichthyosis vulgaris, but according to our study it rather seems to be a trait of atopic dermatitis *per se*.

Key words: Palmar hyperlinearity; Atopic dermatitis; Ichthyosis vulgaris

Among the clinical signs of atopic dermatitis the presence of a characteristic hyperlinearity pattern of the palms and soles has attracted relatively little attention, although it is a rather common trait easily recognized at the clinical examination.

The few previous studies from Germany (1, 3) and quite recently from Japan (6) have concordantly reported a close relationship between this sign and a concomitant ichtyosis vulgaris affecting a remarkably high proportion of these materials.

The present study of a Danish material of patients suffering from atopic dermatitis has led to somewhat deviating conclusions.

MATERIALS AND METHODS

40 consecutive patients with definite atopic dermatitis attending the out-patient clinic, 14 males aged 2–27 years and 26 females aged 3–51 years, were included in the study. 20 members of the staff without any evidence of atopic dermatitis served as controls.

The palms were examined by careful inspection and the findings were substantiated by taking imprints on paper of both palms after blacking them with a small rubber cylinder. The persons were clinically examined for evidence of ichthyosis vulgaris.

According to the interpretation of the linearity pattern we have chosen to operate with only two categories: normal and palmar hyperlinearity. A more elaborate scoring system designed by Tillner (5), operating with four degrees of linearity based on quantitative differences in the number and extent of the creases, seemed too complicated for our purpose.

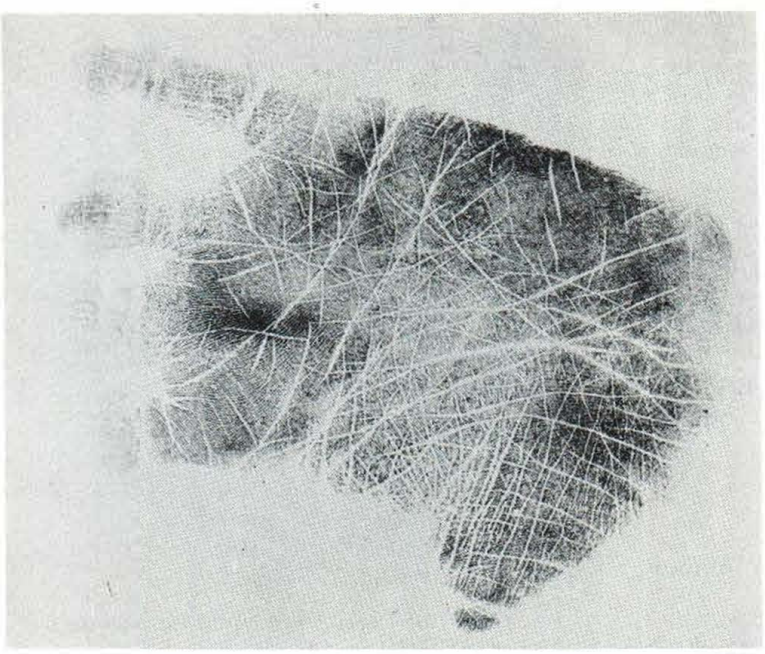

Fig. 1. Imprint of a palm with the typical hyperlinearity pattern.

The typical hyperlinearity pattern is unmistakable, both clinically on inspection and especially when using the imprint technique (Fig. 1). The creases are broad and deep, closely arranged and crossing over the thenar and hypothenar regions. In contrast, the normal palm has relatively few and shallower creases, confined mainly to the thenar region.

RESULTS

Among the 40 patients with atopic dermatitis, 15 persons (37%) were found to have the hyperlinearity pattern. In this group 4 patients, 10% of the material, had ichtyosis vulgaris with the characteristic features of this skin disorder. 25 patients had normal palms and none in this group suffered from ichtyosis vulgaris.

In the control group none of the 20 persons exhibited hyperlinearity of the palms and none had ichthyosis vulgaris.

DISCUSSION

Concerning the frequency of palmar hyperlinearity in patients with atopic dermatitis our results are in agreement with previously published results.

In 1971 Hirth et al. (1) carefully examined a group of 17 subjects suffering from atopic dermatitis. Imprints of both palms and soles were evaluated according to the 4-degree scoring system of Tillner. Half of the patients were found to have hyperlinearity of their palms. In their control group comprising 300 persons, only 1% exhibited this trait. The same year Leutgeb et al. (3) studied 130 patients with atopic dermatitis and 34% had hyperlinear palms. Quite recently Uehara & Hayashi (6) found the trait in 28% among 178 patients with atopic dermatitis.

The last two groups of investigators emphasize a close relationship between palmar hyperlinearity and ichthyosis vulgaris and independently claim that palmar hyperlinearity is a feature of a concomitant ichthyosis vulgaris rather than of the atopic dermatitis itself.

Their statements regarding the frequency of ichthyosis vulgaris seem remarkably high and in contradiction to the studies of Nexmand (4) which state only 6% and Wagner & Pürschel (7) indicating 6–10%.

According to Koukkanen (2) about half of all persons with ichthyosis vulgaris have palmar hyperlinearity.

On the basis of these reports and our own results it seems most reasonable to assume that palmar hyperlinearity is in fact mainly a trait of atopic dermatitis itself.

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Pyoderma gangrenosum in Infancy

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Abstract. A case of pyoderma gangrenosum is described in a patient aged 9 months. The histopathological features were those of acute panniculitis and treatment with oral prednisolone produced an excellent clinical response. No underlying cause of the skin lesions has been found. The differential diagnosis of the clinical and histological appearances seen in our patient is discussed.

Key words: Pyoderma gangrenosum; Panniculitis

Pyoderma gangrenosum is an uncommon ulcerative skin disorder that has not, as far as we are aware, been reported previously in early infancy. We wish to report a case with somewhat unusual histological features in a 9-month-old infant.

CASE REPORT

The patient, a previously healthy female infant, developed an upper respiratory tract infection accompanied by cervical lymphadenopathy at the age of 9 months. She was treated with ampicillin, with initial improvement, but a week after the onset of her illness she began to refuse feeds and an erythematous lesion was noticed on her left cheek. Treatment was changed to topical fusidic acid ointment and oral amoxycillin, but more lesions appeared followed by swelling of her right foot and she was admitted to hospital.

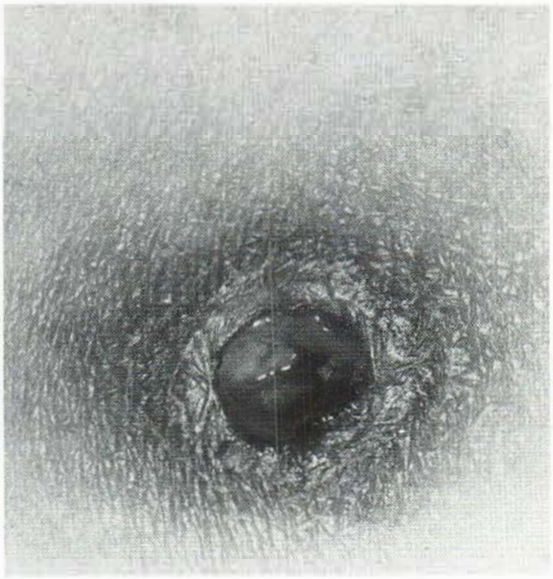

Fig. 1. Fully developed lesion on the leg, showing pustulation and ulceration.

On admission she appeared ill, with a temperature of 38.3°C, pustular lesions on her face, and a swollen right foot. She was otherwise a well-nourished child whose length and weight were both around the 50th centile. She had no lymphadenopathy, her throat and ears appeared normal, and examination of other systems proved essentially negative. She was found to be anaemic, with a haemoglobin of 9.0 g/dl (normochromic, normocytic) and had a pronounced neutrophil leukocytosis (total white cell count 27.8×10^9/dl, 80% polymorphs). Her ESR (Westergren method) was 110 mm in the first hour. An X-ray examination of her right foot and ankle revealed no abnormality and a chest X-ray was normal.

She was initially thought to be suffering from a bacterial infection and was treated with benzyl penicillin and flucloxacillin. Bacterial cultures from the pustules and blood were repeatedly negative. After 5 days in hospital she still had an elevated temperature and was continuing to develop fresh skin lesions on her legs, on her left arm at the site of a recent Mantoux test and at the sites of injections on her thighs. Her treatment was changed to intravenous gentamicin and flucloxacillin. The skin lesions began as small erythematous papules that developed into large pustular ulcers over a period of 36 hours and she had, by this time, ulcers on her left thigh, calf and arm, as well as her right arm, and right leg (Fig. 1). The haemoglobin concentration fell further to 7.7 g/dl and she was transfused with whole blood. The total white cell count rose to a maximum value of 41.9×10^9/dl.