mutilating keratoderma (Vohwinkel). Only the latter three diseases are frequently accompanied by hyperhidrosis (5, 7). In kerato-elastoidosis marginalis of the hands (8) the keratosis is linear and localized to the radial margin of the index finger and to the ulnar margin of the thumb, and hyperhidrosis is not present. In acrokeratosis verruciformis the warty papules are flat or convex and isolated in small groups. This condition is often present at birth or has its onset during early childhood, similar to diffuse palmo-plantar keratoderma, whereas acrokerato-elastoidosis has its onset later in life.

In diffuse palmo-plantar keratoderma the hyperkeratosis is surrounded by a band of erythema. In mutilating keratoderma the keratosis are starfish-shaped and cicatricial alopecia can be seen. In progressive palmo-plantar keratoderma, hyperhidrosis is not always present, and if so only localized to the palms (5).

Electron microscopy of biopsies taken from the skin of the hands of 2 patients, 47 and 59 years of age, suffering from acrokerato-elastoidosis, revealed pronounced changes of the dermal elastic tissue in the form of granular disaggregation (7). Similar changes were absent in the present case. In our patient, however, the biopsies were taken from non-sun-exposed areas on the lower legs. The elastic fibre changes reported by Jung et al. (7) apparently do not differ morphologically from the changes found in the skin of older people and in senile skin, especially in chronically sun-exposed skin (4). We therefore suggest that the ultrastructural changes found by Jung et al. (7) are probably non-specific.

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Granulomatous Secondary Syphilis Coinciding with PUVA Treatment in a Patient with Psoriasis: An Apparent Failure of PUVA Therapy

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Received June, 27, 1980

Abstract. A 39-year-old man is described who has been suffering from psoriasis for many years. Because of the extensive involvement of the skin he was treated with PUVA therapy, initially with a good result. A second course of PUVA treatment was unsuccessful. Histopathological examination of the (persisting) skin lesions at this time showed clear granulomatous infiltration, in addition to psoriatic changes. Based on history, serological and dark-field examination, a secondary syphilis was diagnosed. The possible influence of PUVA therapy is discussed.

Key words: Psoriasis; Syphilis; Granulomatous reaction

It is generally accepted that skin lesions during secondary syphilis can show great variability in appearance and number (7). One of the clinical forms resembles psoriasis. Currently, PUVA therapy is widely used in the treatment of patients with psoriasis (13, 18, 19). The influence of PUVA treatment on other (skin) diseases is not well established. The development of systemic lupus erythematosus (3), parapemphigus (17) and possibly the development of skin cancer (16) have been described. In this paper we report a patient who was treated with PUVA therapy for psoriasis. During this treatment he developed a secondary syphilis.

REPORT OF A CASE

A 39-year-old man, skin type III (4) had been suffering from psoriasis vulgaris since he was 11 years old. For the

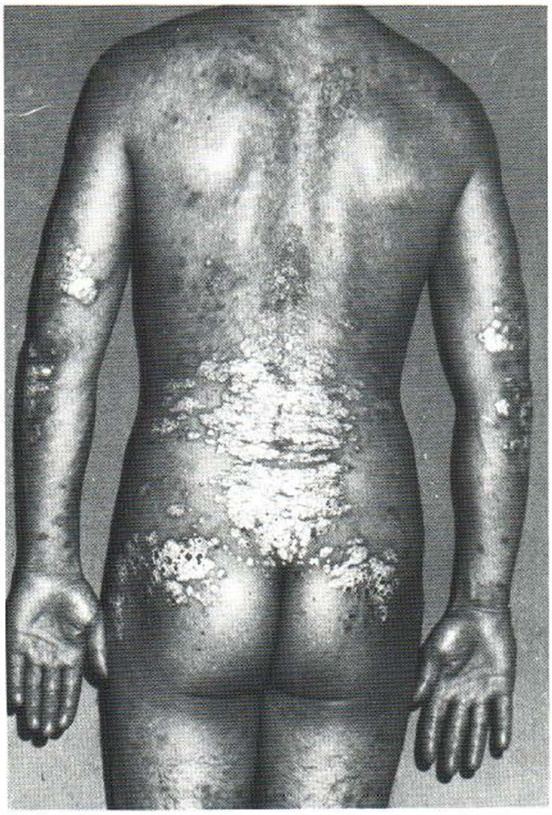

Fig. 1. Clinical appearance during unsuccessful PUVA therapy.

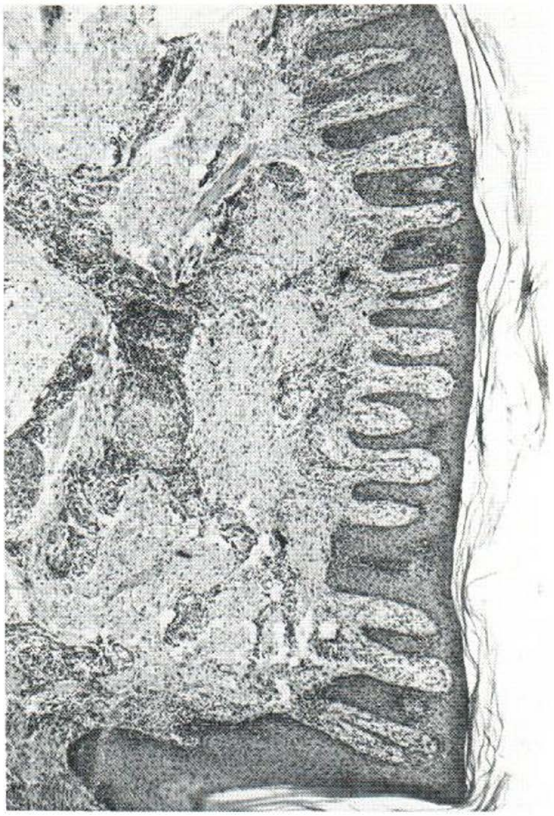

Fig. 2. Histology of a characteristic lesion, as shown in Fig. 1. Note the psoriasiform acanthosis and granulomatous infiltrates in the deep dermis.

last 10 years he had been under treatment at our department where he received methotrexate (in 1968) and various local treatments. The psoriasis was difficult to treat and involved large areas of the skin. In April 1976 it was decided to start with PUVA therapy. After 30 irradiations (August 1976) a clearing of more than 95 % was achieved and the treatment was discontinued. However, in January 1977 an erythemato-papulosquamous eruption, clinically psoriasis, developed in the same areas of his skin. In April 1977 it was decided to recommence PUVA therapy but this time after an equal number of irradiations no therapeutical effect was observed. Disseminated nummular psoriasiform lesions were present over the whole body. They were coalescent and formed erythemato-squamous plaques (Fig. 1.) The skin was hyperpigmented. The nails were slightly pitted.

Physical examination

Bp 130/85 mmHg; pulse 72/min; regular and equal. Temp. 36.8°C. There were no enlarged lymph glands. Results of further physical examination were unremarkable.

Histopathological examination

Several punch biopsies were taken from psoriatic plaques for light microscopic examination. All biopsy material showed the same changes (Fig. 2). The epidermis was parakeratotic, with Munro abscesses, absence of stratum granulosum, elongated rete ridges with clubbing of the tips and thinning of the suprapapillary regions. The dermal papillae were oedematous and contained dilated capillaries. There was a mononuclear infiltrate with some polymorphonuclear granulocytes and a mild exocytosis at the tips of the papillae. In the deep dermis, (perivascular) granulomata with giant cells and plasma cells were found (Fig. 3). PAS, Triff and FFW staining did not reveal fungi or acid-fast bacteria.

Laboratory examination

ESR 8 mm first hour, Hb 10,1 mmol/l; leukocyte count $7{,}2 \times 10^9$/l with normal differentiation. Urine analysis: normal. Examination for occult blood in the faeces: negative. Glucose, Na, K, creatinine, alk.phosph., GOT, GPT, LDH, γGT, total protein and albumin values were within the normal range. AST 100E, HB_s-antigen and -antibodies negative. Antibodies angainst Yersina types 3, 4, 9< 1 : 20. Cultures: throat swab: no haemolytic streptococci. Urethra and anus swab: no gonococci. Faeces: no growth of pathological micro-organisms. Serological tests for syphilis: see Table 1. ECG: normal; X-thorax, X-sinus

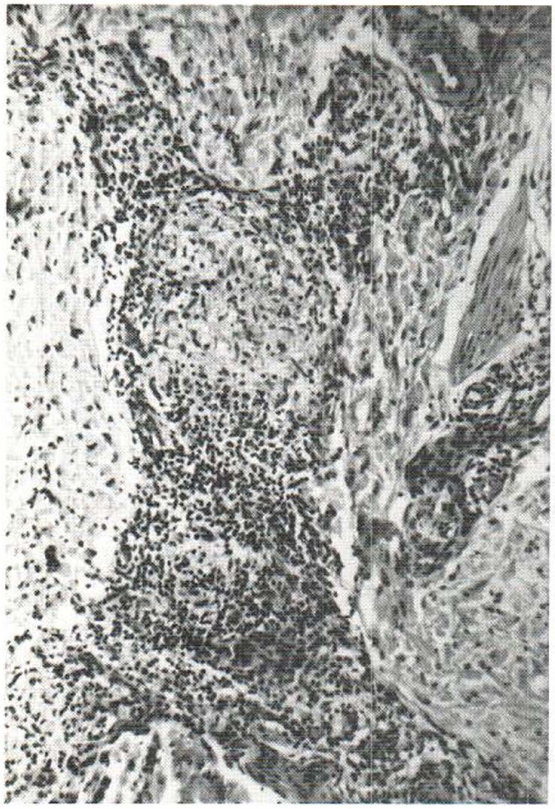

Fig. 3. Higher magnification of the granulomatous infiltrate shown in Fig. 2.

and X-status of teeth: normal Roentgenograms of hands, feet and chest showed no evidence of sarcoidosis.

Intracutaneous tests with *Haemophilus influenzae*: positive. PPD, *Pneumococcus*, *Mumps*, *Staphylococcus*, *Trichophyton*: negative (read after 24, 48, and 72 hours). Kveim test (read after 6 weeks): negative. Dark ground-field microscopy from a recent lesion showed moving spirochaetes. From the history of the patient and the history of his sexual partner it was evident that the syphilis was contracted in the beginning of December 1976.

Treatment

An adequate antisyphilitic treatment with 14×10^6 I.U. clemizolpenicillin (megacilline®) was given. After this treatment his psoriasis remained, but was successfully treated with PUVA therapy.

DISCUSSION

It is well known that secondary and tertiary syphilis may mimic psoriasis (7). However, our patient was definitively suffering from psoriasis. During PUVA therapy he developed an early syphilis which was camouflaged by his psoriasis. Right from the beginning the histological investigations showed the characteristic findings of psoriasis. The multiple perivascular granulomatous infiltrates in the deep dermis were striking, however. The histopathological characteristics of secondary syphilis are: (*a*) swelling and proliferation of the endothelial cells; (*b*) a considerable perivascular infiltration consisting of lymphoid and plasma cells (1, 6, 11).

Table I. *Syphilis serology*

date reaction	WAR	VDRL	FTA-ABS	TPI
19-6-1976	neg	neg	n.d.	n.d.
26-6-1977	neg[a]	neg[a]	n.d.	n.d.
25-8-1977[b]	1/40	pos	pos	pos
21-3-1978	1/10	pos	pos	pos
4-7-1978	neg	neg	pos	pos

[a] Laboratory administration failure, in reality the reactions were WAR: 1 : 2½ and VDRL pos.
[b] Dark-field examination: positive.
n.d.: not done.
It is worth noting that, concerning the patient's history, syphilis was contracted in December 1976.

However, the extensive granulomatous infiltrates with epithelioid cells and giant cells in our patients (Fig. 3) have not been described earlier in *psoriasiform* secondary syphilis, in which one can find beside the histopathological characteristics of secondary syphilis, irregular acanthosis and frequently infiltration of polymorphonuclear granulocytes in the epidermis (1, 9). In tertiary syphilis, granulomata are a common finding (9). The poor response to the second PUVA therapy was possibly caused by a Köbner phenomenon due to the underlying syphilitic inflammation. After an adequate antisyphilitic treatment the psoriasis remained. A new course of PUVA treatment again resulted in clearance the skin lesions.

It is worth noting that with the intracutaneous tests with common antigens as mentioned above, only a positive response to *H. influenzae* antigen was found.

One year later we repeated, also during PUVA therapy, these intracutaneous tests. There was now a good delayed-type immunity to several antigens. This gives the impression that cell-mediated immune reactivity had been temporarily reduced.

One can only speculate about the possible influence of PUVA therapy on the natural course of a syphilitic infection.

It has been reported that PUVA therapy induces a transient decrease in circulating T-cells (2, 4, 12) and influences possible cell-mediated immune reactions (10, 15). Although in psoriasis patients several functional changes in cell-mediated immune responses have been reported (5, 8), to our knowledge no mention has ever been made of a different course of a syphilitic infection in those patients.

There are very few reports in the literature concerning granuloma formation in secondary syphilis (1, 6) in which no (clear) explanation is given for this phenomenon.

One might hypothesize that PUVA therapy has (transiently) influenced cell-mediated immune reactivity, thereby facilitating granuloma formation in this patient.

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Hair Loss, Depigmentation of Hair, Ichthyosis, and Blepharoconjunctivitis Produced by Dixyrazine

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Received July 17, 1980

Abstract. Four patients developed hair loss, depigmentation of hair, ichthyosis, and blepharoconjunctivitis during treatment with large doses of dixyrazine (Esucos®, UCB, Belgium). The hair, skin, and eyes returned to normal within 2 months of withdrawal of dixyrazine, without any other treament.

Key words: Dixyrazine; Hair loss; Depigmentation of hair; Ichthyosis; Blepharoconjunctivitis; s-Cholesterol

Dixyrazine (Esucos®, UCB, Belgium) is a phenothiazine major tranquillizer advocated mostly for the treatment of anxiety and tension in many types of psychiatric disorders, including alcoholism