

will not induce a Koebner phenomenon, regardless of the strength of the stimulus. Probably, in urticaria pigmentosa the number of positive reactors is very low, unlike for instance in psoriasis where approximately 25% of patients exhibit the Koebner sign (1).

REFERENCES

1. Farber, E. M., Roth, R. J., Aschheim, E., Eddy, D. D. & Epinette, W. W.: Role of trauma in isomorphic response in psoriasis. *Arch Dermatol* 91: 246, 1965.
2. MacDonald, A.: Cutaneous mastocytosis: an unusual radiation dermatitis. *Proc Roy Soc Med* 64: 29, 1971.
3. Rodermund, O.-E., Biersack, H.-J. & Rohner, H.-G.: Szintigraphische Veränderungen an Leber und Milz bei Urticaria pigmentosa. *Hautarzt* 29: 478, 1978.

Clear Cell Acanthoma: Not of Sweat Gland Origin

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Abstract. We have previously reported the presence of carcinoembryonic antigen in eccrine and apocrine gland and duct and in all sweat gland adenomas. The absence of carcinoembryonic antigen in clear cell acanthoma suggests that this lesion is not derived from sweat gland epithelium.

The classification of clear cell acanthoma is obscure (1-3). We have recently reported that carcinoembryonic antigen (CEA) can be detected in eccrine and apocrine glands, ducts, duct cuticle and acrosyringium by immunoperoxidase techniques (4). Furthermore, CEA can be visualized in all sweat gland adenomas by using similar techniques (5). CEA is also detectable in sweat by radioimmunoassay. If clear cell acanthoma is a proliferation that arises from acrosyringial epithelium, then CEA should be detectable within the mass of the lesion.

In this report, we have examined two typical lesions of clear cell acanthoma for the presence of CEA and find no demonstrable CEA within the lesions.

METHODS

An unlabelled antibody peroxidase-antiperoxidase (PAP) technique was carried out in the following manner as previously described (6): (1) Paraffin sections (3 μ m) incubated 24 hours at 37°C, dewaxed in xylol-alcohol; (2) 0.3% hydrogen peroxide in methanol for 30 min to block endogenous peroxidase; (3) normal rabbit serum 1:20, 30 min, to reduce non-specific background staining; (4) goat antihuman CEA, 1:6000 for 30 min; (5) rabbit anti-goat IgG 1:20 for 30 min; (6) goat peroxidase-antiperoxidase 1:100 for 30 min; (7) 3-amino-9-ethylcarbazole reaction with hydrogen peroxide for 3 min; (8) hematoxylin counterstain for 10 min, dehydrate and mount.

All reactions were carried out in phosphate-buffered saline solution, pH 7.4, with washes after each of stages 4 through 7. Goat antibody against CEA was donated by Hoffmann-LaRoche Inc. and rabbit antibody against CEA was donated by Dako Laboratories. Rabbit anti-goat IgG and goat peroxidase-antiperoxidase were from Dako Laboratories, Inc. Santa Barbara, Ca. 3-amino-9-ethylcarbazole was from Aldrich Chemical Co., Milwaukee, Wisconsin.

RESULTS AND DISCUSSION

CEA is easily visualized within the cells that compose the acrosyringial unit and in the sweat duct (Fig. 1). However, in neither case did we observe CEA within the tumor mass of clear cell acanthoma. Since we have observed the presence of CEA in varying amounts in all sweat gland adenomas and sweat gland carcinomas (5), we conclude that clear cell acanthoma is most likely not derived from sweat gland or duct epithelium.

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REFERENCES

1. Wells, G. C. & Wilson-Jones, E.: Degos' acanthoma (acanthome à cellules claires). A report of five cases with particular reference to the histochemistry. *Br J Dermatol* 79: 249, 1967.
2. Degos, R. & Civatte, J.: Clear-cell acanthoma. Experience of 8 years. *Br J Dermatol* 83: 248, 1970.



Fig. 1. The presence of carcinoembryonic antigen is reflected by dark staining in the cells composing the acrosyringial unit (3-amino-9-ethylcarbazole and hematoxylin, $\times 250$).

3. Lindgren, Å. G. H. & Newmann, E.: Some evidence concerning the sweat duct origin of clear cell acanthoma. *Acta Dermatovener (Stockholm)* 53: 511, 1973.
4. Penneys, N. S., Nadji, M. & McKinney, E. C.: Carcinoembryonic antigen is present in human sweat. *J Am Acad Dermatol* 4: 401, 1981.
5. Penneys, N. S. & Nadji, M.: Carcinoembryonic antigen in benign sweat gland tumors. *Arch Dermatol*, submitted.
6. Nadji, M., Tabei, S. Z., Castro, A., Chu, T. M. & Morales, A. R.: Prostatic origin of tumors. *Am J Clin Pathol* 73: 735, 1980.

Oral Methoxsalen Photochemotherapy (PUVA) of Dyshidrotic Eczema

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Abstract. Seven patients with chronic severe intractable dyshidrotic eczema of the palms were treated with oral methoxsalen photochemotherapy. The right palm was

treated, while the left palm was not treated until the right palm was cleared of lesions. All 7 patients responded to treatment and remained disease-free on a maintenance schedule for 2 to 6 months.

Dyshidrotic eczema is an acute recurrent or chronic vesicular eruption of the palms and soles. Characteristically, it occurs as crops of deep-seated clear vesicles involving the lateral surfaces of the digits, with symmetrical involvement of the palms and/or soles. Mild cases may temporarily respond to the topical application of corticosteroids, though chronic severely afflicted patients are notoriously resistant to any type of therapy except oral corticosteroids.

Oral methoxsalen photochemotherapy (PUVA) has been demonstrated to be effective in a variety of dermatoses. One study (1) found that PUVA was useful in recalcitrant dermatoses of the palms and soles, including eczema and psoriasis. The present study was designed to check for spontaneous improvement or remission and to evaluate the effect of PUVA on chronic severe dyshidrotic eczema.

PATIENTS AND METHODS

Seven patients (2 men, 5 women) were referred to the Massachusetts General Hospital Phototherapy Center. The patients, ages 39 to 57 years, had been diagnosed as having dyshidrotic eczema and had tried other available