

On examination, there was diffuse erythematous papular eruption with scanty small vesicles, but without pustulation or telangiectasia (Fig. 1). The eruption was seen mainly around the lips and on the chin and cheeks. The tip of the tongue showed proliferation of the filiform papillae. The mucous membranes and the skin elsewhere, the nails and hair were clinically normal.

Routine urine and stool examination, ESR, blood sugar, serum electrophoresis and chest X-ray were normal. Porphyrin screen tests, serological tests for syphilis, ANF, and tuberculin and Kveim tests were negative. Patch tests were positive to *p*-phenylenediamine and formaldehyde.

Histopathological examination showed minimal changes in the epidermis in the form of mild acanthosis and parakeratosis. In the dermis, there was discrete epithelioid cell granulomata with perifollicular predominance and scanty Langhans giant cells (Fig. 2). There was no evidence of caseation or acid-fast bacilli. The patient refused biopsy of the tongue lesion.

The patient was advised to avoid the use of the black synthetic meshes and most lesions disappeared within 2 months without any remedy.

DISCUSSION

Among the multifactorial etiology of perioral dermatitis, contact factors should be considered (4). Marks & Black (5) in a histopathological study of 26 cases of perioral dermatitis found neither pathognomonic histological features of the disease nor specific etiological agents to account for it, but they tentatively suggested that the disorder may be provoked or perpetuated by an external irritant of some kind. Sarcoid-like granulomas of the skin have been reported to be produced by acrylic and nylon fibres (6). Gianotti et al. (3) and Gianotti (2) described a particular form of perioral dermatitis occurring in children, with lupoid appearance clinically and sarcoid reaction in some of the cases histologically. The tuberculin and Kveim tests of their cases were negative. More recently, Georgouras & Kocsard (1) described an interesting case of micropapular sarcoid facial eruption in a child and postulated that bubble gum was the cause of the eruption. In our case, the diagnosis of perioral dermatitis (Gianotti-type) was considered on clinical and histological bases and other possibilities such as rosacea, sarcoidosis and lupus miliaris disseminatus faciei were

excluded on the same bases. The eruption in this case may be attributed either to the acrylic fibres or to textile finishers.

REFERENCES

1. Georgouras, K. & Kocsard, E.: Micropapular sarcoid facial eruption in a child: Gianotti-type perioral dermatitis. *Acta Dermatovener (Stockholm)* 58: 433-436, 1978.
2. Gianotti, F.: Cutaneous benign histiocytoses in childhood. *In* *Pediatric Derm. Mod. Probl. Paediat.*, vol. 17, pp. 193-203. Karger, Basel, 1975.
3. Gianotti, F., Ermacora, E., Benelli, M. G. & Caputo, R.: Particulière dermatite péri-orale infantile. Observation sur 5 cas. *Bull Soc Franc Dermatol Syph* 77: 341, 1970.
4. Kocsard, E. & King, R. H.: Perioral dermatitis. *Aust J Dermatol* 13: 49-54, 1972.
5. Marks, R. & Black, M. M.: Perioral dermatitis: A histopathological study of 26 cases. *Br J Dermatol* 84: 242-247, 1971.
6. Cortez Pimentel, J.: Sarcoid granulomas of the skin produced by acrylic and nylon fibres. *Br J Dermatol* 96: 673-677, 1977.

Cockade Naevus: An Unusual Variant of the Benign Cellular Naevus

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Abstract. A patient with benign cellular naevi with unusual target-like morphology is described. Histological and histochemical examination of the lesions showed Dopa oxidase positive cells in the epidermal portion of the tumour but only the naevus cells and keratinocytes at the periphery of the tumour stained for melanin. It is suggested that failure of melanin synthesis is the cause of the target-like appearance.

Key words: Cockade naevus; Naevus, pigmented

Cockade ('flower-like') was the term used by Happle (2) to describe multiple target-like naevi arising on the trunk of an 11-year-old boy. The morphology of these lesions is striking but similar cases have not been reported frequently.

CASE REPORT

An 11-year-old girl began to develop naevi on the trunk 2 years prior to presenting. They began as small pink papules and after a few weeks became surrounded by a stippled pigmented halo. New lesions continue to appear.

In 1971 acute lymphoblastic leukaemia was diagnosed and treated with chemotherapy and cranio-spinal irradiation. The patient has been off all treatment for 2 years.

On examination there were about 30 target-like lesions on the trunk. They were distributed mainly over the central back (Fig. 1) but a few were found on the abdomen and chest. Each lesion was 2–7 mm in diameter and consisted of a central non-pigmented papule surrounded by a zone of non-pigmented skin and by a peripheral ring of brown pigment (Fig. 2). The most recent lesions were small non-pigmented papules without the pigmented halo.

Histology

A lesion taken from the back showed a central benign compound naevocellular naevus with lateral extension of junctional naevus cells away from the central tumour (Fig. 3). There were no dermal inflammatory cells associated with this lesion.

A Fontana stain showed that melanin was absent from both the dermal and epidermal portions of the tumour and from the epidermis immediately surrounding it. However, melanin was present in the naevus cells and keratinocytes several millimetres away (Fig. 4) and was thought to correspond to the ring of pigment seen clinically.

Histochemistry

A Dopa oxidase reaction was carried out on frozen tissue. Many of the melanocytes in the epidermis surrounding and overlying the tumour gave a strongly positive reaction. The dermal tumour cells gave a negative reaction.

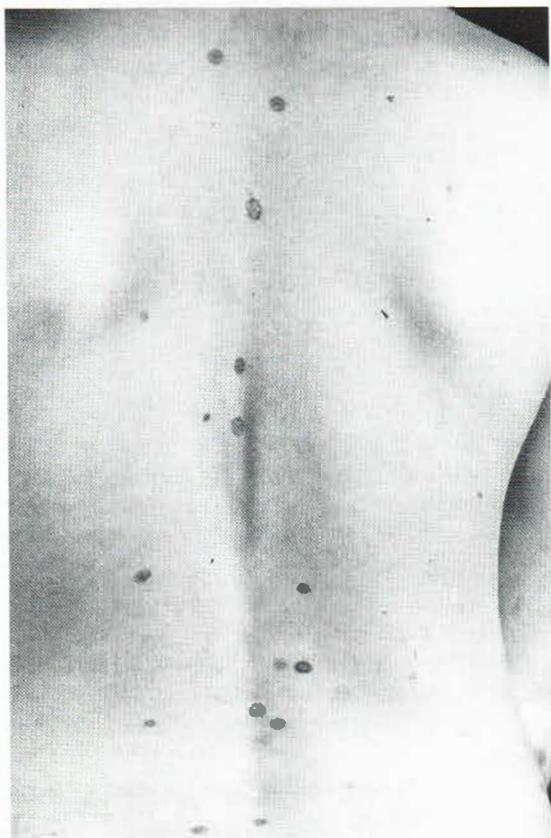


Fig. 1. Multiple cockade naevi on the central back.



Fig. 2. Cockade naevi with a central non-pigmented papule and a pigmented halo.

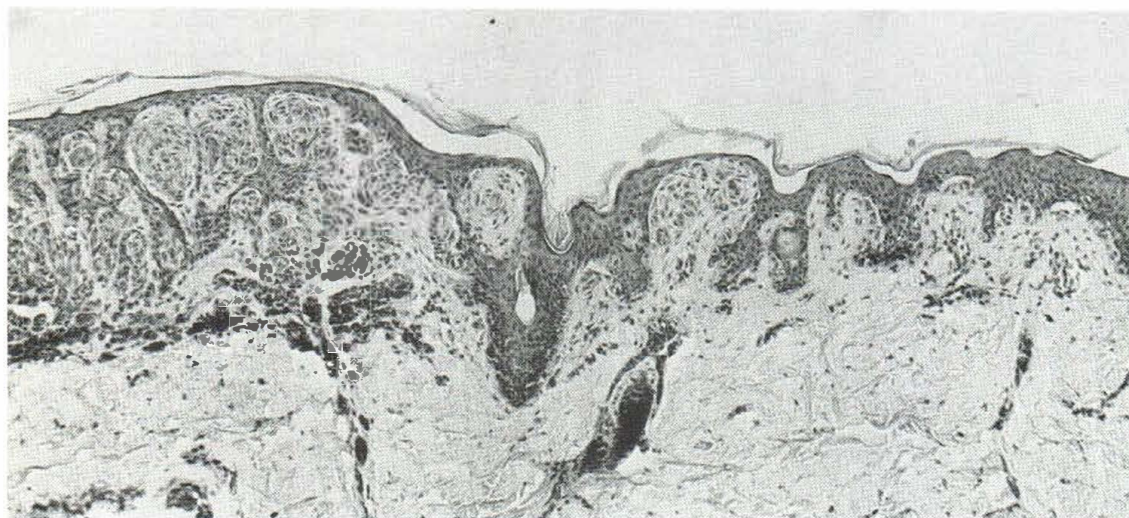


Fig. 3. A naevocellular naevus (*left*) forms the central papule. Junctional naevus cells can be seen (*right*) distant from the central tumour (H + E).

DISCUSSION

Mehregan & King (4) reported a case of unusual target-like pigmented naevi arising on the trunk of a young female. Each lesion had a central pigmented papule surrounded by a peripheral ring of pigmented micropapules. Happle (2) used the term

Kokardennaevus to describe identical lesions arising on the trunk of a young boy. This same term has been used more recently by Warin (7) who reported two more cases. Both were young females who developed multiple cockade naevi on the trunk and these, like the lesions seen in the present case, consisted of a central non-pigmented papule sur-

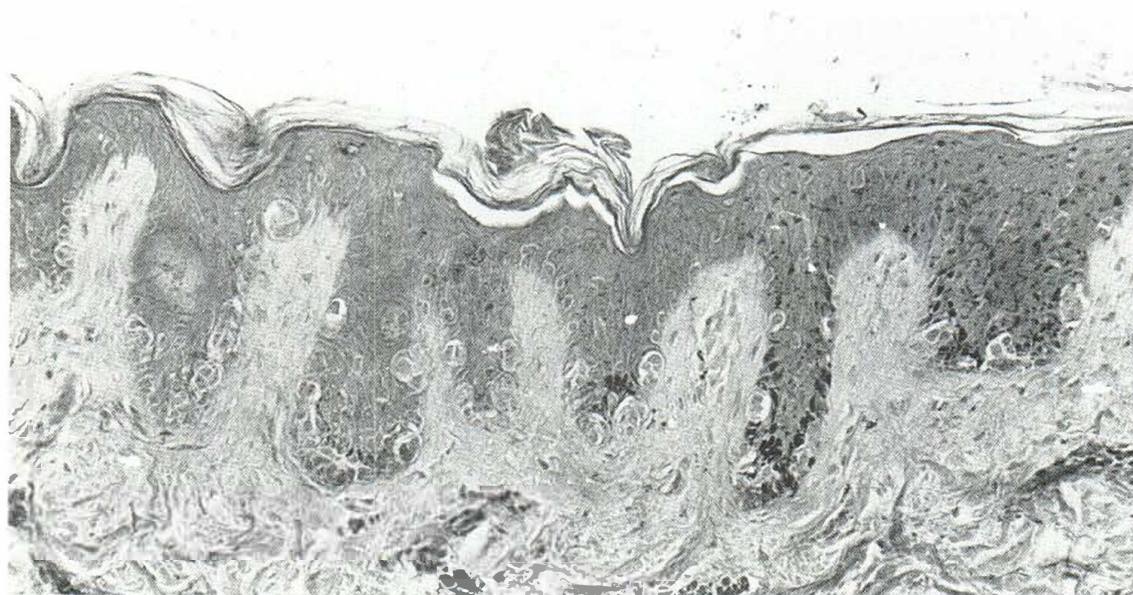


Fig. 4. Melanin in the epidermis (*right*) forms the pigmented halo seen clinically. Note the absence of melanin

in the epidermis (*left*), and the presence of non-pigmented naevus cells (Fontana stain).

rounded by a zone of normal skin and a peripheral ring of macular hyperpigmentation.

Histopathological changes were similar, though not identical, in all these cases. The central lesion was either a compound or a junctional naevus and the halo was formed by collections of pigmented junctional naevus cells except in the first case reported by Warin, in which excess pigment was present in the epidermis without obvious increase in the melanocyte population. In the case reported here, and in the second case reported by Warin, junctional naevus cells could be traced from the central tumour to a point where the pigmented halo was formed.

The cause of this unusual morphological pattern is uncertain. The positive Dopa oxidase reaction within epidermal melanocytes indicates that these cells contain tyrosinase and are capable of synthesizing melanin (end-product of the reaction) (5). That these same cells do not stain for melanin suggests that melanin synthesis has been blocked. Melanin precursors produced by the epidermal melanocytes may inhibit melanin biosynthesis (1), or the dermal component of the naevus in some way may inhibit melanin synthesis in the overlying epidermal melanocytes. Away from the tumour where inhibition weakens, melanin can be synthesized, leading to a ring of pigmentation. Inhibitors of tyrosinase occur in certain amelanotic melanomas and are thought to account for the lack of melanin in these tumours (6).

The absence of a dense lympho-histiocytic infiltrate beneath the tumour and the presence of Dopa oxidase positive melanocytes in the overlying epidermis indicate that the absence of melanin in these tumours is unlikely to be due to an immunological mechanism. Such mechanisms are thought to account for the depigmentation which occurs in Sutton's halo naevus. However, in this tumour the presence of an infiltrate and loss of epidermal melanocyte Dopa oxidase reactivity are characteristic features (3).

In conclusion, this report documents a case of unusual target-like or cockade naevi arising on the trunk of a young girl. This type of naevus appears to be a benign but unusual variant of the cellular naevus and at least in some cases, the unusual morphology could be explained by the inhibition of melanin synthesis in epidermal melanocytes.

REFERENCES

1. Graham, D. G., Tiffany, S. M. & Vogel, F. S.: The toxicity of melanin precursors. *J Invest Dermatol* 70: 113, 1978.
2. Happle, R.: Kokardennaevus. *Hautarzt* 25: 594, 1974.
3. Lever, W. F. & Schaumburg-Lever, G.: Melanocytic naevi and malignant melanoma. *In* *Histopathology of the Skin*, 5th edn., 646 pp. J. B. Lippincott Co., Philadelphia, 1975.
4. Mehregan, A. H. & King, W. R.: Multiple target-like pigmented naevi. *Arch Dermatol* 105: 129, 1972.
5. Pearse, A. G. E.: Oxidoreductases I. *In* *Histochemistry*, vol. 2, 3rd edn., 860 pp. Churchill Livingstone, London, 1972.
6. Satoh, G. J. Z. & Mishima, Y.: Tyrosinase inhibitor in Fortner's amelanotic and melanotic malignant melanoma. *J Invest Dermatol* 48: 301, 1967.
7. Warin, A. P.: Cockade naevus. *Clin Exp Dermatol* 1: 221, 1976.

Solar Urticaria: A Case with Increased Skin Mast Cells and Good Therapeutic Response to an Antihistamine

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Abstract. A 45-year-old woman with solar urticaria is described. She was found to have: (a) increase of skin mast cells; (b) a good therapeutic response to hydroxyzine hydrochloride; (c) frequent peptic ulcers of the stomach; (d) antinuclear IgM antibodies in a titre of 1:1000; (e) cold urticaria and dermatographism; (f) anamnistically, suppression of the solar urticaria by a sequential oral contraceptive.

Key words: Urticaria; Mast cells

Solar urticaria is a fairly uncommon but well recognized clinical entity characterized by erythema, itching and wealing immediately after exposure to sunlight. The symptoms appear within a few minutes and usually do not persist for more than one hour.

The pathogenetic mechanisms are not clear. Immunoglobulins may be involved, according to suc-