Disseminated, Miliarial Type Lymphocytoma Cutis

A Report of Two Cases

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The disseminated, miliarial type of lymphocytoma cutis (DMLC) is a clinicopathologic subtype of lymphocytoma, characterized by multiple, 1–2 mm translucent asymptomatic papules located in the exposed areas of the head and neck. DMLC represents a multifocal hyperplasia of B-lymphocytes with follicular differentiation and formation of follicular germinal centres. The evolution of the disease is characteristic, with some of the lesions resolving and other progressing to nodules or pseudolymphomas. The disease has a chronic course, with complete resolution in one to several years. ***Key word: Skin; Pseudolymphoma; Lymphocytic infiltration.***

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Cutaneous lymphoid hyperplasia and lymphocytoma cutis are the terms commonly used to describe a pseudotumoral proliferation of lymphocytes in the skin. Clinical variants of lymphocytoma cutis have been described according to the number and the clinical appearance of the lesions (1–4). Two major clinical forms can be distinguished, according to Bäfverstedt (1): *a*) solitary or regional cases, characterized by a solitary lump or a number of regionally limited tumours, and *b*) disseminated cases in which extensive lesions are seen. Several histologic subtypes of lymphocytoma cutis have also been defined (5, 6). Lymphocytoma cutis cannot always be related to any previous disease or extrinsic factor, although sometimes it may be triggered by a toxic injury to the skin (7–9) or by infectious agents such as Herpes Zoster (10), Borrelia (11) or Leishmania.

The variant of lymphocytoma cutis called disseminated, miliarial type (DMLC) is rare, with cases only sporadically reported in the literature (5, 12–14). DMLC is characterized by the appearance of numerous (up to hundreds) translucent 1–2 mm asymptomatic papules with a predilection for the head and neck. In this paper we describe the clinical, histological and immunological features of two cases of DMLC.

CASE REPORTS

Case 1

A 79-year-old man with severe androgenic alopecia, had an asymptomatic eruption of micropapular elements on the forehead and anterior scalp lasting 2 months. His past medical history was unremarkable. Examination revealed multiple, dome-shaped, translucent, 1–3 mm pseudovesiculous papules. Four months later, the eruption extended to the parietal sides of the head and the retro-auricular folds with more than a hundred elements simultaneously being present. Physical examination did not reveal lymph node enlargement. The results of standard haematological and biochemical tests were normal.

The patient was treated with chloroquine (250 mg/daily) without benefit. Two months later, the lesions began to resolve spontaneously. The regression was completed within 2 months without any clinical residue.

Case 2

A 83-year-old man was first seen in September 1989 because of an asymptomatic papulo-nodular eruption in the exposed areas of the face, which had been noticed for 3

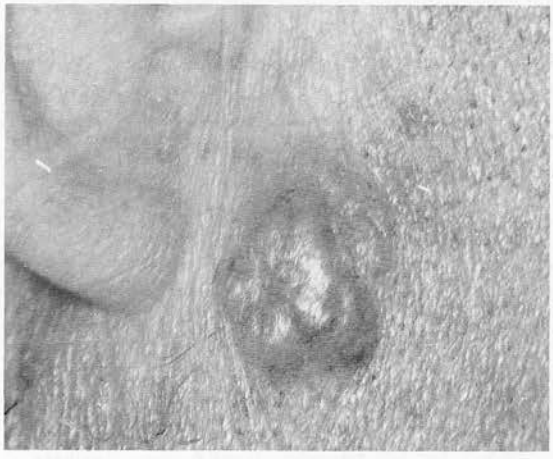

Fig. 1. Case no. 2. Large (1.5 cm) pre-auricular nodule. Note smooth surface and depressed centre.

Fig. 2. Case no. 2. Waxy, dome-shaped papules on the neck.

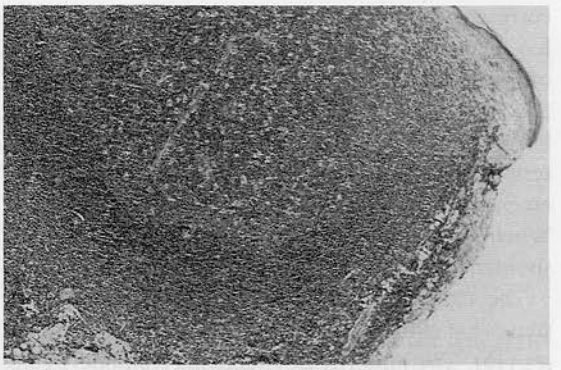

Fig. 3. Punch biopsy obtained from a small papule in patient no. 1. A lymphoid follicle with a prominent germinal centre is seen in the dermis (H&E × 40).

years. His past medical history revealed hypertrophic myocardiopathy and obliterant atherosclerosis with chronic ischemia of the legs. In the previous 3 years, the patient had developed several nodules and numerous small papules on his face, neck and scalp. The larger lesions were nodules with a smooth surface and a light red hue (Fig. 1). They were single or intermingled with the small papules. The patient presented about 10 lesions of this type, measuring 1 to 4 cm, located to the lateral sides of the neck, the preauricular region and the scalp. The smaller lesions, in similar locations, consisted of numerous translucent or waxy small papules, 2–5 mm in diameter (Fig. 2). The eruption was painless and caused only slight pruritus. Physical examination did not reveal lymph node enlargement or visceromegaly. The results of standard haematological, biochemical and immunological tests were normal. Chest X-ray film showed discrete cardiomegaly without other abnormalities. Abdominal scanner and bone marrow examination also showed normal findings.

Some of the lesions became less prominent and began to fade during the immediate follow-up. Consequently, it was decided that no treatment was immediately necessary. After 6 months, only a few lesions remained and they were receding.

Histopathologic examination

Several 4-mm punch biopsy specimens were obtained from well-developed and regressing papules of both patients. Also, two large excisional biopsies were taken from the nodules of patient number two. The specimens were fixed in formalin and embedded in paraffin wax. The immunohistochemical analysis was performed on paraffin-embedded tissue, using the avidin-biotin complex (ABC) method. Monoclonal antibodies that recognize B lymphocytes (L-26 Dakopatts; CD45R Cromalon) and T lymphocytes (UCHL-1 Dakopatts; MT1 Clonab) were used.

The well-developed papules of both patients showed similar histological findings. The epidermis was normal or atrophic. Nodules of lymphocytic infiltrate were detected in the superficial and mid-dermis. The nodules formed lymphoid follicles with prominent germinal centres (Fig. 3). They were composed of centroblasts, centrocytes and dendritic reticular cells, surrounded by small lymphocytes. Immunohistochemical markers for B-lymphocytes were positive in the follicle-like structures. The biopsies from resolving lesions exhibited involutive changes, with follicular hyalinization and infiltration by plasma cells. The follicular centres were less prominent or even inconspicuous. The biopsies from the large tumours showed a pseudotumoral lymphoid proliferation that occupied all the dermis. There were large follicular centres showing large 'atypical' centroblasts (Fig. 4) separated by narrow mantles of small lymphocytes. The immunohistochemical studies also showed that these centroblasts were of B-cell phenotype.

DISCUSSION

The term lymphocytoma cutis refers to pseudoleukemic (pseudolymphomatous) infiltration of the skin. The typical histologic pattern of lymphocytoma cutis is a massive lymphocytic inflitrate in the dermis and/or the subcutaneous tissue. The infiltrate consists of small and large lymphocytes with occasional eosinophils and plasma cells. Structures similar to lymphoid follicles can be seen. Each DMLC papule

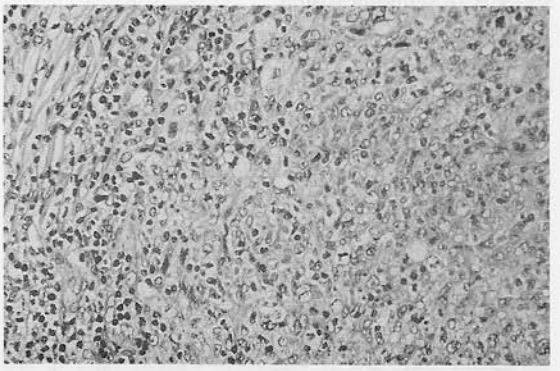

Fig. 4. Biopsy from a large nodule in patient no. 2. Large sheets of centroblasts separated by narrow mantles of small lymphocytes (H&E × 200).

corresponds to one hyperplasic lymphoid follicle having a prominent germinal centre. However, some of the lesions can progress, as happened in our case no. 2, to a nodular lymphocytoma that corresponds histologically to the 'giant follicular' variant described by Mach & Wilgram (5) or to the more recent concept of 'large cell lymphocytoma' (6, 15). When this occurs, the clinical course, before the spontaneous remission, is more protracted.

The classifications of lymphocytoma have been somewhat altered by the use of monoclonal antibodies (16). The majority of cutaneous lymphocytomas express a mixed polyclonal B-cell and T-cell or a predominant B-cell phenotype (3, 15, 17–19), although cases of T-cell lymphocytomas have also been described (7, 19, 20). The papules of DMLC contain an almost pure B-cell population. The cause of DMLC is unknown, though the selective location in sun-exposed areas and the involvement of elderly patients may suggest that DMLC is somehow related to actinic radiation. In support of this view, the patient of Frain-Bell & Magnus (14) had suffered for more than 20 years from polymorphic light eruption before miliary lymphocytoma developed. Abnormal responses were obtained in this patient by phototesting. However, Self et al. (13) failed to reproduce lesions of DMLC in a black patient using ultraviolet light. Our patients did not have any history of photosensitivity. Another possibility is that DMLC could be secondary to a cutaneous infection as in solitary lymphocytoma (11).

We consider DMCL to be a multifocal follicular lymphoid hyperplasia of the skin, having characteristic clinical and histological feature. We would like to encourage the publication of additional reports in order to define the pathogenesis of this interesting subtype of lymphocytoma.

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