Learning from errors

Idiopathic lymphocytoma cutis: a diagnostic dilemma

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Summary

Lymphocytoma cutis, also known as cutaneous B cell pseudolymphoma, represents a spectrum of disease that shares similar clinical and histological features and simulates cutaneous lymphoma clinically and histologically. Clinically it is manifested as asymptomatic, indolent, nodular lesions of different sizes varying between 2 and 5 cm, usually solitary, mainly on exposed area of the body like face and neck. The presence of polymorphous cell infiltrates comprising of T and B lymphocytes, plasma cells, eosinophils, histiocytes and dendritic cells along with lack of atypical lymphocytes after incisional biopsy support diagnosis of pseudolymphoma. Final diagnosis is made on immunohistochemistry.

BACKGROUND

Pseudolymphoma closely mimics lymphoma and differentiation is very difficult.

CASE PRESENTATION

A 45-year-old woman was referred to the Dermatology Outpatient Department of J N Medical College, Aligarh, Uttar Pradesh, India, with complaints of a solitary erythematous dome-shaped nodule on the cheek for the last 5 years. Onset was insidious and symptomless and caused no discomfort to patient. There was no past history of drug intake, insect bite, tattooing, scabies, vaccination, acupuncture and photosensitivity. On examination the lesion was a dome-shaped firm nodule measuring 4×4 cm (figure 1). The surface was smooth and devoid of scaling or prominent follicular opening. There was no sensory deficit on the lesion. No regional lymphadenopathy was noticed. A skin biopsy was taken from the central part of the lesion, which revealed a predominantly nodular or

diffuse infiltrate of lymphocytes admixed with variable number of histiocytes, eosinophils and plasma cells. The infiltrate tends to favour papillary dermis (top heavy) (figure 2). Few areas show germinal centre formation and lack cellular pleomorphism. Other cell types found in germinal centres were T helper cells, macrophages with tingible bodies and dendritic cells (figure 3). There was a narrow grenz zone having atypical and poorly differentiated cells; however, mitotic figures were absent. The epidermis showed mild hyperkeratosis, parakeratosis and acanthosis. Basal layer was intact. Epidermis was free from inflammatory infiltrate. Immunostains shows positivity for B cells marker (CD 79, CD 20) (figure 4 and 5) and sparse population of cells showing T cells marker (CD 3) (figure 6). In cutaneous B cell pseudolymphoma (CBPL), immunohistochemical studies showed B cell predominance with a variable number of T cells. A final diagnosis of CBPL was made.

Figure 1 An erythematous dome-shaped nodule on the cheek.

Figure 2 Well-defined 'top-heavy' nodular infiltrate in the upper dermis of the patient with lymphocytoma cutis (H&E ×50).

Figure 3 Higher magnification of the histological section showing infiltrate that is composed mostly of lymphocytes intermingled with histiocytes. Some of the histiocytes tend to form aggregates (H&E ×500).

Figure 4 CD 79 positivity ×125.

DIFFERENTIAL DIAGNOSIS

Cutaneous B cell lymphoma.

TREATMENT

Various treatment modalities include topical or intralesional glucocorticoids, surgical excision, cytotoxic agents, interferons and antimalarials.

OUTCOME AND FOLLOW-UP

The patient is completely cured.

DISCUSSION

The term cutaneous pseudolymphoma is used to describe non-malignant accumulation of T and B lymphocytes in the skin. They can be either cutaneous B cell or T cell pseudolymphoma. Depending on aetiology, CBPL is also known as cutaneous lymphoid hyperplasia, lymphocytoma cutis, sarcomatosis cutis of Spiegler–Fendt and Bafverstedt syndrome.¹ Aetiology is unknown in most of the cases; however, several association are described in literature,^{2–4}

Figure 5 CD 20 positivity ×50.

Figure 6 CD 3 positivity ×125.

which include medications, contact allergens, post-zoster scars, arthropod bites, vaccinations, tattoos and infections that include *Borrelia burgdorferi* and *Leishmania donovani*.^{5–11} Face, chest and upper extremities are commonly involved sites. Lesions are usually asymptomatic, solitary, skin coloured to violaceous plaques or nodules. A female predominance is seen. It is more common in patients under 40 years of age.¹ Histopathological examination shows nodular or diffuse infiltrate more in superficial dermis (top heavy). Adenaxal structures are spared although distortion of hair follicle and hyperplastic changes may be seen. The hallmark of CBPL is the formation of lymphoid follicle containing mixed population of lymphoid cells. Mitotic figures may be seen in the follicle. Flow cytometric analysis shows a polyclonal lymphocytic population. Differential diagnosis include B cell lymphomas, which shows monomorphic distribution of cells with atypia having bottom heavy distribution of cells, destructive growth affecting adnexae, thinned or absent mantle zone and mitotic activity both within and outside germinal centres. Various treatment modalities include topical or intralesional glucocorticoids, surgical excision, cytotoxic agents, interferons and antimalarials.^{1–2 12}

Learning points

- Differentiation of pseudolymphoma is difficult from lymphoma.
- Immunohistochemistry is very helpful for final diagnosis.
- It can be completely cured in most of cases.

Competing interests None.

Patient consent Obtained.

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