Lymphocytoma Cutis: A Case Report

Balachandra S. Ankad[1,*], Shilpa Biradar[2] and M. Varna Naidu[1]

[1]*Department of Dermatology, S. Nijalingappa Medical College, Bagalkot, Karnataka, India*

[2]*Department of Pathology, S. Nijalingappa Medical College, Bagalkot, Karnataka, India*

Abstract: Cutaneous pseudolymphomas are a group of benign reactive T- or B-cell lymphoproliferative processes of diverse etiology that simulate cutaneous lymphomas clinically and histologically. The diagnosis and classification of pseudolymphomas is a challenge for the clinical dermatologists and dermatopathologists. Lymphocytoma cutis (LC) is a prototypic lesion of cutaneous pseudolymphomas. It is characterized by a relatively dense, B-cell rich lymphoid infiltrate in the dermis. Here we report a case of lymphocytoma cutis presenting on the face.

Keywords: Pseudolymphomas, lymphocytoma cutis, lymphoid follicles.

INTRODUCTION

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 [1].

It manifests as asymptomatic, nodular and indolent lesions on the face, head and neck areas. It varies from 2 and 5 cm in size. It mainly occurs on exposed area of the body [2].

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 immunohistochemitry [3]. Here we report a case of nodular presentation of lymphocytoma cutis on the face which was excised fully to prevent recurrence and inference in the histopathology. It is reported here due to unusual presentation as solitary lesion on the face.

CASE REPORT

A 67 year old male presented with skin lesion on the face since 1 year. Initially the lesion started as a red colored elevated papule. There was no history of trauma at the site prior to the appearance of lesion. In a span of 1 year, the lesion progressively increased in size to attain present size. On examination, an erythematous nodule on the infra-orbital margin of the right eye was noticed. The nodule was nontender, dome shaped, the surface was shiny and it measured about 1.5 X 1 cm (Figure **1**). The overlying skin was adherent to the nodule. There were no associated systemic signs and symptoms.

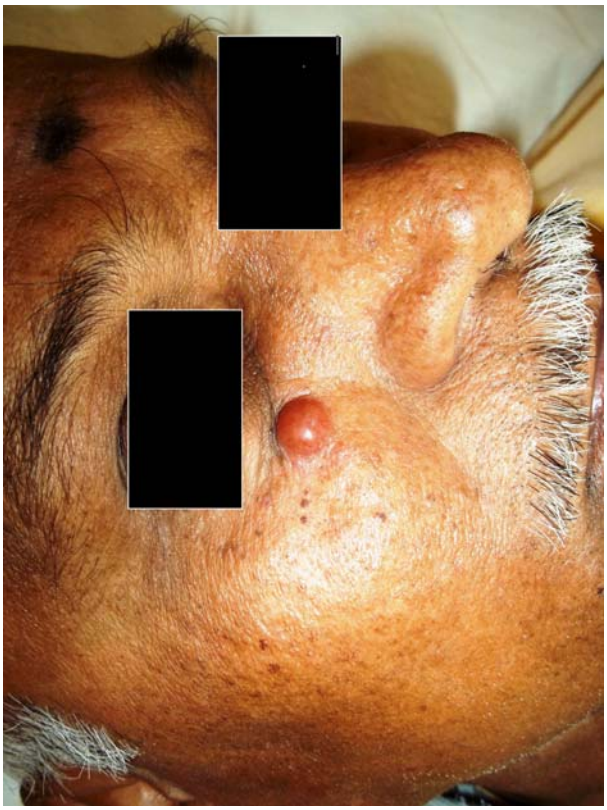

Figure 1: Erythematous nodule on the right infraorbital margin.

Routine blood, urine, biochemical investigations were within normal limits. And HIV (human immunodeficiency virus) and VDRL (venereal diseases research laboratory) tests were negative. The nodule was subjected to histopathology by doing excisional biopsy. The histopathological examination of multiple sections was carried out which revealed hydropic degeneration of the basal layer. In the dermis, there was chronic and nonspecific inflammatory infiltrate,

*Address correspondence to this author at the Department of Dermatology, S. Nijalingappa Medical College, Navanagar, Bagalkot-587102, Karnataka, India; Tel: +91 9980410056; E-mail: drbsankad@gmail.com

E-ISSN: 2310-998X/15

with a predominance of lymphocytes in the reticular dermis and the formation of lymphoid follicles: germinative centers (Figures **2**, **3**). There was no recurrence even after 3years of follow up.

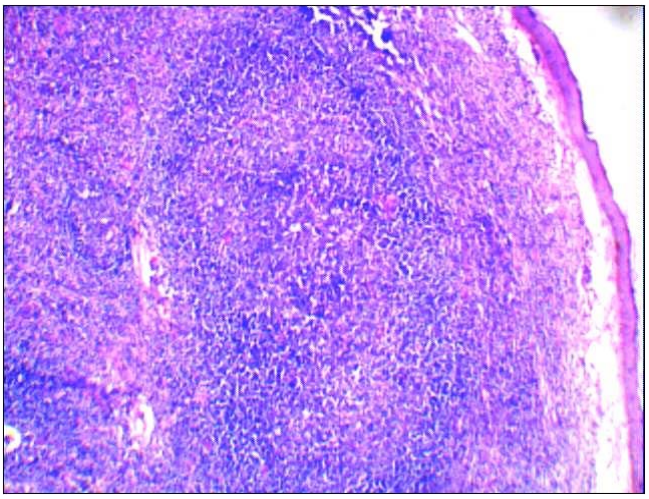

Figure 2: Normal epidermis with dermis showing numerous lymphoid follicles with pale germinal centres (H&E 10X).

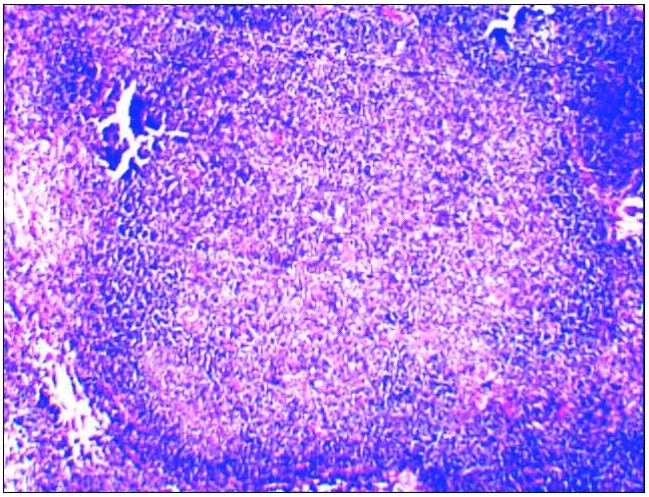

Figure 3: Germinal centre composed of small and large lymphocytes with peripharl mantle zone (H&E 40X).

DISCUSSION

Lymphocytoma cutis (LC) is a prototypic lesion of cutaneous pseudolymphomas. It is characterized by a relatively dense, B-cell rich lymphoid infiltrate in the dermis. It is referred to as Spiegler Fendt sarcoid, lymphadenosis benigna cutis of Bafverstedt, cutaneous lymphoid hyperplasia, or cutaneous lymphoplasia [3].

Cutaneous pseudolymphomas are a group of benign reactive T- or B-cell lymphoproliferative processes of diverse etiology that simulate cutaneous lymphomas clinically and histologically. The diagnosis and classification of pseudolymphomas is a challenge for the clinical dermatologists and dermatopathologists [3].

T-cell pseudolymphomas may result as adverse reaction due to drugs such as anticonvulsants, angiotensin-converting enzyme inhibitors, β-blockers, cytotoxics, antirheumatics, antibiotics, antidepressants and many others [4].

LC is an example of B-cell pseudolymphoma and its exact etiology is unknown. The exaggerated local immunologic reaction to stimulus, often unrecognized, is known to be the cause of LC [5]. It may arise in the course of Lyme disease with *Borrelia burgdorferi* infection, in tattoos as a reaction to certain pigments, after vaccination and trauma, acupuncture and within scars of herpes zoster. However, in most cases etiology of lymphocytoma cutis is idiopathic [4].

Clinically LC presents most commonly as a solitary nodule, although it can appear as localized array of nodules, plaques or papules. The head, neck, extremities, breast, genitalia are common sites of involvement. Lesions have doughy to firm consistency and range from red-brown to violaceous in color [6].

The histopathology of LC reveals a dense, nodular or diffuse lymphoid infiltrate concentrated in the reticular dermis. The epidermis is normal and separated from underlying infiltrate by a narrow grenz zone of uninvolved papillary dermis. The hallmark of LC is formation of true polyclonal lymphoid follicles and pattern of infiltration is top heavy tapering downwards in dermis [7].

These reactive B-cell follicles with pale germinal centers are classified into primary, consisting of homogenous small lymphocytes and secondary, in which there is a peripheral mantle zone surrounding germinal centers composed of heterogeneous mixture of small and large lymphoid cells with cleaved and noncleaved nuclei known as centrocytes and centroblasts [6].

Differentiation from B-cell lymphomas is of utmost importance. Here, the pattern of infiltration is bottom heavy and monomorphous with destruction of the adnexae and absence or thin mantle zone [7].

Clinically, LC can simulate chronic cutaneous lupus erythematosus, Jessner's lymphocytic infiltration of the skin, granuloma faciale, polymorphous light eruption, drug eruption, angiolymphoid hyperplasia with

eosinophilia, infections and inflammatory granulomas, leukemia cutis and cutaneous B-cell lymphoma [6].

Histopathologically, lupus erythematosus (presence of basal cell liquafactive degeneration), polymorphous light eruption (presence of spongiosis), sarcoidosis (presence of naked granulomas) and granuloma faciale (presence of grenz zone) can be differentiated from LC [7].

LC is treated with antibiotics, topical and intralesional steroid, hydroxychloroquine, cryotherapy and radiation therapy with variable results [7]. Excision can be done for solitary lesions.

To conclude, the cutaneous pseudolymphomas simulate true lymphomas very much clinically and histologically. Hence it is necessary to take biopsy for histological study and should be confirmed by immunohistochemitry. The CD-3 and CD-20 are specific for LC. Due to lack of facility we could not do immunohistochemitry. The following points to be considered when we encounter such conditions. Biopsy should be very deep to involve deeper layers of the dermis. Excisional biopsy is preferred when solitary lesion is present because partial removal results in inflammatory changes which interfere with the interpretation.

REFERENCES

[1] Cerroni L, Goteri G. Differential diagnosis between cutaneous lymphoma and pseudolymphomas. Anal Quant Cytol Histol 2003; 25: 191-8.

[2] Brodell RT, Santa Cruz DJ. Cutaneous pseudolymphomas. Dermatol Clinics 1985; 3: 719-34.

[3] Mehta V, Balachandran C, Hameed S. Lymphocytoma cutis following excision arthroplasty. Indian J Dermatol 2011; 56(1): 104-106. http://dx.doi.org/10.4103/0019-5154.77569

[4] Whittaker SJ. Cutaneous lymphomas and lymphocytic infiltrates. Id: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's textbook of dermatology, 8th edn. Oxford: Blackwell publication 2010; pp. 57.53-57.54. http://dx.doi.org/10.1002/9781444317633.ch57

[5] Colli C, Leinweber B, Müllegger R, Chott A, Kerl H, Cerroni L. Borrelia burgdorferi-associated lymphocytoma cutis: Clinicopathologic, immunophenotypic, and molecular study of 106 cases. J Cutan Pathol 2004; 31(3): 232-40. http://dx.doi.org/10.1111/j.0303-6987.2003.00167.x

[6] Wood GS. Inflammatory diseases that simulate lymphomas: cutaneous pseudolymphomas. In: Wolff K, Goldsmith LA, Katz SI, Gilchrest BA, Paller AS, Leffell DJ, editors. Fitzpatrick's Dermatology In General Medicine, 7th edn. New York: McGraw-Hill Publishers 2008; pp. 1402-1413.

[7] Hsu M, Morphy GF. Cutaneous lymphomas and leukemias. In: Elder DE, Elenitsas R, Johnson BL Jr. *et al*, editors. Lever's histopathology of skin, 10th edn. Philadelphia: Lippincott-Raven publishers 2009; pp. 915-1017.

Received on 01-06-2015 Accepted on 18-06-2015 Published on 15-01-2016

DOI: http://dx.doi.org/10.12970/2310-998X.2015.03.02.2