

An asymptomatic well-defined brown coloured plaque on the eyebrow in a middle aged woman

Iran J Dermatol 2012; 15: 141-143

Hossein Mortazavi, MD ¹
 Mona Abdolreza, MD ¹
 Azita Nikoo, MD ²

1. Department of Dermatology, Tehran University of Medical Sciences, Tehran, Iran

2. Department of Pathology, Tehran University of Medical Sciences, Tehran, Iran

Corresponding Author:
 Mona Abdolreza, MD
 Department of Dermatology, Razi Hospital, Tehran University of Medical Sciences, Tehran, Iran
 Email: abdolreza@razi.tums.ac.ir

Conflict of interest: none to declare

Received: 15 May 2012
 Accepted: 6 September 2012

On January 2012, we visited a 48-year-old woman for her skin lesion on the left eyebrow. It had been appeared as an asymptomatic lesion with gradual enlargement since 2 years ago. There was no family history of a similar lesion. No drug was used by the patient.

Physical examination revealed a nearly 1 cm, dark brown, non-ulcerated, oval shaped plaque on the distal part of the left eyebrow. The inferior medial part of the lesion was lighter in color. On palpation, the periphery of the lesion was flattened and the centre was elevated (Figure 1). We took a 3 mm punch biopsy from the lesion.

What is your diagnosis?

Move on the next page for the answer and discussion.



Figure 1. Dark brown, non-ulcerated, oval shaped plaque on the distal part of the left eyebrow.

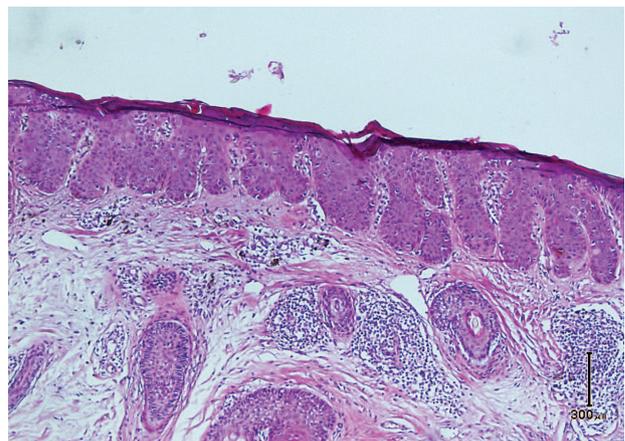


Figure 2. Mild epidermal thickness associated with enlargement of keratinocytes. (H&E ×10)

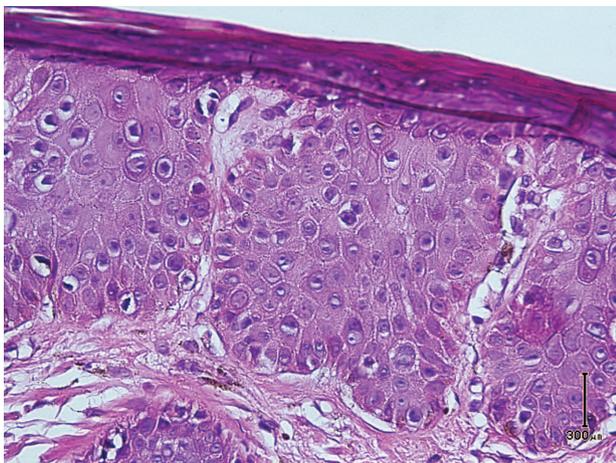


Figure 3. Enlargement of keratinocytes and an increase in the nuclear size of squamous cells. (H&E $\times 40$)

Diagnosis

Large cell acanthoma

Microscopic findings

Pathologic examination showed mild epidermal thickness associated with enlargement of keratinocytes and an increase in the nuclear size of squamous cells (Figure 2,3).

DISCUSSION

Large Cell Acanthoma (LCA) is a benign keratinocytic lesion¹ that was first reported by Pinkus in 1970². It is frequently seen in middle aged individuals, and is mainly located on the sun-damaged skin including eyelids. The incidence in women is slightly higher than its incidence in men and the condition is seen more commonly in Caucasians³. It is usually manifested as a skin-colored or pigmented macule or papule¹. Solitary hyper- or hypo pigmented asymptomatic plaque is another presentation of LCA³.

Generally, the lesion diameter is less than 1 cm¹. Two variants are reported: solitary and multiple lesions³. Clinically, it may resemble solar lentigo, pigmented actinic keratosis and flat or pigmented seborrheic keratosis⁴.

The pathogenesis of LCA is not completely understood. Genetic studies have revealed low-degrees of aneuploidy³. Although some researchers have detected especially in multiple variants¹, some serotypes of human papillomavirus (HPV),

such as HPV 16 and 53¹, others have reported HPV 33 by PCR⁵. The pathogenic role of HPV in LCA is unidentified⁵. Melanocytic proliferation by HMB-45 staining has also been shown in such lesions, suggesting that large cell acanthoma may be a reactionary pattern related to lentigo senilis⁴. LCA is considered as a variant of Bowen's disease or solar lentigo^{3,6}. LCA is a distinctive entity with various stages of development which is probably related to stucco keratosis⁷.

On light microscopy evaluation, large keratinocytes with enlarged nuclei are commonly seen⁴. Minimal nuclear pleomorphism is seen as well⁴. Acanthosis, hypergranulosis and orthohyperkeratosis are also observed¹.

Sánchez and colleagues reported three histopathologic patterns of LCA: basic, verrucous and flat hyperkeratotic. In the basic pattern, acanthosis, hyperkeratosis, enlarged keratinocytes, hyperpigmentation and bulbous rete ridges are seen. Church spire-like papillomatosis and hyperkeratosis are seen in the verrucous pattern and acanthosis with compact hyperkeratosis that lacks rete ridge and papilla are seen in the flat hyperkeratotic pattern⁷.

Our patient's lesion was biopsied to rule out other conditions with a similar clinical presentation such as lentigo, seborrheic keratosis, Bowen's disease and melanoma³.

LCA is considered as a benign condition³; therefore, we started a less aggressive treatment modality for our patient because the lesion, which had a relatively large diameter, was located on the eyebrow region. We performed curettage and no gross remnant was seen in the 6-week follow up of the patient.

REFERENCES

1. Garrido-Rios AA, Sanz-Muñoz C, Aragonese-Fraile MH, et al. Human papillomavirus detection in multiple large-cell acanthomas. *J Eur Acad Dermatol Venereol* 2009; 23:454-5.
2. Sánchez Yus E, de Diego V, Urrutia S. Large cell acanthoma. A cytologic variant of Bowen's disease? *Am J Dermatopathol* 1988; 10:197-208.
3. Bologna JL, Jorizzo JL, Rapini R, et al. *Dermatology*. 2nd Edition. Philadelphia: Mosby Elsevier; 2008.
4. Mehregan DR, Hamzavi F, Brown K. Large cell acanthoma. *Int J Dermatol* 2003; 42:36-9.
5. Wu YF, Ko JH, Kuo T, et al. Large cell acanthoma

Well-defined brown coloured plaque on the eyebrow

- manifesting as multiple white papules on extremities. *Dermatologica Sinica* 2011; 29: 144-6.
6. Roewert HJ, Ackerman AB. Large-cell acanthoma is a solar lentigo. *Am J Dermatopathol* 1992; 14:122-32.
7. Sánchez Yus E, del Rio E, Requena L. Large-cell acanthoma is a distinctive condition. *Am J Dermatopathol* 1992; 14:140-7.