Hypertrophic (Verrucous) Cutaneous Lupus Erythematosus of the Lip and Oral Cavity: A Series of 4 Cases

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So-called "hypertrophic cutaneous lupus erythematosus (LE)" (also termed "verrucous cutaneous LE") is a distinct and rare clinical variant of chronic cutaneous LE that is characterized by intense tissue hyperplasia and hyperkeratosis. Hypertrophic LE causes marked disfigurement and is usually resistant to therapy (1, 2). Lesions occur more commonly on the face and upper limbs, with no specific mention in the literature of lesions occurring on the lips or oral mucosa.

We describe here a series of 4 cases with a diagnosis of LE who presented with hypertrophic lesions on the skin and oral mucosa. Clinical and laboratory data are presented, together with detailed characterization of the mucosal involvement.

CASE REPORTS

Clinical data for the 4 patients are shown in Table SI (available from http://www.medicaljournals.se/acta/content/?doi=10.2340/00015555-1433). All patients presented hypertrophic cutaneous LE of longstanding duration. Only patient 1 had multiple active cutaneous LE lesions at the time of examination (Fig. 1A, B). Skin lesions in patients 2 and 4 were mainly residual, with intense scarring. The lesion in patent 3 was confined to the lip area (Fig. 1C–F).

Histopathology of biopsied oral lesions revealed marked hyperkeratosis, presence of a granular layer, focal hydropic degeneration of the basal layer, necrotic basal keratinocytes, and melanophages of variable intensity (Fig. 1G, H). There were no signs of keratinocytic atypia. Dermal components included dilated papillary vessels, mucin, and scarce inflammatory infiltrate, except for case 2, in which inflammatory cells were abundant in a superficial and deep pattern. Direct immunofluorescence findings were non-diagnostic.

In patients 1, 2 and 3, LE activity was more pronounced on the tegument. In addition to skin lesions, patient 4 had a several year history of lupus arthritis.

DISCUSSION

There are few published case series of oral compromise in LE. Of these, some uniformity can be observed in the clinical picture, despite the great variety of descriptive terms employed ("oral discoid lesion", "chronic plaque", "lupus cheilitis", "acute ulcer", "erythematous ulcer", "ulcerated plaque", "pebbly red areas", "honeycomb lesions", "keratotic white lesion", "purpuric lesion", and "diffuse palatal petechial erythema", among others); a clinical characterization based on established dermatological criteria would be useful. Our group has proposed a method that simply compares mucosal LE lesions with their cutaneous counterparts (acute, subacute and chronic mucosal LE in analogy to acute, subacute and chronic cutaneous LE) in order to better understand those lesions (3).

We describe here 4 patients with what is known as hypertrophic/verrucous LE (a subtype of chronic cuta-

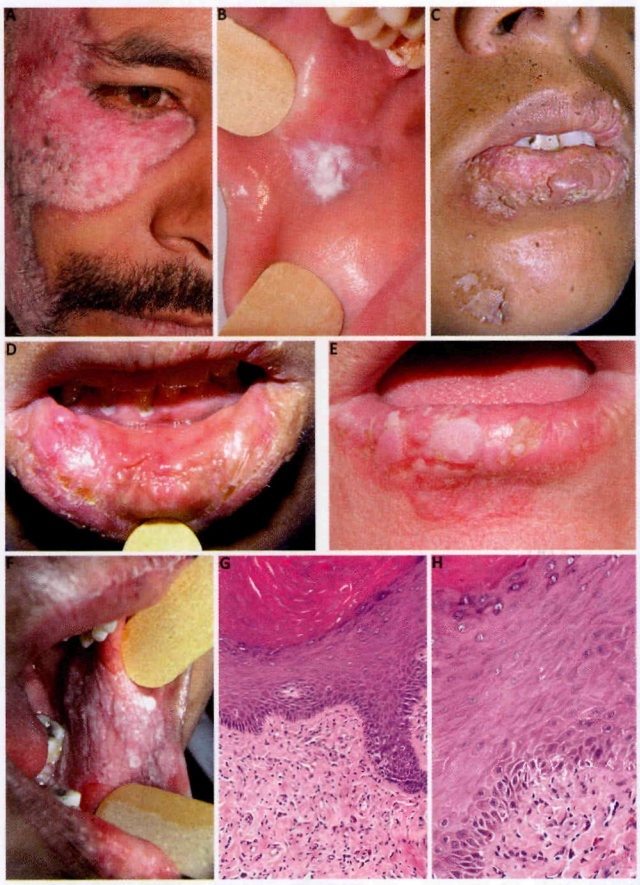

Fig. 1. (A, B) *Patient 1:* extensive verrucous lesion on the face, and analogous lesion on the buccal mucosa. (C, D) *Patient 2:* verrucous lesion on all structures of the lip. Intensely atrophic scar on the chin. (E) *Patient 3:* hypertrophic lesion on lip skin and vermilion. (F) *Patient 4:* extensive verrucous plaque. (G, H) Histopathological aspects of the mucous lesion in patient 1: intense hyperkeratosis, granulosis, focal hydropic degeneration of the basement zone, apoptotic cells, pigmentary incontinence. Note the scarceness of inflammatory infiltrate: haematoxylin and eosin, original magnification: (G) ×250, and (H) ×400.

neous LE) who presented significant mucosal lesions. We found no published references to this combination. A case reported by Chi et al. (4) cannot be considered, since only a typical palatal LE lesion without marked hyperkeratosis is seen.

All 4 patients presented here had long-lasting LE. In addition to mucosal lesions, patients 1, 2 and 4 had had exuberant cutaneous compromise; nonetheless, lesions were mainly residual in patients 2 and 4 at the time of consultation. Their mucosal lesions remained active, however; such lesions appear to have had an even more protracted course than their cutaneous counterparts, although the patients could not recall precisely whether their cutaneous and mucosal lesions had erupted simultaneously.

Patients 2 and 3 had lesions on the lip. The plaques characteristically progressed from the vermilion to the skin, which is considered typical for labial LE papules and plaques (3, 5). In addition, the plaque in patient 2 progressed to the labial mucosa, causing great destruction. Patient 3 had a single lesion on the vermilion and nearby skin, which is a strikingly rare presentation.

An earlier publication by our group reported that there was no difference between cytokine expression on biopsies of LE lesions from the lower vermilion (sun-exposed) and the intra-oral mucosa (sun-protected) (6). These findings seem to suggest that, although ultraviolet (UV) light is known to be of great importance in the induction of LE activity, intrinsic mechanisms of mucocutaneous lesions formation may be similar in sun-exposed and sun-covered areas, once the process has been initiated. These findings are in accordance with our hypothesis about the similarity between cutaneous and mucosal LE lesions, since both seem to arise via the same molecular and inflammatory mechanisms. Thus, it is not surprising that intra-oral verrucous lesions may develop if a patient is prone to verrucous cutaneous LE. An interesting finding reinforcing this idea is that, in patients 2 and 3, the lower lip skin, vermilion, and mucosal lesions were due to a single plaque.

Differential diagnoses of hypertrophic oral LE lesions include other causes of white keratotic mucosal lesions: hyperplastic candidiasis, lichen planus, lichen simplex chronicus, and squamous cell carcinoma (which can appear on longstanding scarring mucosal lesions of LE) (3).

Histopathological aspects of oral lesions were similar in patients 1, 3 and 4. The presence of a granular layer is seldom observed in the mucosa; this is a frequent finding in persistent mucosal rubbing (lichen simplex chronicus) (7). Other histopathological features of LE, such as hydropic degeneration, apoptotic bodies, melanophages, and lymphocytic inflammatory infiltrate, were present, but with little intensity on most of the studied sections, probably due to antiquity of the lesions. Direct immunofluorescence findings were characteristic, but non-diagnostic.

Verrucous LE is typically chronic and resistant to therapy (1, 8–11); our patients had been treated previously, with mostly poor results. No patient was a smoker; this is known to alter therapeutic response (12). In addition, the mucosal lesions seem to have an even more protracted course than their cutaneous analogues, since intra-oral lesions in patients 2 and 4 were still active after involution of the long-lasting skin lesions.

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