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Letter to the editor

Impressive oral lichen planus progression to invasive squamous cell carcinoma in a three months lapse

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Dear Editor,

Lichen planus (LP) is a chronic inflammatory disorder that frequently involves oral mucosa. Since Hallopeau's first report of oral lichen planus (OLP) malignant transformation in 1910 [1], several sporadic cases of degeneration into oral squamous cell carcinoma (OSCC) have been described in the literature [2–7]. The OLP progression to OSCC is considered a long-term process and chemoprevention strategies have been suggested to arrest or reverse this transition before malignancy occurs [8]. A recent review reports an average time from OLP diagnosis to SCC of 51,4 months [2]. We present an unusual OLP case in a 64-year-old Caucasian man with clinical and histological documentation of the extremely rapid development of OSCC, requiring wide demolition and reconstructive problems.

The patient presented to our hospital with a three months history of painful erosions on his lower lip. He denied heavy alcohol intake or smoking and had no previous history of skin or oropharyngeal cancer. Physical examination revealed a wide erosion extending on the vermilion of the lower lip, with focal areas of flaking and crusting (Fig. 1A), while the rest of the oral mucosa showed asymptomatic lacy, white, reticular patches. The skin examination revealed annular patches with a red-brownish papular border scattered on the neck, upper back, trunk, genital areas; hyperkeratotic violaceus papules were noted along the lower legs. Isolated small patches of cicatricial alopecia with the same red-brownish borders were also present on the scalp. According to clinical presentation, the diagnosis of LP was made; incisional biopsies were performed on an annular lesion of the neck, and on the erosive lesion of the lip. Histopathology confirmed the clinical diagnosis of LP. Careful examination of the lip biopsy showed epidermal ulceration with dense band-like lymphocytic infiltrate in the papillary dermis and several apoptotic keratinocytes, in the absence of dysplastic features (Fig. 2A). Patient was treated with topical betamethasone plus fusidic acid ointment with apparent recovery of the erosions (Fig. 1B). No general treatment was performed due to the good response to the topical moderate potency corticosteroid medication (methylprednisolone aceponate) of the skin lesions.

Three months later he urgently referred to us for the rapid growing of an exophytic tender 1 cm nodule on the lower lip (Fig. 1C). There was no evidence of cervical lymph nodes enlargement. Biopsy revealed nests of moderate-differentiated keratinocytes invading the underlying reticular dermis, surrounded by a dense perilesional inflammatory infiltrate (Fig. 2B). Surgical margins were deemed as negative. Histopathology confirmed the diagnosis of OLP with malignant transformation to localized SCC of the lower lip (stage I: T1N0M0). Unfortunately, the wide surgical excision healed with a devastating scar, requiring plastic reconstructive surgery: a nasolabial flap was performed, but did not allow for functional restoration (Fig. 1D).

A computed tomography carried out 6 months later did not detect any recurrence or potential metastasis. The patient is currently on regular follow up and started hydroxychloroquine sulphate 200 mg twice daily for the residual LP lesions.

The presented case is emblematic of LP, which is a mucocutaneous inflammatory disorder with a broad spectrum of clinical manifestations, affecting the skin as well as scalp, nails, oral and genital mucosa. Oral involvement is quite common and affects from 0.5 to 3% of the population, with predilection for middle age and female gender [2]. Clinical presentation of OLP consists of three clinical subtypes: reticular (Wickham striae), including papules, white lines and plaques; erythematous or atrophic; and erosive [3]. Our patient presented both reticular and erosive manifestations. Differential diagnosis include other forms of oral dysplasia with secondary lichenoid features, and clinicopathological correlation is mandatory [9]. The presence of typical LP skin findings further deemed the diagnosis in our patient.

In 1910, Hallopeau [1] described the first case of OLP with malignant degeneration into oral SCC (OSCC). Many sporadic cases have been reported since then [4] supporting the inclusion, especially of the erosive form, among precancerous conditions, according to the World Health Organisation's classification [5,6]. Two recent systematic reviews [2,4] tried to better estimate the frequency of OLP malignant transformation, reporting an overall rate of 1.09% and 1.1% respectively, with an average time from diagnosis of OLP to diagnosis of SCC of 51.4 months [2].

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Fig. 1. A, Erosive lichen planus of the lower lip, with reticular lichen of the lower gum. B, Recovery of the lip erosion after topical treatment. C, Squamous cell carcinoma developed on the same area of the previous erosive lichen manifestations. D, Plastic reconstructive outcome showing poor results, with functional impairment and anaesthetic sequelae.

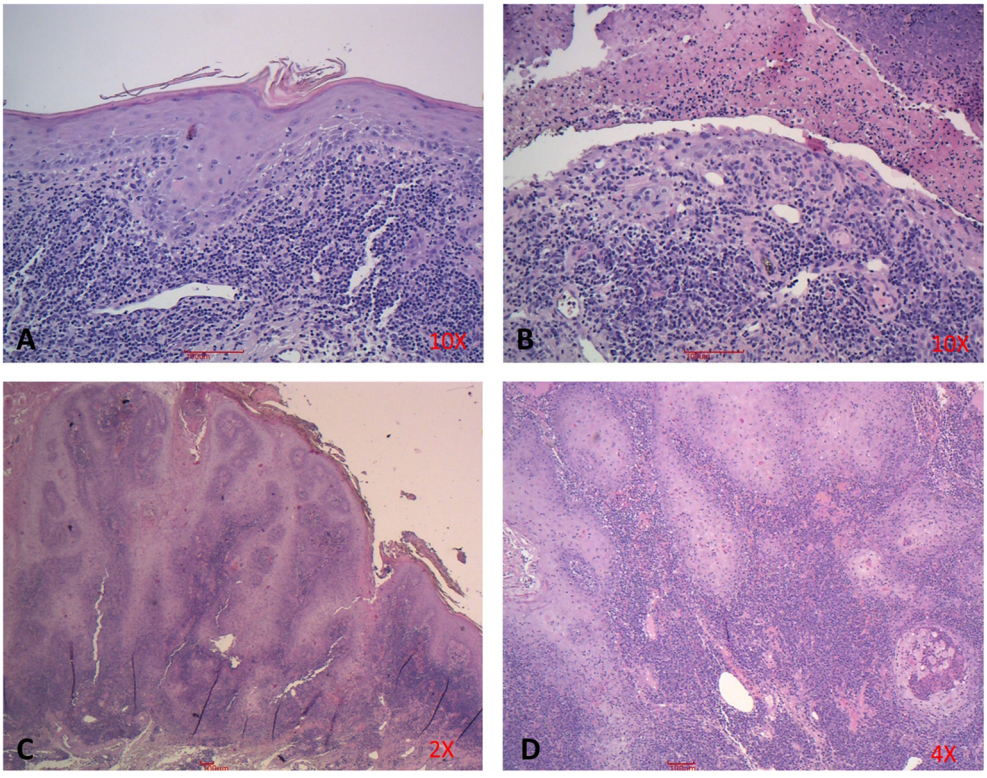

Fig. 2. Histopathology of the erosive lichen planus biopsy: epidermal ulceration with dense band-like lymphocytic infiltrate in the papillary dermis and few apoptotic keratinocytes (H&E, magnification: 10× inset A and B). Excised squamous cell carcinoma: nests of moderately differentiated keratinocytes invading the underlying reticular dermis, surrounded by a dense perilesional inflammatory infiltrate. (H&E, magnification: 2× inset C, and 4× inset D).

The pathophysiology of OLP malignant transformation is still uncovered, even though different risk factors have been suggested [7] including smoke, alcohol, viruses (HPV, HCV), *Candida albicans* infections [10], in addition to immunosuppression and chronic inflammation.

These findings contrast with our case in which the patient was otherwise healthy, negative for any risk factor, and most of all experienced an extremely rapid OSCC development on the same site carefully investigated by incisional biopsy 3 months earlier. The dramatic aggressive behaviour did not allow the adoption of any chemopreventive measure [8], and alert on the need of more strictly follow-up timing, which is not currently scheduled by consensus protocols. Regarding the behaviour of OSCC after malignant transformation, the literature reports a tendency for the development of well-differentiated non-invasive tumour, without lymph node metastasis (stage I-II according with the AJCC staging criteria for head and neck), although some cases of more aggressive disease have been described [11]. Surgical wide margins excision on very sensitive area, such as the lip is another problem, requiring plastic surgery advise. In our case, the aesthetic and functional sequalae of the initial reconstruction was poor, requiring additional interventions.

In conclusion, our case advances doubts on the general belief that the OLP malignant transformation is associated with chronicity, and suggests a closer follow-up, at least three times a year. Education of the patients and alerting the medical community is necessary to urgent referral for any suspicious sign of transformation, to immediately perform the biopsy and careful histological examination.

Conflict of interest statement

The Authors do not have any conflict of interest to declare.

All authors contribute to: design, data acquirement, study writing, editing.

References

[1] Hallopeau H. Sur un cas de lichen de Wilson gingival avec neoplasia voisine la region maxillaire. Bull Soc Fr Derm Syph 1910;17:33.
[2] Fitzapatrick S, Hirsch S, Gordon S. The malignant transformation of oral lichen planus and oral lichenoid lesions: a systematic review. J Am Dent Assoc 2014;145(1):45.
[3] Eisen D. The clinical features, malignant potential and systemic associations of oral lichen planus: a study of 723 patients. J Am Acad Dermatol 2002;46(2):207.
[4] Aghbari S, Abushouk A, Attia A, et al. Malignant transformation of oral lichen planus and oral lichenoid lesions: a meta-analysis of 20095 patient data. Oral Oncol 2017;68:92–102.
[5] Ismail SB, Kumar SK, Zain RB. Oral lichen planus and lichenoid reactions: etiopathogenesis, diagnosis, management and malignant transformation. J Oral Sci 2007;49:89–106.
[6] WHO Collaborating Centre For Oral Precancerous Lesions. Definition of leukoplakia and related lesions: an aid to studies on oral precancer. Oral Surg Oral Med Oral Pathol 1978;46(4):518–39.
[7] Giuliani M, Troiano G, Cordaro M, et al. Rate of malignant transformation of oral lichen planus: a systematic review. Oral Dis 2018;00:1–17.
[8] Cau L, Jabara JT, Lai W, et al. Topical agents for oral cancer chemoprevention: a systematic review of the literature. Oral Oncol 2017;67:153–9.
[9] Thirumal Raj A. Formulating a clinicopathological algorithm for oral lichenoid dysplasia and related lesions. Oral Oncol 2017;71:186–7.
[10] Krogh P, Hald B, Holmstrup P. Possible mycological etiology of oral mucosal cancer: catalytic potential of infecting *Candida albicans* and other yeasts in production of N-nitrosobenzylmethylamine. Carcinogenesis 1987;8:1543–8.
[11] Braun KA, Massa L. Oral lichen planus with malignant transformation to invasive squamous cell carcinoma. Cutis 2015;96(3):E12–4.

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