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Short communication

Development of a squamous cell carcinoma is not at all unusual in a white plaque displaying no earlier clinical signs of malignancy. In short, excisional biopsy of OL does not prevent malignant transformation (primary prevention), but it does promote early diagnosis of cancer (secondary prevention) and is indicated for every lesion[13].

In one retrospective study of OL, the incidence of oral squamous cell carcinoma was determined in patients treated surgically and/or medically and in those managed only by regular clinical follow-ups[14]. Given that the two groups did not differ significantly, one may argue that OL lesions destined for malignant transformation will suffer such fate regardless of active intervention. However, a bias related to group heterogeneity cannot be excluded, because the patients were not randomly assigned.

CO_2 laser resection is the most commonly used laser method for treatment of OL[15]. The rate of recurrence after CO_2 laser resection varies from 7.7% to 66%, with malignant transformation occurring in 7.7–14.2%[15–19]. Continuous smoking after surgical removal and widespread lesions are prognostic indicators for recurrence after laser surgery[15]. The haemostasis achieved by laser ablation is clearly advantageous as well as the ability to preserve surrounding tissue and the positive wound healing attached. Unfortunately, no tissue is available for histopathological examination[7].

Photodynamic therapy has also been used to manage patients with OL and oral erythroplakia. In patients with OL, results have proved unsatisfactory, but a high success rate (66–95%) has been reported with erythroplakia. The less keratinized surface and more decisive dysplasia of the latter perhaps facilitate greater penetration by photosensitizer[20].

Despite extensive investigations and a number of advances in systemic therapy for patients with potentially malignant oral lesions, there is no standard approach for prevention of head and neck malignancies[21]. A serious drawback of chemoprevention is the relapse of lesions after discontinuing treatment. In addition, there is no evidence that such therapy reduces the incidence of oral cancer long term.

Recurrence Versus Second Primary OL

Resection is the most common treatment modality in OL. However, clinicians must bear in mind that molecular alterations may or may not be manifested in 'clinically normal mucosa' (Figure 1). When surgical margins are involved, removal of the lesion will not eliminate 'altered clones'. Thus, any relapse should be considered a persistent/recurrent disease. In the event that the margins do not present molecular alterations, any new lesion appearing at the same site is better viewed as a second primary OL. Currently, there is no proof that recurrent and second primary OL differ in respective risks of malignant transformation or indicated treatments. Future studies may help illuminate the clinical relevance of any distinction in this regard.

Discussion

Any expression of molecular alterations in 'clinically normal mucosa' at the margins of OL carries an increased risk of progression to squamous cell carcinoma[22]. Because the means of assessing surgical margins may not be routinely available, clinicians must factor this into treatment decisions. In general, all patients with OL should be monitored regularly.

Despite a lack of evidence, surgical resection still remains the best practice for management of OL, regardless of histologic grade. Lifestyle modifications (i.e. cessation of smoking and alcohol consumption) in patients with OL are also warranted.

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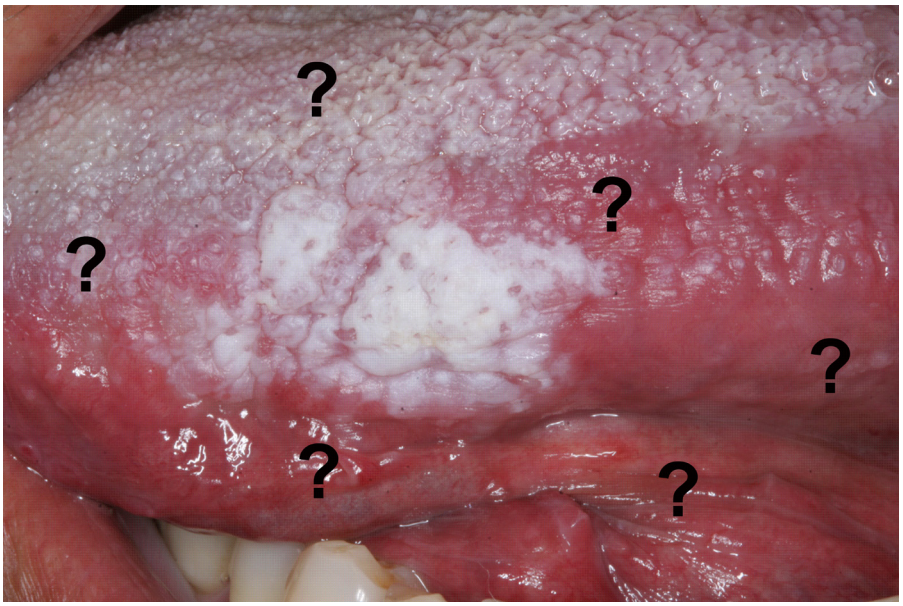

Figure 1: Oral leukoplakia (lateral border of tongue). Clinically normal mucosa at margins may in fact harbour molecular alterations, contributing to the persistence/recurrence of subsequent squamous cell carcinoma.

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Abbreviations list

OL, oral leukoplakia

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