Lip Ulcer Induced by Nivolumab: A Case Report

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An 84-year-old man received nivolumab for the treatment of pleural mesothelioma and thereafter showed a partial response. After 6 cycles of treatment, the appearance of a lip ulcer was noticed. During the coronavirus disease 2019 pandemic, the patient used masks regularly and, consequently, his mouth was hidden and he thus had not noticed the lip ulcer.

After 11 cycles of the treatment, the patient consulted his physician about the lip ulcer (Picture a). He had no history of smoking and had never had ulcers before. Actinic keratosis and contact dermatitis were considered in the differential diagnoses, but the probability was considered to be low because of the short time to the onset, the presence of a localized ulcer in the lip and the absence of any possible allergens. Herpes Simplex was suspected; however, the use of vidarabine did not improve the ulcer. The Nivolumab treatment was continued, but a decrease in the quality of life was noticed due to the pain caused by the lip ulcer. Based on a diagnosis of grade 2 immune-related adverse events (irAEs), prednisolone at 10 mg/day was orally administered for 2 weeks and the lip ulcer thereafter rapidly improved (Picture b). irAEs are a wide variety of side effects that can appear throughout the entire body, with variable time and site of onset (1). More than one-third of patients experience cutaneous AEs, usually in the form of a maculopapular rash, pruritus or vitiligo (2). Although the occurrence mechanism of irAEs is not fully clear yet, effector T cells are considered to injure the tissue by blocking the control by regulatory T cells. As the lip is formed from the skin and mucosa, the effector T cells might have damaged the keratinocytes of the lip, thus resulting in lip ulceration. Several cases of nivolumab-associated lichenoid planus drug eruption have been reported, and the underlying mechanism seems to be related with the T cell-mediated attack on keratinocytes. Unfortunately, this clinical case could not be confirmed because a biopsy was not performed, but a similar phenomenon might have occurred on this patient’s lip. However, to the best of our knowledge there have so far been no reports on irAEs involving the lips, including lip ulcers. As a result, this makes our case a rare one.

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References


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