CONFLICTS OF INTEREST

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ORCID

Ji Hae Lee, https://orcid.org/0000-0002-5132-1627
Ro Woo Lee, https://orcid.org/0000-0001-6500-9223
Sung Hye Eun, https://orcid.org/0000-0001-8124-1305
Han Mi Jung, https://orcid.org/0000-0002-0968-9647
Gyong Moon Kim, https://orcid.org/0000-0002-6141-4501
Jung Min Bae, https://orcid.org/0000-0001-5975-8519

REFERENCES

1. Firooz A, Tehranchi-Nia Z, Ahmed AR. Benefits and risks of intralesional corticosteroid injection in the treatment of dermatological diseases. Clin Exp Dermatol 1995;20:363-370.
2. Strazar AR, Leynes PG, Lalonde DH. Minimizing the pain of local anesthesia injection. Plast Reconstr Surg 2013;132:675-684.
3. Leff DR, Nortley M, Dang V, Bhutiani RP. The effect of local cooling on pain perception during infiltration of local anaesthetic agents, a prospective randomised controlled trial. Anaesthesia 2007;62:677-682.
4. Al-Qarqaz F, Al-Aboosi M, Al-shiyab D, Al Dabbagh Z. Using cold air for reducing needle-injection pain. Int J Dermatol 2012;51:848-852.
5. Irkoren S, Ozkan HS, Karaca H. A clinical comparison of EMLA cream and ethyl chloride spray application for pain relief of forehead botulinum toxin injection. Ann Plast Surg 2015;75:272-274.

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Squamous Cell Carcinoma at the Site of Cutaneous Lymphoid Hyperplasia

Hiraku Kokubu, Kazuya Teramura, Toshihiro Tanaka, Noriki Fujimoto

Department of Dermatology, Shiga University of Medical Science, Otsu, Japan

Dear Editor:

An 82-year-old Japanese female noticed an erosive plaque on her lower lip in 2012. Although the plaque healed by itself, it recurred after a month. She was referred to our hospital in 2014. She did not smoke or drink alcohol. Her past history was not in particular, and she had no experience of radiation therapy, burns, herpes zoster, and insect bite on her lip. She presented with partially erosive plaque with surrounding bulges measuring about 1.0 cm×2.0 cm on her lower lip (Fig. 1A). The serum level of zinc was within the normal limit (71.9 μg/dl). Histopathological examination of a biopsy specimen from the erosive plaque showed the elongation of rete ridges and parakeratosis, pseudocarcinomatous epithelial hyperplasia, superficial and deep infiltration of plasma cells, and small lymphocytes forming lymphoid follicles (Fig. 1B, C). Immunohistochemical staining showed CD20 was positive in folli-

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Corresponding Author
Hiraku Kokubu
Department of Dermatology, Shiga University of Medical Science, Seta Tsukinowa, Otsu, Shiga 520-2192, Japan
Tel: +81-77-548-2233
Fax: +81-77-548-2154
E-mail: kokubu@belle.shiga-med.ac.jp
https://orcid.org/0000-0003-4023-367X

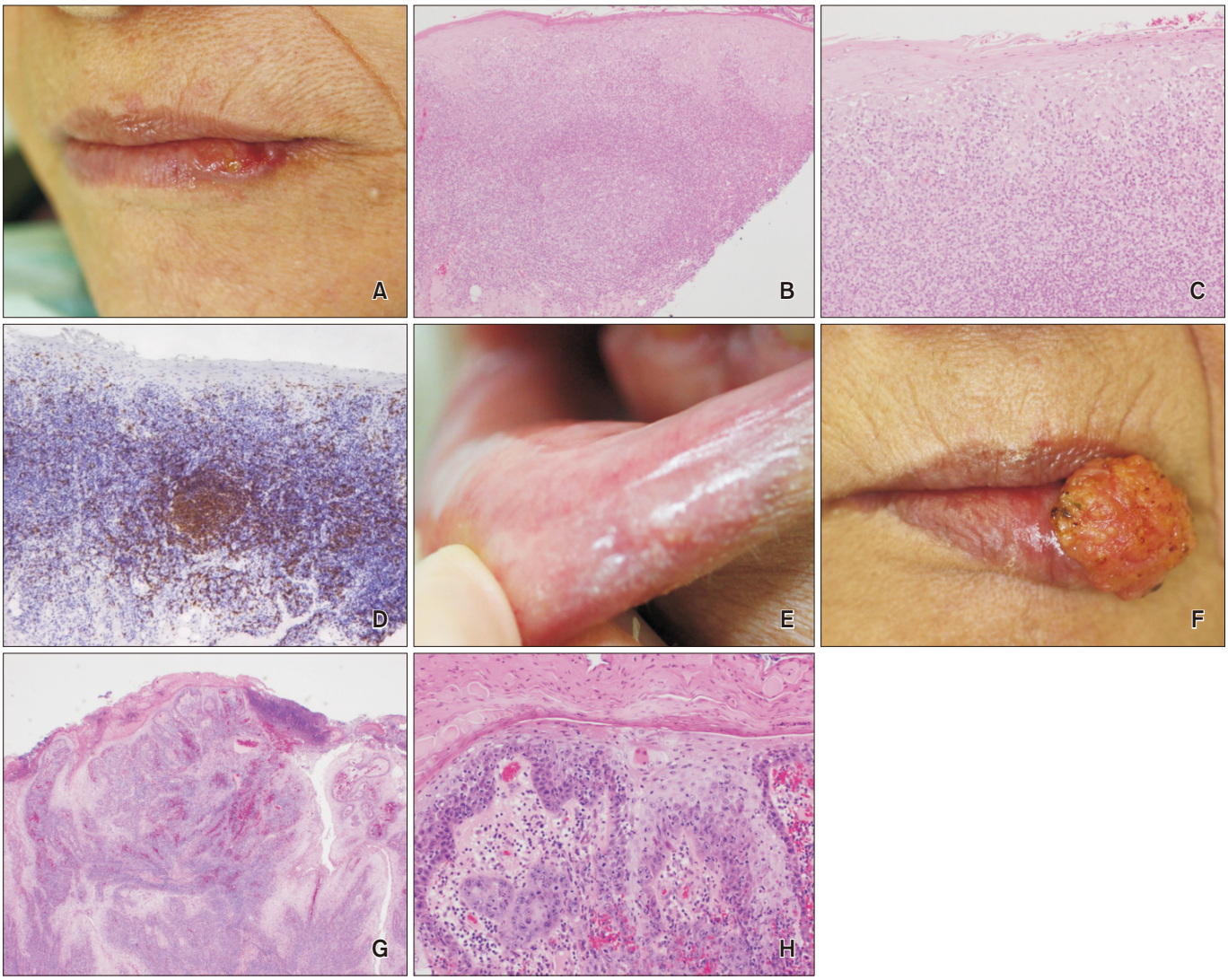

Fig. 1. (A) Clinical presentation at first visit (we received the patient's consent form about publishing all photographic materials). (B, C) Histopathological examination of a biopsy specimen from the erosive plaque showed the elongation of rete ridges and parakeratosis, pseudocarcinomatous epithelial hyperplasia, superficial and deep infiltration of plasma cells, and small lymphocytes forming lymphoid follicles (H&E; original magnification: B, ×40; C, ×200). (D) Immunohistochemical staining showed that CD20 was positive in follicular cells (original magnification, ×40). (E) After 2 months, the erosions epithelialized. (F) A tumor measuring 3.0 cm×1.5 cm after 12 months at the same site. (G, H) Histopathological examination of the resected specimen showed proliferation of atypical keratinocytes invaded through the dermis with keratinization (H&E; original magnification: G, ×12.5; H, ×200).

cles (Fig. 1D), CD3, CD4, and CD8 were positive beside them, and CD30 was negative. *In situ* hybridization of κ and λ light chains did not show light chain restriction, which indicated polyclonal plasma cell infiltration. Clonal rearrangement for blood of T-cell receptor (TCR)-Cβ1, TCR-Jγ chain and immunoglobulin heavy chain genes using Southern blot analysis was not detected. We diagnosed her with cutaneous lymphoid hyperplasia (CLH) and decided watchful waiting[1]. After 2 months, the erosions spontaneously epithelialized (Fig. 1E). However, a plaque developed after 6 months at the same site, which develop to a tumor measuring 3.0 cm×1.5 cm after 12 months in 2015 (Fig. 1F). Histological examination of a second lip biopsy showed comparatively atypical keratinocytes that proliferate irregularly in the deep direction with keratinization. There was no finding of pseudolymphoma. Immunohistochemical staining of Ki-67 was 39.8% positive in the tumor. Computed tomography revealed no abnormal findings. We diagnosed the tumor as squamous cell carcinoma (SCC) and

treated it with surgical resection[2]. Histopathological examination of the resected specimen showed proliferation of atypical keratinocytes invaded through the dermis with keratinization (Fig. 1G, H). No recurrence has been observed for 3 years.

CLH with erosive lesion healed by itself at first. Then, SCC rapidly grew at the same site. We considered there was an association between CLH and SCC, as SCC developed at the same site of CLH. To our knowledge, this was the first case of SCC developed at the site of CLH. Although chronic injury might cause CLH as well as SCC[3], she did not smoke, drink alcohol, or work outside. Therefore, there is a possibility that chronic inflammation for more than 3 years due to CLH caused SCC in our case, although the exact reason why SCC developed at the site of CLH is not clear. There are other possibilities that this case might be merely the coexistence of CLH and SCC, or immune evasion mechanisms are likely to occur before becoming malignant[4], but SCC occurred at the site where CLH existed. Therefore, dermatologists should keep in mind that SCC could develop at the site of CLH and should follow up patients with CLH.

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ORCID

Hiraku Kokubu, https://orcid.org/0000-0003-4023-367X
Kazuya Teramura, https://orcid.org/0000-0001-9969-7159
Toshihiro Tanaka, https://orcid.org/0000-0001-6201-9784
Noriki Fujimoto, https://orcid.org/0000-0003-4051-0649

REFERENCES

1. Itoh S, Masatsugu A, Hinoue A, Ohta M, Wakasa T, Shintaku M, et al. CD30+ pseudolymphoma arising on the lower lip. J Dermatol 2010;37:685-688.
2. Euvrard S, Kanitakis J, Claudy A. Skin cancers after organ transplantation. N Engl J Med 2003;348:1681-1691.
3. Koh WL, Tay YK, Koh MJ, Sim CS. Cutaneous pseudolymphoma occurring after traumatic implantation of a foreign red pigment. Singapore Med J 2013;54:e100-e101.
4. Lopes MLDS, Gonzaga AKG, Mosconi C, Palomino GM, Mendonça EF, Batista AC, et al. Immune response and evasion mechanisms in lip carcinogenesis: an immunohistochemical study. Arch Oral Biol 2019;98:99-107.