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Squamous cell carcinoma on the lip arising from discoid lupus erythematosus: a case report and review of Japanese patients

Squamous cell carcinoma (SCC) is a rare but well-recognized complication of longstanding discoid lupus erythematosus (DLE). Although few epidemiological studies concerning DLE-related SCCs in Japan exist, it has been estimated that the incidence of SCC arising in DLE lesions reaches 3.3%, which is similar to that reported for Caucasians (2.3% to 3.3%) [1, 2]. SCC is relatively rare in Japan, and its incidence of 2.5/100,000 person-years [3] is much lower than that in Caucasians (22.65/100,000 person-years in England [4] and 7.2 to 153.4/100,000 person-years in the USA [5]). Although the exact epidemiology of DLE is not known, DLE is estimated to be linked to 0.8-4.6% of all precursor lesions of SCC in Japan.

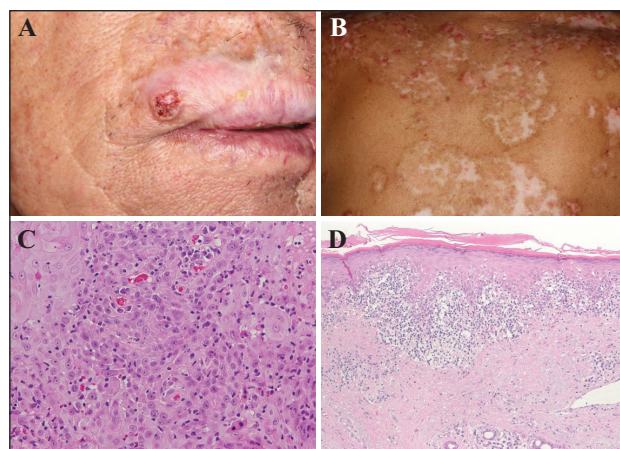


Figure 1. A) Clinical appearance of the squamous cell carcinoma (SCC) on the upper lip. B) Clinical appearance of discoid lupus erythematosus (DLE) lesions on the back. C) Histological aspect of the SCC (haematoxylin-eosin (HE) staining; original magnification: $\times 200$). D) Histological findings of DLE lesion adjacent to the resected SCC (HE staining; original magnification: $\times 40$).

We report a patient with SCC which developed on a DLE lesion of the upper and lower lip with cervical lymph node metastasis, and review 30 cases of DLE-related SCCs in the Japanese population.

A 68-year-old man with a 39-year history of DLE was referred to our department for a nodule on the upper lip which he had had for the last four months. Fourteen years before, he had developed SCC on the DLE lesion of the lower lip, accompanied by left cervical lymph-node metastasis. He subsequently underwent wide tumour resection and dissection of the left cervical lymph nodes. Physical examination revealed a reddish, dome-shaped, ulcerated nodule located on the atrophic DLE plaque of the upper lip, and multiple patches of DLE distributed on the face, hands, and back (figures 1A, B). Cervical lymph nodes were not swollen. Histological findings of a tumour biopsy were suggestive of moderately differentiated SCC (figure 1C). The SCC lesion was completely resected and the histological examination revealed the presence of vacuolar changes and intradermal lymphocyte infiltration adjacent to the resected tumour, corresponding to histological findings consistent with DLE (figure 1D). These findings provided further evidence that the SCC lesion was related to the pre-existing DLE lesion. There has been no evidence of local recurrence or distant metastasis to date.

Fifty-two SCCs in 30 cases of DLE-related SCC have been reported in the Japanese literature. These include 20 male and 10 female patients, with a male-to-female ratio of 2:1, despite the fact that DLE affects women approximately three times more often than men. A major factor that may contribute to this male predominance is considered to be ultraviolet (UV) radiation. Generally, in Japan, men work outdoors more frequently than women. Of all the reported DLE-related SCCs, 84.6% (44/52) developed in sun-exposed areas of the body, particularly the lip (22/52; 44.3%). These results also suggest that UV radiation is one of the most important factors involved in the development of SCCs on DLE lesions. The median latency period between onset of DLE and development of SCC on the lip (10 years;

range: 2-32) is significantly shorter than that for SCCs arising at other sites (26 years; range: 5-47) (Mann-Whitney *U* test; $p < 0.05$). A shorter latency period for DLE-related SCCs developing on the lips has also been reported in Chinese and Indian patients [6, 7]. Recurrence of multiple SCCs and lymph node metastases developed in eight (27%) and three (10%) of the 30 patients, respectively. In agreement with previous studies [8], these rates appear to be higher than those for non-DLE-related SCCs (20% for recurrence and 0.5-6% for metastasis) [9]. DLE-related SCCs are reportedly more aggressive than conventional SCCs on histological examination [6], which may provide a possible explanation for their more aggressive clinical behaviour. The present case is the first report of multiple DLE-related SCC associated with lymph node metastasis in Japan. The aggressive behaviour was attributed to the location on the lip and the moderate differentiation of the SCC on histological examination.

In conclusion, although SCC is relatively rare in Japan, DLE-related SCC is not uncommon. Sun protection, careful follow-up, and prompt skin biopsy is essential for patients with DLE, especially for SCCs developing on the lip. Once SCC has developed, sufficient attention should be paid to monitor possible recurrences and/or metastasis because of their more aggressive behaviour. ■

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Herpes zoster occurring on scars: two cases

We report two patients who developed herpes zoster (HZ) on pre-existing scars, one of which developed at a site previously affected by HZ.

Patient 1 was a 35-year-old woman who had undergone surgical removal of an osteoblastic osteosarcoma involving the left seventh rib. Thereafter, she received chemotherapy (methotrexate, cisplatin, and doxorubicin) every two months. She was referred to our department complaining of painful eruptions on the trunk that had appeared five months post-surgery. Physical examination showed small vesicles with surrounding erythema on and around the sutured scar (figure 1A). A Tzanck smear revealed multinucleated giant cells. In addition, a number of small freckles were observed on the lateral side of the abdomen. She was treated with valaciclovir (3,000 mg/day) for seven days.

Patient 2 was a 65-year-old woman suffering from IgA nephritis and hypogammaglobulinaemia, treated with oral prednisolone (2.5 mg every other day). She visited our department complaining of painful eruptions on the trunk that had appeared a few days before. Six months previously, she contracted HZ on the left T4-T5 dermatome, and was treated with oral antiviral drugs. Physical examination showed a number of erythematous seropapules and vesicles consistent with post-herpetic scars (figure 1B). A Tzanck smear revealed multinucleated giant cells. She was



Figure 1. A) Small vesicles on and around the sutured scar. B) Herpes zoster on the herpes zoster scar on the back.