Squamous Cell Carcinoma in a Chronic Genital Ulcer in Behçet's Disease

Hiroo Hata, Satoru Aoyagi, Maria Maroto Iitani, Erina Homma and Hiroshi Shimizu
Department of Dermatology, Hokkaido University Graduate School of Medicine, Kita-ku, Sapporo 060-8638, Japan. E-mail: hata07@med.hokudai.ac.jp
Accepted March 30, 2010.

Behçet's disease (BD) is a chronic inflammatory disease characterized by oral aphthae, genital ulcers, non-bacterial folliculitis, erythema nodosum and uveitis. The genital ulcers are characterized by clear demarcation, great depth and pain. They heal and recur, leaving scarring. In a chronic BD ulcer, squamous cell carcinoma (SCC) may develop at the scar site, as is the case with other chronic ulcers that are predisposed to malignancy. However, no cases have been reported in which SCC *in situ* has developed on a chronic genital ulcer in a patient with BD. We describe such a case here.

CASE REPORT

A 74-year-old woman presented with a 2-year history of erosive plaques in the genital region. The lesions had gradually enlarged during the previous 6 months. She had a 20-year history of repeated oral aphthae, genital ulcers and erythema nodosum. BD had been diagnosed 20 years previously. Oral corticosteroids (10 mg/day) had been administered since the initial diagnosis. Furthermore, 6 years prior to presentation, SCC had been observed on her buccal mucosa, for which she had received radiation therapy. No local recurrence had been observed.

Upon physical examination, pale-red, well-demarcated, flatly elevated lesions were extensively found symmetrically on the labia majora. The lesions were partially papillomatous and erosive (Fig. 1). Clinically, the vaginal and urethral mucosa showed no evidence of tumour spreading.

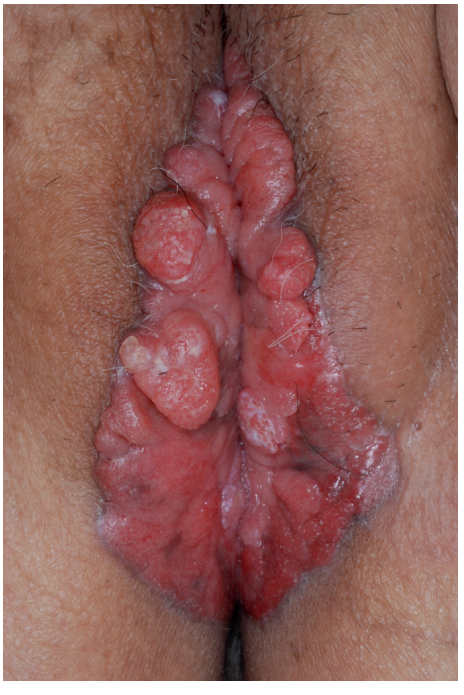

Fig. 1. Clinical features of the tumour. Well-demarcated, slightly reddish, partly papillomatous tumour presents, mainly on the labia majora.

A punch biopsy from the large plaque on the right labium majus showed proliferation of atypical keratinocytes within the acanthotic epidermis; however, the epidermal basement membrane was unaffected.

Routine laboratory examinations including that of serum SCC antigen were normal. Additionally, a computed tomography scan showed no evident distant metastasis, including of the regional lymph nodes. Therefore, the lesion was excised with at least a 1-cm margin. The surgical specimen showed neoplastic proliferation of squamous differentiated tumour cells with dyskeratotic and atypical keratinocytes (Fig. 2a). There was no evidence of dermal invasion by tumour cells (Fig. 2b). The tumour cells tested negative for anti-human papillomatous virus (HPV) antibody by immunostaining; furthermore, HPV DNA was not detected by PCR. We diagnosed this case as SCC *in situ*. The patient was disease-free 6 months after surgery with no recurrence or metastasis.

DISCUSSION

It is extremely rare for a cutaneous neoplasm to develop in cases of BD (1). To the best of our knowledge, only one such case has been reported, in which a patient with BD subsequently developed a Merkel cell carcinoma on the left forearm (2). The authors of that report suggested that immunosuppression due to the treatment for BD might have triggered the Merkel cell carcinoma, although the occurrence of BD with solid tumours tends to be regarded as coincidental.

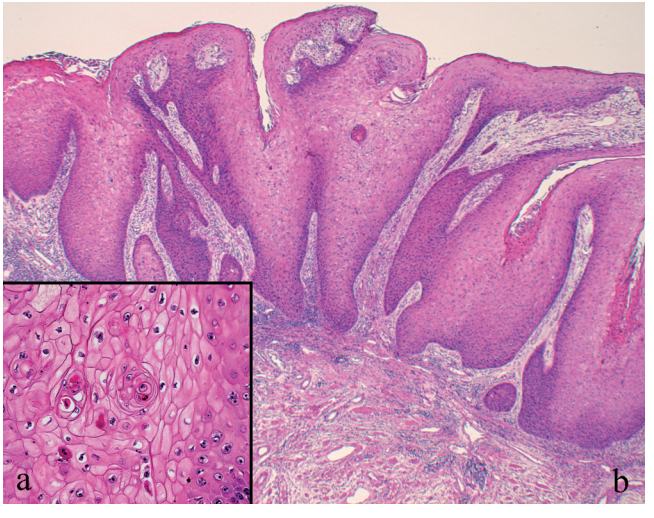

Fig. 2. (a) Neoplastic proliferation of squamous differentiated tumour cells with dyskeratotic and atypical keratinocytes only in the epidermis. These typical keratinocytes and mitoses are scattered throughout the all layers (haematoxylin and eosin; H&E). (b) There is no evidence of dermal invasion by tumour cells (H&E).

Conditions known to be associated with increased risk of SCC *in situ* include therapeutic immunosuppression, arsenic exposure, irradiation, burn scarring, and HPV infection. In addition, HPV infection has been identified in erythroplasia of Queyrat, an intraepidermal carcinoma of the penis (3).

In our case, the refractory genital ulcer and long-term administration of oral corticosteroids may have contributed to the development of the SCC. Interestingly, our case also had a history of SCC on the buccal mucosa. The incidence of SCC *in situ* in patients with BD may be rarer than that in lichen planus or lichen sclerosis et atrophicus patients, given that similar cases have not been reported in patients with BD.

REFERENCES

1. Mansur AT, Kocaayan N, Serdar ZA, Alptekin F. Giant oral ulcers of Behçet's disease mimicking squamous cell carcinoma. Acta Derm Venereol 2005; 85: 532–534.
2. Satolli F, Venturi C, Vescovi V, Morrone P, Panfilis GD. Merkel-cell carcinoma in Behçet's disease. Acta Derm Venereol 2005; 85: 79.
3. Arlette JP. Treatment of Bowen's disease and erythroplasia of Queyrat. Br J Dermatol 2003; 149: 43–47.