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BRIEF REPORT

Basal Cell Carcinoma Arising within Seborrheic Keratosis

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Dear Editor:

Seborrheic keratosis (SK) is one of the most common benign cutaneous tumors. Although it usually has a benign course, malignant tumor, including basal cell carcinoma (BCC) and squamous cell carcinoma, arising within SK has rarely been reported in literature[1,2].

A 77-year-old female patient presented with a brownish plaque on the left posterior thigh that had been present for more than 20 years. She reported that the lesion experienced chronic friction because of location and became ulcerated and began to bleed in the past few years. Physical examination revealed a well-demarcated 3×4 cm in diameter verrucous surfaced brownish plaque with ulceration and crust on her left posterior thigh (Fig. 1A). We received the patient's consent form about publishing all photographic materials. Skin biopsy performed two sites of plaque, the peripheral margin and the crusted lesion. The peripheral margin showed epidermal hyperkeratosis, acanthosis, papillomatosis, and pseudo-horn/horn cyst, which indicate SK (Fig. 1B). The crusted lesion revealed proliferation of atypical basaloid cells palisading throughout the epidermis and cleft between the epithelium and stro-

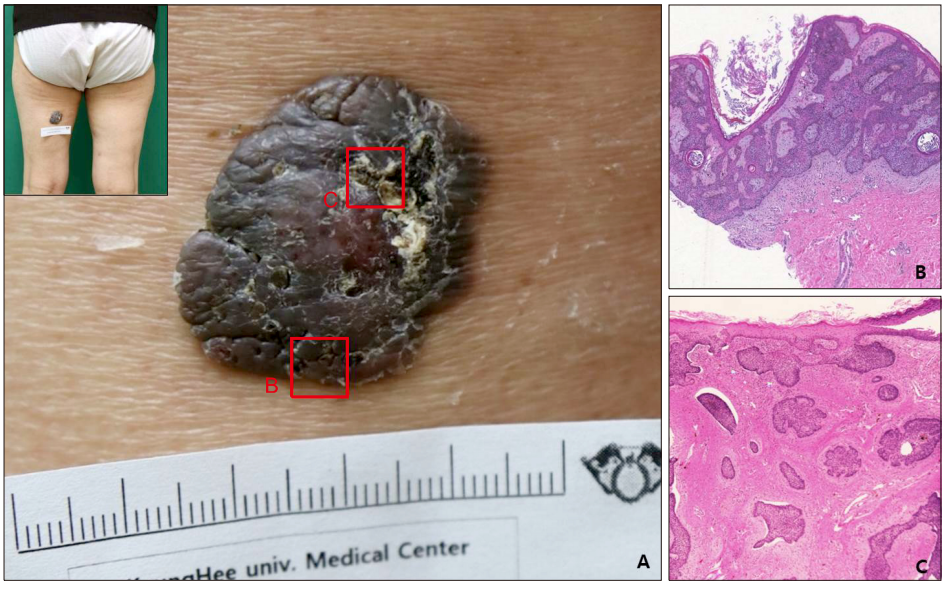

Fig. 1. (A) Verrucous surfaced brownish plaque, measuring 3×4 cm in diameter, with crust and ulceration. Histological analysis of the (B) peripheral margin showed epidermal hyperkeratosis, acanthosis, papillomatosis, and pseudo-horn/horn cyst and (C) crusted lesion revealed proliferation of atypical basaloid cell showing peripheral palisading and cleft between the epithelium and the stroma (H&E: B, C, ×40).

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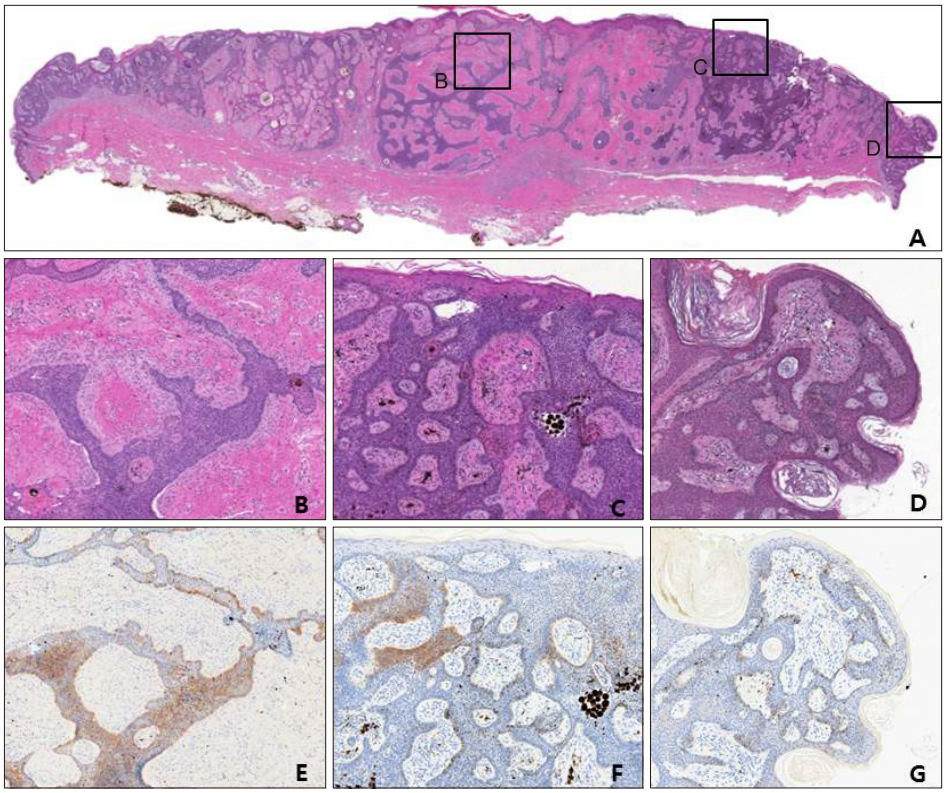

Fig. 2. (A) Scanning view of excision specimen (H&E, scanning view). Histological analysis of total excised lesion showed (B) basal cell carcinoma (BCC) in the crusted lesion, (D) seborrheic keratosis (SK) in the peripheral margin and (C) mixed pathologic zone between BCC and SK (H&E: B~D, ×100). (E) Diffuse positive staining with CK19 of BCC compared with (G) SK in the peripheral margin, and (F) partial positive staining with CK19 of mixed pathologic zone (CK19: E~G, ×100).

ma, which confirmed BCC (Fig. 1C). The lesion was totally excised. The excisional specimen of the lesion showed BCC in the crusted lesion, SK in the peripheral margin, and mixed pathologic zone combined BCC and SK between the areas of crusted lesion and peripheral margin. Immunohistochemical evaluation revealed diffuse positive staining with CK19 of BCC, compared with SK lesion in the peripheral margin (Fig. 2). Furthermore, overexpression of p53 was observed in the lesion of BCC. There was no recurrence during 3 months of follow up.

BCC developed within SK is extremely rare. In a large, retrospective study of Lim[3], in total 639 cases of SK, 4 were found to be malignant tumor arising within the SK, 2 of these were BCC. Still there is controversy as to whether BCC can develop directly from SK.

Several possible reasons for BCC arising within SK have been suggested. Carcinogenic factors such as cumulative sunlight exposure, low dose chronic ionized radiation exposure, and chronic wounds could be etiologic factors for BCC. In our case, chronic irritation caused by friction may have acted as a carcinogenic factor. Cascajo et al.[4] suggest that both BCC and SK can differentiate in hair follicles, and there may be a pathogenic relationship between SK and BCC. CK19 is expressed in the outer root sheath of hair follicles, and there is report that presence of CK19 in SK occurs in some suprabasal cells in 20% of cases[5]. In immunohistochemical examinations, our case showed diffuse positive staining with CK19 of BCC but also focal positive staining with CK19 of mixed pathologic zone and SK. This suggests that both SK and BCC may be derived from a similar origin of hair follicle. Also, the lesions showed histologic continuity between SK and BCC. These features indicate that SK might be a precursor lesion of BCC.

This case supports the possibility of SK as a malignant precursor for BCC. When SK shows atypical features such as ulceration, bleeding, and crusting, histological examination should be considered.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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