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Case Report

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Management of Basal Cell Carcinoma That Developed in The Vulva: Based on Treatment Experience of 2 Cases of Basal Cell Carcinoma

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Summary

Vulvar carcinoma is rare as a gynecologic malignant tumor, and among vulvar carcinoma, basal cell carcinoma is extremely rare. We encountered 2 cases of basal cell carcinoma that developed in the vulva.

***Case 1:** A patient was an 81 year-old female. The patient presented with a chief complaint of sensation of mass in the left side of the vulva. The mass in the left side of the vulva was 1 cm in size and diagnosed as basal cell carcinoma based on biopsy results. Systemic examination showed no distal metastasis and local resection was performed.*

***Case 2:** A patient was an 84-year-old female. The patient presented with a chief complaint of atypical genital bleeding. Mass of 3 cm in size was present in the left side of the vulva, and biopsy of that site was performed and basal cell carcinoma was diagnosed. Systemic examination showed no distal metastasis, and local resection was performed. Postoperative course was uneventful and recurrence has not occurred in both cases.*

In differential diagnosis of external genitalia lesion, basal cell carcinoma should be put in mind and if abnormal lesion is observed, biopsy should be actively performed aiming at early detection, and appropriate operative procedure should be selected.

***Keywords:** basal cell carcinoma, labia majora, genitalia, surgical procedure.*

Introduction

Basal cell carcinoma is the most common skin cancer and its main cause is considered to be ultraviolet radiation exposure. Therefore, it commonly develops in area exposed to sunlight and development in non-exposure parts such as external genitalia are very rare. Vulvar carcinoma accounts for 3-5% of all types of female genital cancer, and it is mostly squamous cell carcinoma and vulvar basal cell carcinoma is very rare accounting for only 2-4% of all types of vulvar carcinoma1). We encountered 2 cases of basal cell carcinoma that developed in the vulva and discussed management of this disease.

Case

Case 1: An 81-year-old female.
Chief complaint: Sensation of mass in the left side of the vulva.
Medical history: At the age of 51, total hysterectomy was performed with a diagnosis of uterine myoma.
Family history: Malignant lymphoma in elder sister.
History of pregnancy and delivery: Gravida, 1; para, 1.
History of menstruation: Time of first menstruation was unknown and menopause occurred at age of 51.
History of present illness: The patient noticed mass in the left side of vulva 3 years earlier. The patient presented to the hospital because mass showed a tendency to grow.
Physical condition: Solid mass of approximately 1 cm in size was palpable at the left side of the vulva. Neither pain nor tenderness were noted. The mass was well defined and movable without change in color tone on the skin surface. Biopsy of relevant site was performed (Figure 1A).
Histopathological findings: Histologically, basal cell-like atypical cells were present in the dermic layer, and a tendency toward keratinization and keratinous cyst formation were noted. There was palisade arrangement of spindle cells at the margin. Pigment cell was absent.
Based on above findings, nonpigmented basal cell carcinoma, micronodular type was diagnosed (Figure 1B and C).

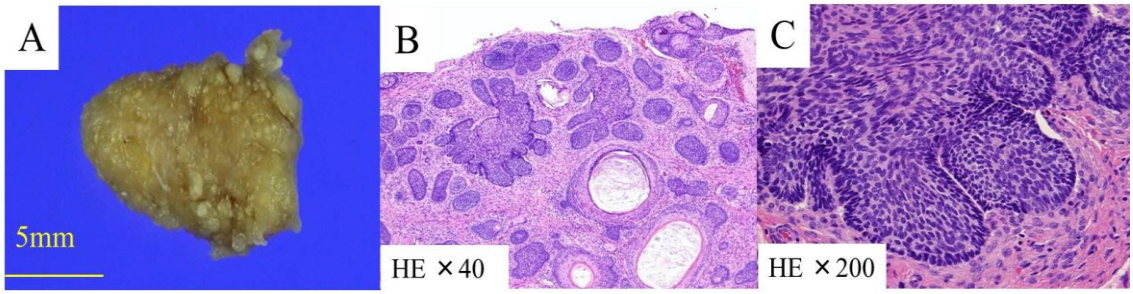

Figure 1: A Macroscopic image, B, C Histopathologic examination of biopsy (hematoxylin and eosin: HE).

Clinical course: Systemic examination showed no distal metastasis, and local resection was performed (Figure 2A).
Histopathological findings of resected specimen: Residue of basal cell carcinoma was confirmed in the resected left vulvar region, and depth of the deepest part was 2.5 mm deep in the dermis beneath the epidermis. Advanced stage was IB (Figure 2B and C).

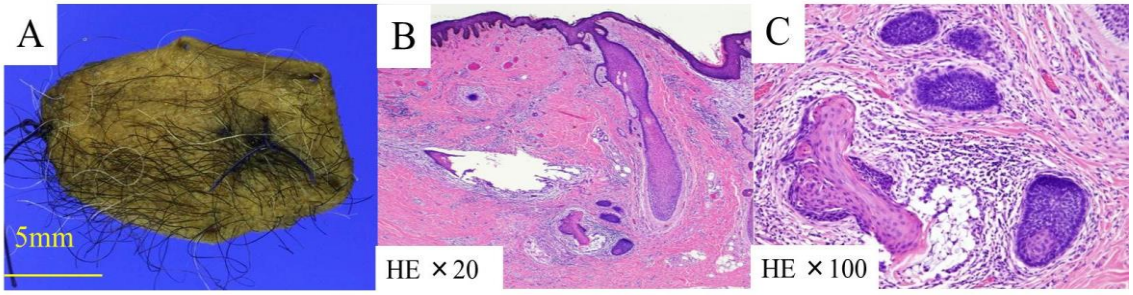

Figure 2: A Macroscopic image of specimen, B, C Histopathologic examination of biopsy (hematoxylin and eosin: HE).

Case 2: An 84-year-old
Chief complaint: Atypical genital bleeding
Medical history: Essential hypertension and dementia
Family history: There was no remarkable feature.
History of pregnancy and delivery: Gravida, 2; para, 2
History of menstruation: Time of first menstruation was unknown and menopause occurred at age of 53.
History of present illness: Atypical genital bleeding started to occur 6 months earlier and thus the patient presented to the hospital.
Physical condition: There was a solid mass of approximately 3 cm in size in the left side of the vulva. Neither pain nor tenderness were noted. The mass was well defined and movable (Figure 3). Biopsy of relevant site was performed.

Figure 3: A macroscopic image pre-operation.

Histopathological findings: Tumour cells similar to epidermal basal cells showed alveolar growth pattern with palisade arrangement of nuclei at the margin of the alveolar structure. Based on above findings, basal cell carcinoma was diagnosed (Figure 4 A, B and C).

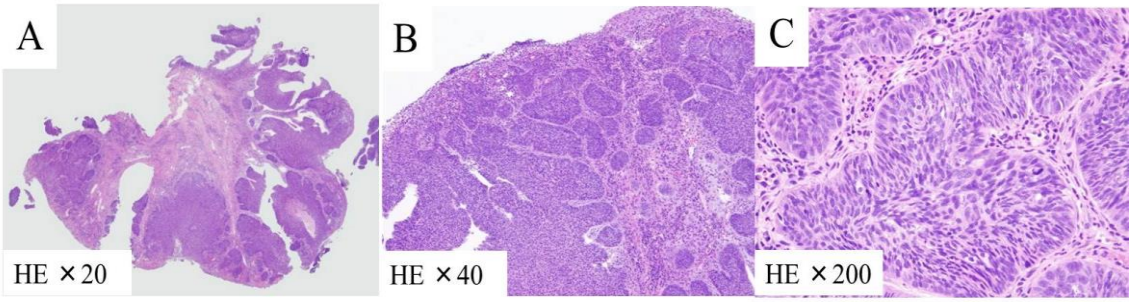

Figure 4: Histopathologic examination (hematoxylin and eosin: HE).

Clinical course: Systemic examination showed no distal metastasis, and local resection was performed (Figure 5).

Figure 5: A macroscopic image post-operation.

Histopathological findings of the resected specimen: On the resected specimen of the tumour in the left side of the vulva, there was elevated lesion of 37×30×9 mm in size, and histologically, alveolar growth pattern of epidermal basal cell-like tumour cells was noted with palisade arrangement of nuclei at the margin of the alveolar structure. Based on above findings, advanced stage was determined to be stage IB (Figure 6 A, B and C).

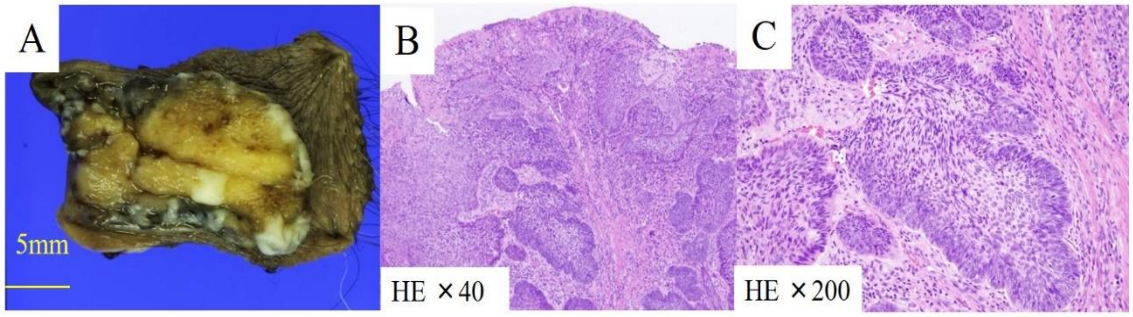

Figure 6: A Macroscopic image of specimen, B, C Histopathologic examination of biopsy (hematoxylin and eosin: HE).

Postoperative clinical course was uneventful and no recurrence has occurred in both cases.

Discussion

In a research in Japan, it is reported that basal cell carcinoma accounts for nearly 50% of malignant skin tumor and tends to gradually increase. However, incidence of basal cell carcinoma in the external genitalia is 1.9%, and furthermore, the incidence is very low at 0.7% when patients are limited to female patients [1]. Commonly affected age group of basal cell carcinoma is 60 years or older [2].

Clinical symptoms of basal cell carcinoma widely range from swelling, bleeding from tumor, ulcer, itching, to pain [2], and supplementary information should be added to improve sensitivity of clinical diagnosis. In Japanese patients, pigmented basal cell carcinoma accounts for 90%, and as diseases that should be clinically differentiated,

malignant tumor including melanoma and benign pigmented lesions including melanocytic nevus, seborrhoeic keratosis, sebaceous hyperplasia, and trichoblastoma can be listed. In order to differentiate from these diseases, dermoscopy is useful [2,3].

As a cause of basal cell carcinoma, long-term ultraviolet exposure is considered as an initiator because basal cell carcinoma mostly develops on the skin that is exposed to sunlight [4]. However, in basal cell carcinoma in the area which is not ultraviolet exposure part such as external genitalia, other causal factors should be identified as the case of tumor occurrence. It is reported that chronic skin irritation due to chronic vulvovaginitis, certain types of immunosuppression, or systemic arsenic exposure can promote occurrence and growth of tumor. In addition, area of thermal burn, trauma, and radiation exposure part are considered to be the most affected area of basal cell carcinoma [5].

The most reliable treatment for basal cell carcinoma is a surgery [6,7], and sufficient volume of tissues should be resected to obtain negative surgical margins on pathological assessment. It is important to determine the scope of resection according to risk factors of recurrence of basal cell carcinoma specified in the clinical practice guidelines and prevent local recurrence8). In low-risk group, the tissue should be resected at 4 mm from the tumour margin, and in high-risk group, the tissue should be resected on the fascia at 5-10 mm from the tumor margin to prevent local recurrence. Since the 2 cases we encountered corresponded to high-risk group for recurrence, the tissue was resected at 10 mm or more lateral and 5 mm or more deep from the tumor margin.

In general, occurrence of metastasis is rare and thus prognosis is good, and prophylactic regional lymph node dissection is not required [8]. However, basal cell carcinoma accompanied by lymph node metastasis have been reported in some cases [9,10], and therefore, in individual cases, especially in cases in which tumor diameter or depth of infiltration is large, CT or MRI should be used to examine presence of lymph node metastasis, and lymph node dissection should be performed if necessary. Radical vulvectomy or radical groin resection is extremely invasive, and these procedures require collaboration with department of plastic surgery or department of urology to reconstruct defected external genitalia or external urethral orifice. In addition, as postoperative complications, vascular injury during radical groin resection, necrosis of sutured skin, and urination impaired associated with scarring near the external urethral orifice have been reported. de Hulu, et al. reported that incidence of wound infection was 22-57%, that of wound dehiscence was 13-38%, and that of lymphoedema of lower extremity was 13-53% [11]. Therefore, it is important to make efforts for early detection and treatment.

Conclusion

Among malignant skin tumor, basal cell carcinoma tends to increase. In order not to overlook basal cell carcinoma that develops in external genitalia, histological examination should be actively performed aiming at early detection even if the lesion is small. In addition, since this disease generally grows slowly and has low degree of malignancy, radical resection is considered unnecessary. It is also important to make correct histological diagnosis, perform systemic examination, and select appropriate operative procedures.

There is no conflict of interest in this study.

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