Polypoid Basal Cell Carcinoma as a New Variant of Basal Cell Carcinoma: Three Korean Cases

Jae Eun Choi, Na Young Ko, Soo Hong Seo, Soo Nam Kim, Young Chul Kye and Hyo Hyun Ahn*
*Department of Dermatology, Korea University Anam Hospital, #126-1, 5-Ka, Anam-dong, Sungbuk-ku, Seoul, 136-705, Korea. *E-mail: gold2000@nate.com*
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Sir,

Basal cell carcinoma (BCC), the most common malignant tumour of the skin, has many different clinical and histological appearances according to clinical subtype. The subtypes include: nodular BCC, which is the most common; pigmented BCC; morpheaform BCC; superficial BCC; and fibroepithelioma of Pinkus (FEP). The subtypes manifest as nodules, patches, plaques or, rarely, a polypoid shape. Only FEP frequently has a polypoid appearance (1). However, polypoid lesions have also exceptionally been reported to demonstrate nodular BCC growth on histopathology. This subtype has recently been proposed as a new clinicopathological entity of BCC, given the name polypoid BCC (2). We report here three cases of polypoid BCC in Korean patients.

CASE REPORTS

Case 1. A 56-year-old Korean woman presented with a slow-growing pedunculated mass of 2 years' duration on the right inguinal area. She reported that the mass had enlarged rapidly over recent months. It measured 2.5×2 cm and was red-coloured, firm with a waxy, undulating, focally ulcerative surface (Fig. 1A). The differential clinical diagnosis was pyogenic granuloma. Histopathology showed an asymmetrical polypoid tumour consisting of aggregations of atypical basaloid cells present freely in the dermis or growing from the under-surface of the epidermis with peripheral palisading. Few cells were necrotic or in mitosis. The tumour aggregations were restricted to the polypoid area, partly separated from surrounding fibromyxoid stroma by clefts. Follicular differentiation was not observed.

Case 2. A 69-year-old woman presented with a 10-year history of slow-growing tumour on the right calf. The tumour, measured 2×2 cm, was polypoid and violaceous with undulating waxy surface (Fig. 1B). The clinical differential diagnosis was melanoma or seborrhoeic keratosis. Histopathology revealed a polypoid lesion and neoplastic aggregations with peripheral palisading, which were limited to the polypoid area (Fig. 2A). Some of the tumour aggregations were separated from the surrounding stroma by clefts.

Case 3. A 28-year-old man was referred with a 10-year history of a recently growing tumour on his parietal scalp. Examination revealed a dusky to violaceous coloured, pedunculated tumour 1.5×1 cm in size. The differential diagnosis was pyogenic granuloma. Histopathologically the tumour was polypoid and consisted of aggregations of atypical basaloid cells with peripheral palisading. They were restricted to the polypoid zone and no follicular differentiation was observed (Fig. 2B).

DISCUSSION

BCC is a malignant tumour composed of basaloid cells that arise from basal cells of the epidermis or epithelial structures of adnexa (2). It is seen almost exclusively on the hair-bearing skin, especially on the face, and has many different clinical and histological appearances. In 1999, Megahed (2) first proposed a new clinicopathological entity of BCC, given the name polypoid BCC. It is clinically distinguished from other variants of BCC by its polypoid appearance with a stalk that connects it to the skin surface. Histologically it is characterized by a pedunculated exophytic appearance and solid tumour aggregations restricted to the polypoid zone, which is considered to be a variant of nodular type BCC (2, 3). FEP, a subtype of BCC, which frequently manifests a polypoid appearance, has branching, anastomosing strands of BCC embedded in a fibrous stroma and connected with the surface epidermis, which make it differ from polypoid BCC. In 1996, McElroy et al. (4) had suggested that polypoid BCC is one of four clinical subtypes of giant BCC. However, not all the polypoid

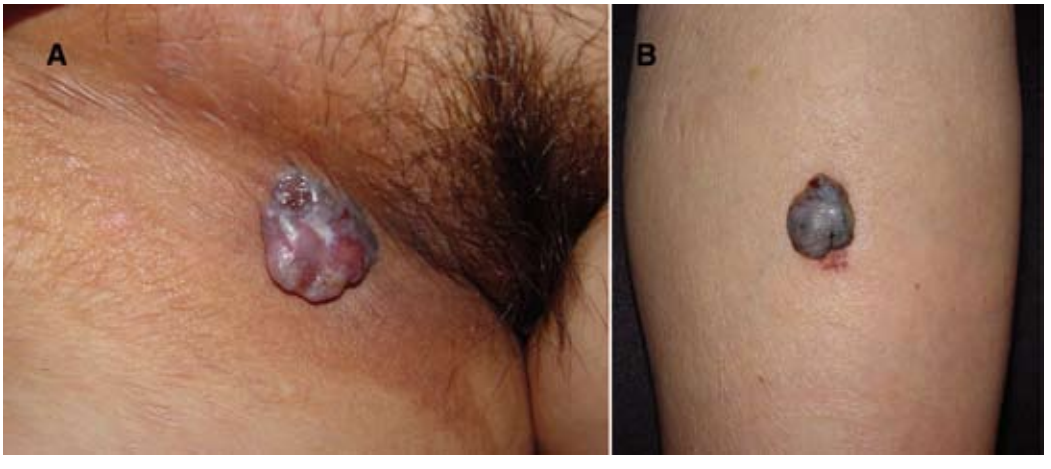

Fig. 1. Slow-growing polypoid tumour with a waxy, undulating, focally ulcerative surface (A) on the right inguinal area (case 1) and (B) on the right calf (case 2).

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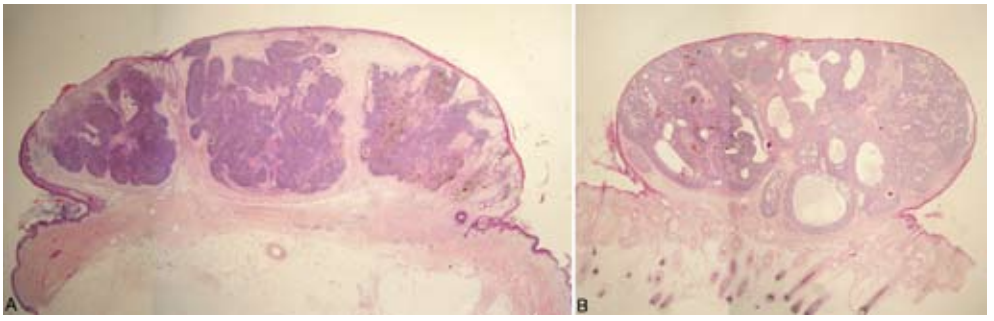

Fig. 2. Asymmetric pedunculated tumour consisting of aggregations of basaloid cells with peripheral palisading restricted to the polypoid area. (A) Case 2; (B) Case 3 (haematoxylin and eosin (H&E ×10).

BCC are large enough to be classified as giant BCC and polypoid BCC is considered not to be included in giant BCC.

A review of the literature in English (2–8) revealed 10 additional cases of polypoid BCC, which fit the definition of Megahed (2). Analysis of all 13 cases (including our own cases) showed that there were 9 women and 4 men with a mean age of 58.9 (range 20–88) years. The anatomical locations- are shown in Table I. The mean diameter was 2.9 cm (range 1–8 cm). There was no case of metastasis. Compared with typical nodular BCC, cases of polypoid BCC showed some distinctive features. First, unlike nodular BCC (M/F ratio=1.02), polypoid BCC mostly affects women (M/F ratio=0.4) (9). Secondly, the preferred anatomical locations for polypoid BCC are the scalp (38.5%), buttock (15.4%) and, to a minor extent, the arm, back, shoulder, ear, inguinal and legs. These findings are quite different from those of nodular BCC, which is located on the facial area in about 90% of cases (9). Misago et al. (3) have proposed that peculiar locations of polypoid BCC, such as scalp, back-buttock and inguinal area, may reflect some environmental factors characteristic of these anatomical locations. FEP, which also favours the back and buttock areas and genitalia, frequently has a polypoid shape possibly by the same mechanism. Thirdly, polypoid BCC are usually large in size probably due to neglect by both patients and physicians, because they are easily hidden on the scalp, genital area or trunk. However, contrary to giant BCC, they are not considered aggressive, being well-demarcated and showing non-infiltrative growth patterns (3).

We agree with the concept that polypoid BCC is a new clinicopathological variant of BCC, because it shows histological features of nodular BCC with distinctive polypoid appearance that requires differential diagnosis with adnexal tumour, dermal nevus, angioma or amelanotic melanoma. It also has peculiar preferred locations, unlike nodular BCC, which suggest some aetiological factors other than ultraviolet radiation exposure usually contributing to conventional nodular BCC. It has a non-aggressive histological type, being amenable to surgical cure, with low metastatic potential.

Table I. *Cases of polypoid basal cell carcinoma reported in the English literature*

Reference	Age/Sex	Location	Size (cm)	Duration (years)
4 (1969)	68/F	Forearm	5×2.5	1.5
6 (1985)	64/M	Back	5×2	3
5 (1985)	69/M	Buttock	1×1.5	2
7 (1996)	56/M	Shoulder	7×4	15
2 (1999)	87/F	Ear helix	1×0.8	–
2 (1999)	76/F	Occipital scalp	2×1	3
2 (1999)	52/F	Parietal scalp	1.5×1	3
2 (1999)	20/F	Frontal scalp	1.3×0.8	20
8 (2001)	33/F	Scalp	1.5×1.7	2
3 (2004)	88/F	Buttock	3.5×2.0	5.5
This study (2006)	56/F	Inguinal area	2×2.5	2
This study (2006)	69/F	Lower leg	2×2	10
This study (2006)	28/M	Scalp	1.5×1	10

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