



Perianal Basal Cell Carcinoma: a Case Report

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Introduction

Basal cell carcinoma (BCC) is the most commonly diagnosed skin cancer and highest incidence of any malignancy in the USA [1]. It usually arises in the elderly on sun-exposed areas, such as the head and neck [2]. The most important etiologic factor for the development of BCC is ultraviolet light exposure; thus, it is very rare for BCC to arise within the anogenital region or other non-UV-exposed areas.

Here, we describe a case of a 49-year-old patient with a perianal skin lesion that presented with painless bleeding. Immunohistochemical staining for Ber-EP4 and BCL2 was positive which demonstrated that the lesion was BCC and not a basaloid squamous cell carcinoma. There have only been a few previously published reports of perianal BCC. While very rare, it is important to highlight this case as it demonstrates the necessity to biopsy suspicious perianal lesions and how to distinguish between basaloid squamous cell carcinoma and BCC.

Case Report

A 49-year-old Caucasian male with no significant past medical history was referred to our hematology-oncology clinic for

further evaluation of a slowly growing perianal skin lesion. The lesion was non-painful and non-pruritic. He first noticed the lesion 6 months prior to presentation when he saw blood on the toilet paper after defecation. He did not seek medical attention earlier because he believed the lesion to be symptomatic hemorrhoids. He denied abdominal pain, pain with defecation, blood in his stool, weight loss, fever, or any other gastrointestinal symptoms. He did not have personal or family history of colorectal cancer.

Physical exam revealed a solitary 2.0 × 1.0-cm soft, flesh-colored nodule with central ulceration and raised edges extending from the left lateral anal verge near the 3 o'clock position (Fig. 1). Digital rectal exam showed no extension of the perianal lesion into the anal canal or fixation to the sphincter complex. Anoscopic examination revealed no additional masses, hemorrhoidal tissue, blood, or purulent drainage. There was no inguinal lymphadenopathy and examination of the abdomen was unremarkable.

Histopathologic analysis of the punch biopsy of the lesion demonstrated nests of small basaloid cells emanating from the epidermis with peripheral palisading in a background of mucin-rich stroma extending into the deep dermis (Fig. 2a, b). The tumor cells were strongly and diffusely positive for Ber-EP4 (anti-human EpCAM/CD326; Fig. 2c) and BCL2 (Fig. 2d) and focally positive for p53. The tumor cells were focally positive for CDK2NA but negative for SOX 2. Ki67 highlighted 70% of the tumor cells. These findings were consistent with the diagnosis of nodular BCC with infiltrative features. A preoperative computed tomography (CT) scan showed no evidence of metastatic disease in the abdomen or pelvis. The patient underwent wide local excision with negative margins. A screening colonoscopy was negative for malignancy. A full body skin exam did not reveal any other lesions. Three months postoperatively, screening colonoscopy revealed no signs of local recurrence. CT of the chest, abdomen, and pelvis with contrast 3 months after resection did not reveal any evidence of recurrence or metastasis.

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Fig. 1 Initial clinical presentation of the skin lesion located at the perianal area

Discussion

BCC, the most common malignancy in Caucasian populations [3], is a skin cancer arising from the basal layer of the epidermis. It is primarily caused by heavy episodic and chronic sun exposure [4]. Given this, BCC of non-sun-exposed areas is a dermatological rarity. BCC of the perianal region comprise less than 0.2% of all anorectal malignancies [5] with only case reports or small series reported in the literature. There are approximately 50 cases of perianal BCC in the English-speaking literature indexed on MEDLINE (Table 1).

The differential diagnosis of perianal BCC can include external hemorrhoids, anal cysts, Bowen's disease, condyloma acuminatum, Paget's disease, and basaloid squamous cell carcinoma (BSCC) [6]. BSCC, previously called cloacogenic carcinoma, is a rare subtype of SCC usually associated with human papillomavirus (HPV) infection [7]. While there is

morphological overlap between perianal BSCC and BCC, it is vital to distinguish them due to the increased risk of metastatic potential of BSCC and different therapeutic implications [8]. The classic histological presentation of BCC is characterized by basaloid tumor nests with peripheral palisading of nuclei surrounded by stroma. Tumor retraction artifact and atypical mitotic figures [9] also suggest a diagnosis of BCC over BSCC. In addition, BCC usually arises in the perianal region while BSCC typically arise within the anal canal [9]. Another important way to distinguish BCC from BSCC is immunohistochemical analysis. BCC will have diffuse Ber-EP4 and BCL2 staining whereas BSCC will exhibit diffuse CDKN2A and SOX2 expression [9].

BCC development on sun-protected areas of the body suggests that certain etiologic factors besides ultraviolet radiation could play a role in carcinogenesis. Several large cohort and case-control studies have revealed that certain lifestyle choices could lead to an increased risk of development of BCC. For instance, there appears to be a small, but statistically significant, increase in the risk of BCC for alcohol drinkers [10, 11], whereas cigarette smoking and obesity appear to decrease the risk of BCC [11]. Other risk factors for BCC include immunosuppression and genetic disorders, such as xeroderma pigmentosum or basal cell nevus syndrome. BCC can also develop in areas that have received radiation therapy or on areas of chronic inflammation, such as chronic pruritus vulvae, burns, or scars [12]. In contrast to SCC, HPV positivity does not appear to increase the risk of BCC [13].

The incidence of recurrence appears to be low for appropriately resected perianal BCC. Gibson et al. [14] reported a recurrence rate of only 1 patient out of 30 with at least 5 years of follow-up. Radiotherapy is also a reasonable treatment

Fig. 2 **a, b** Biopsy of the perianal lesion showing histologic features of basal cell carcinoma (H&E stain, **a**, 100×; **b**, 400×). **c, d** Immunohistochemistry showing that the tumor cells are positive for Ber-EP4 (**c**, 400×) and BCL2 (**d**, 400×)

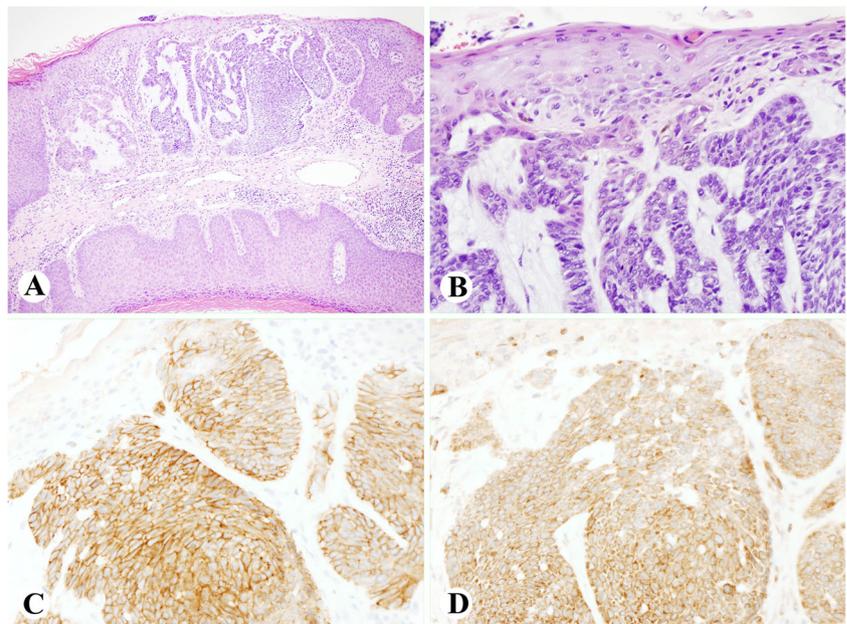


Table 1 Reported cases of perianal basal cell carcinoma

Reference	No. of cases	Sex	Average age (years)	Diameter (cm)	Presentation
Rivera-Chavarria [15]	1	F	93	4.5 × 3.2	Bleeding
Bulus [16]	1	F	56	7 × 5	Pain when sitting, swelling
Lee [17]	1	M	83	3 × 3	Slow growing ulcer
Lohana [18]	1	M	58	6 × 3	Bleeding
Nagendra [19]	1	M	69	3 × 2	Painless ulcerative lesion
Gibson [14]	15	9 M, 6 F	73	1.95	NR
Patterson [5]	21	15M,6 F	67	NR	NR
Patil [9]	9	7 W, 2 M	71	NR	NR
Bulur [6]	1	M	34	6 × 3	Bleeding
Levin [20]	1	M	60	0.4	Pruritus

NR not reported

option for perianal BCC, especially in elderly patients or those with significant medical comorbidities [17].

Conclusion

In summary, we present a case of isolated perianal BCC in a patient with no known risk factors. It is important for clinicians to consider the possibility of BCC for suspicious lesions, even in areas not exposed to UV light. If perianal BCC is suspected, it is crucial to distinguish it from BSCC by morphological assessment in combination with immunohistochemical analysis as these two lesions have widely different prognostic and therapeutic implications.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that there is no conflict of interest.

Informed Consent Informed consent to publish this study was obtained from the patient.

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