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Uro-oncology
Case report

Basal cell carcinoma of the scrotum: A rare occurrence in sun protected skin

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KEYWORDS
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Abstract
Introduction: Basal cell carcinoma (BCC) of the skin is common. The genitalia is rarely affected as it is naturally protected from ultraviolet light (UV) exposure. Predisposing factors and clinical features of BCC affecting the genitalia still require further description.
Observation: We present an elderly man with a scrotal lesion of 31 years duration which was confirmed to be BCC of the nodular and cystic type by histopathological examination. He did not have any known risk factors for genital BCC. There was no local invasion or distant metastases despite the tumour's large size and prolonged duration. Wide local excision was performed. There was no evidence of recurrence at 6 months.
Conclusion: BCC should be considered in the elderly with chronic skin lesions at the genitalia. Multiple factors contribute to delayed presentation.

Introduction

Basal cell carcinoma (BCC) is a common cutaneous malignancy. The genital, perineal and perianal regions are rarely affected as these areas are concealed from ultraviolet light exposure, which is a major predisposing factor to BCC. Only about 0.1 to 0.27% of BCCs are found in these areas [1,2]. Risk factors and clinical characteristics of genital BCC still requires further description to avoid delay and misdiagnosis. We describe a case of a large scrotal BCC and identi-

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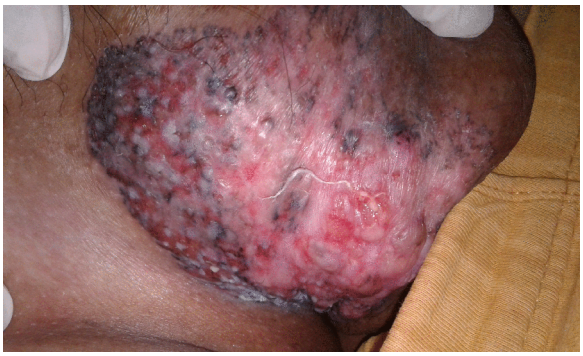

Fig. 1 A large papulonodular plaque with well-defined margins, measuring 8 × 9 cm over right hemiscrotum. Speckled dark brown pigmentation and a single ulcerated nodule with pearly border is seen within the plaque.

fied the clinical characteristics, management and prognosis of BCC affecting the genitalia reported in the literature.

Case report

A 77 year old man presented with a 31 year history of right scrotal skin lesion. The lesion started as a localised patch of scaly skin with pruritus which gradually increased in size and became thickened. About 20 years prior to presentation the lesion was biopsied, the incision resulted in a non-healing ulcer. Unfortunately he defaulted to follow up without obtaining the biopsy result. He was a non-smoker, there was no history of radiotherapy, immunosuppressive therapy, soot exposure, chronic dermatitis or recurrent tinea infection. Clinical examination showed a large papulonodular plaque with well-defined margins measuring 8 × 9 cm over right hemiscrotum extending to the left. There was speckled dark brown pigmentation and a single ulcerated nodule with pearly border (Fig. 1). There was no lichenification, excoriations or annular patches suggestive of chronic dermatitis or tinea infection. There were no inguinal, axillary or cervical lymphadenapathy. Other systems examinations were unremarkable. Clinically, our differential diagnoses were extramammary Paget's disease, BCC, Bowen's disease and pagetoid reticulosis. Histopathological examination from a punch skin biopsy showed lobules of basaloid cells with peripheral palisading nuclei and retraction artefacts confirming the diagnosis of BCC (Fig. 2). Magnetic resonance imaging (MRI) of the scrotum and pelvis did not show local tumour invasion and computed tomography (CT) scan of the neck, thorax, abdomen and pelvis did not show distant metastases. Wide local excision was performed with intra-operative circumferential surgical margin of 2 cm and 1 cm posterior surgical margin. Histopathology showed BCC nodular and cystic type. The tumour cells were 2 mm from the inferior margin, 4 mm from the deep margin and more than 5 mm from the rest of the margins. There was no recurrence at 8 months post surgery.

Discussion

Similar to BCC at other sites, BCC at the genitalia mainly affects elderly patients. The mean age at presentation is in the 7th decade [1,3–7]. Duration of lesion ranges from months up to 20 years [3,6]. Our patient developed the lesion at a younger age of 46, presented for the first time after about 10 years and sought treatment again after another 20 years. Delayed presentation may be attributed to the slow growing nature of the tumour, absence of pain or bleeding and the patient's unwillingness to come forward due to the private nature of the areas affected. Lesions may go undetected for years as self-inspection and visualization of the skin at the genitalia, perineal and perianal areas is difficult. In addition, surface topography of this area with rugosity of the scrotal skin, folds of the vagina and puckering of the anus easily conceal smaller lesions.

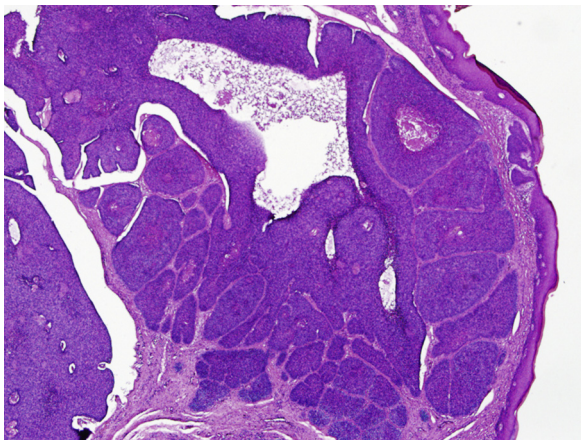

Fig. 2 Lobules of basaloid cells with peripheral palisading nuclei and retraction artefacts.

The vulva is the most common site affected, followed by the perianal, pubic, scrotum and other areas. The penis is the least affected site [1,4,8]. Risk factors for development of BCC other than ultraviolet light (UV) need to be considered as UV exposure in these areas is very limited. The most common risk factor reported is radiotherapy [1,6]. Other risk factors include exposure to dust and soot [9], chronic skin irritation due to dermatitis, infection, Hailey–Hailey disease, immunosuppressive therapy [1,3,10] and smoking [1,3]. Sexually transmitted infections and the human papilloma virus [1,11] have not been associated with genitalia BCC. Our patient did not have any of these risk factors. Clinical diagnosis is more difficult in the presence of a chronic skin disease. Lesions need to be properly evaluated by experienced clinicians to differentiate and identify the malignant site that has arisen from the benign areas. Diagnosis of BCC may be missed if biopsy site is not carefully selected.

Ulcerated nodules, patches and plaques are the usual clinical presentation of BCC including those in the genital, perineal and perianal areas [1,3–5,11]. Ulcers were observed in about a third of cases by Gibson & Ahmed, and de Giorgi et al. [1,4]. Perianal lesions tend to be polypoid [12]. Thirteen out of 16 vulva BCC reviewed by Lui et al. in China were pigmented [5]. In a Caucasian population, only 3% of vulva BCC was pigmented [4]. Pigmentation was a feature in about 10% of scrotal BCC [3]. Size of lesions averages between 1.95 to 2.7 cm [1,3–5]. About 70% of vulva BCC was clinically misdiagnosed as various benign conditions including eczema and psoriasis [4]. Our patient's lesion was unusually large in size and clinically resembles extramammary Paget's disease. However, the single ulcerated nodule with characteristic pearly border was indicative of BCC.

Metastatic BCC is rare. There was no evidence of metastases in our patient despite the delayed presentation. Genital BCC accounts for

about 7% of metastases, more than half metastatic disease originated from lesions in the head and neck followed by the trunk [13,14]. Regional metastases are more common than distant metastases in BCC of the genitalia including the scrotum [13,15].

In general, management of genital BCC is the same for BCC at other sites. Surgical excision is the treatment of choice for non-metastatic disease [1,3,5]. The use of non-surgical options like radiotherapy, topical immunomodulators and photodynamic therapy has not been described in genital BCC. Treatment for regional metastases includes lymphadenectomy [3,5,15]. Chemotherapy with cyclophosphamide, doxorubicin and cisplatin is used for patients with distant metastases. Prognosis for localised and resectable disease is excellent.

Conclusion

The genital area is an unusual site for BCC. Multiple factors lead to delayed presentation. BCC must be considered in elderly patients with unresolved lesions and chronic skin diseases affecting these sites. Lesions are usually ulcerated, and pigmented lesions are more commonly seen in Asians. Metastatic disease is rare and prognosis is good with surgical excision.

Author's contributions

Alyaa Hassan Ali Eisaa: Clinical management of the patient, compilation of the clinical data and writing of the report.

Adawiyah Jamil: Clinical management of the patient, compilation of the clinical data, literature review and writing of the report.

Norazirah Md Nor, Low Dy Win: Clinical management of the patient, compilation of the clinical data, literature review and reviewing the report.

Lee Bang Rom: Clinical management of the patient, compilation of the clinical data, and reviewing the report.

Conflict of interests

None.

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None.

Consent

A written consent obtained for the photograph and a verbal consent for the report.

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