Basal cell carcinoma of the penis

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ABSTRACT

Basal cell carcinoma (BCC) is the most common malignant tumour found in humans. It appears in the genital and perianal region in less than one percent of cases. Discovery of lesions around the genitalia may often be delayed due to neglect, hesitation of patients to visit the clinic or unawareness on the part of both the patients and physicians. We report a case of delayed presentation of BCC of the penis in a middle-aged man, which was successfully managed with wide local excision under the care of plastic surgeons.

Keywords: basal cell carcinoma, genitalia, penis, skin diseases

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INTRODUCTION

Basal cell carcinoma (BCC) of the penis is a rare manifestation of the most common malignant tumour found in humans. The estimated incidence is 0.1 per 100,000 cases per year.[1] The aetiology of basal cell tumours arising in non-sun-exposed sites remains elusive, although it is postulated that some chronic form of local irritation or inflammation may play a role.[2] Although rare, these are important tumours that clinicians should be aware of, as they are more likely to present late and require surgical management. They have an anecdotal propensity to metastasise more commonly than BCCs in other locations, and when diagnosed, carry a greater burden of psychological morbidity to patients.[2] The key to good management of such lesions is recognition and early excision. We report a case of BCC of the penis in a middle-aged man, which was successfully managed with wide local excision under the care of plastic surgeons.

CASE REPORT

A 46-year-old Caucasian man presented with an expanding lesion on the shaft of his penis. The lesion had first appeared ten years earlier and had gradually increased in size, but otherwise caused no symptoms. There was no history of sexually transmitted disease, dermatological disorders, local trauma, irradiation or exposure to toxic chemicals. Examination showed a 17 mm × 20 mm lesion on the shaft of the penis (Figs. 1 & 2). There were no other cutaneous lesions, or any local or regional lymphadenopathy. The patient was referred to our Plastic and Reconstructive Unit for diagnosis and subsequent management with a view to reconstruction.

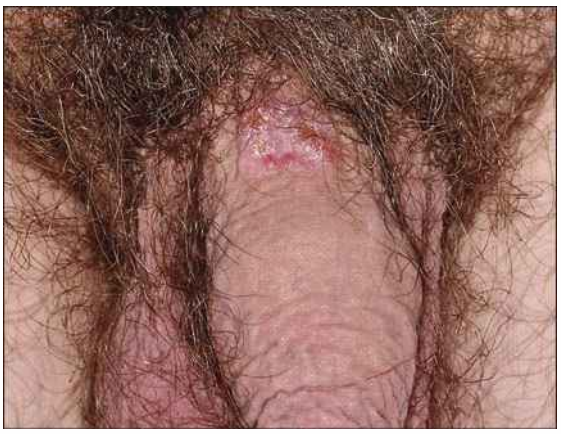

Fig. 1 Macroscopic appearance of the basal cell carcinoma (17 mm × 20 mm) on the dorsal aspect of the shaft of the penis at presentation.

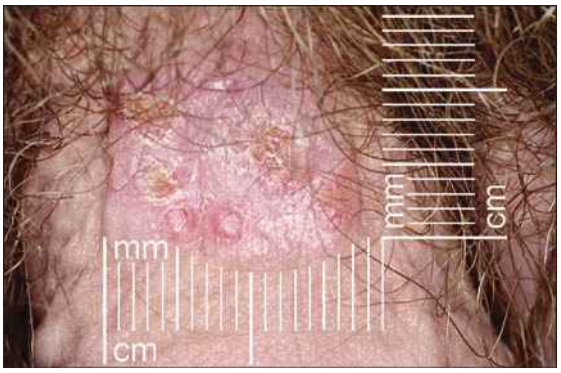

Fig. 2 Photograph shows a magnified view of the non-ulcerated basal cell carcinoma on the shaft of the penis.

Biopsy of the lesion confirmed a nodular BCC (Fig. 3). Primary excision with a 5-mm margin and direct skin closure was performed. Histopathological examination confirmed that the lesion had been completely excised. At the outpatient review at four months, the wound had healed, and there was no local or regional recurrence.

DISCUSSION

Non-melanocytic skin cancers (NMSCs) represent 25% of all cancer diagnoses in the UK. In 2006, the incidence of NMSC was 81,000, of which BCCs accounted for around 80%, although registration was considered to be incomplete.[3] BCCs are solid tumours arising from the basal layer of the epidermis. They are divided into five subtypes, comprising nodular, ulcerating, sclerosing,

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superficial multicentric and pigmented types. BCCs are commonly found in sun-exposed areas such as the head and neck. Primary involvement of the genital and perianal skin is exceedingly rare, with less than 30 reported cases to date.[4]

BCCs of the penis are slow-growing, found most commonly in the fifth to seventh decades of life, and are most commonly located on the shaft, followed by the glans, meatus and the prepuce.[4,5] Examination typically reveals a mobile lesion with a rolled edge, which may bleed or ulcerate. Risk factors for BCC are sun exposure, fair skin, immunocompromised patients and radiation therapy. BCC is rare in brown- and black-skinned individuals. BCC of the genital area represents an unusual pathology in this non-sun-exposed area, and other risk factors have been postulated to include circumcision, trauma, phimosis, chronic dermatitis and irritation.[6,7] No association between BCC and human papilloma virus has been found.[4] Differential diagnoses of skin lesions of the penis include squamous cell carcinoma, Paget's disease and Bowen's disease. Treatment is often delayed by trials of topical applications due to misdiagnosis of suspected fungal, bacterial or viral infections.

BCCs rarely metastasise, with a reported incidence of 0.003%–0.1%. The natural history of the disease is chronic local extension and invasion. However, BCCs of the scrotum with metastatic extension are reported in 13% of cases, possibly representing a different or more aggressive biological behaviour, but this cannot be ascertained due to the low number of reported cases.[6] In case of diagnostic doubt, a biopsy of the lesion should be performed and dermatological or plastic surgical opinion sought. Excision with adequate margins as per latest guidelines[8] is the treatment of choice, but may be difficult due to the anatomical location.

In this case, oncological clearance was the primary goal, with an aim to reconstruct the difficult anatomical area. Split and full thickness skin grafts may be used to close a large defect on the penis; however, there is a high degree of graft failure due to the increased risk of infection and the inability to apply pressure dressings to the penis. Failure of the graft may result in increased morbidity, anxiety and subsequent surgery. Split-thickness grafts to the penis can result in contracture of the graft, causing penile deformity upon erection. Due to the laxity of the skin on the penile shaft, large defects can be closed primarily. The normal elastic skin would stretch, causing little penile deformity with erection. Adjuvant radiotherapy may be required for more extensive or locally invasive disease.

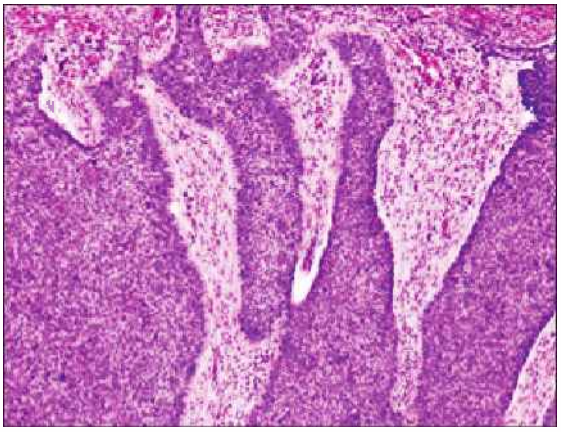

Fig. 3 Photomicrograph of excised lesion shows superficial tumour 'nests' with the characteristic 'pallisading' of basal cells (Haematoxylin & eosin, × 50).

In conclusion, BCC of the penis is rare, and is often accompanied by late presentation and diagnosis. Treatment is the same as for sun-exposed areas, but there are reports of a greater chance of metastasis, thus mandating more aggressive treatment. Complete cure can be expected, but close follow-up may be necessary in some cases. It is important to raise awareness regarding skin malignancies of the genitalia for early diagnosis and treatment at a specialised unit. If there is clinical suspicion of a malignant tumour, an early biopsy is indicated.

ACKNOWLEDGEMENT

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