

Melanoma of the Penis: A Clinical Dermoscopic Case Study

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Sir,

Mucosal melanoma is an extremely rare malignancy that comprises less than 4% of all melanomas and accounts for less than 2% of all primary penile malignant lesions (1, 2).

It is most frequently located on the glans (55%), followed by the prepuce (28%), penile shaft (9%) and urethral meatus (8%) (3).

Penile melanoma is a disease of the elderly: median age at diagnosis is 64 years. By contrast, the average age of patients with cutaneous melanoma is younger (40–50 years of age) (1, 4, 5). The 2- and 5-year overall survival rates are 63% and 31%, respectively (1).

Compared with tumours occurring in cutaneous sites, mucosal melanomas are often thicker: the median depth of invasion at diagnosis is around 3.5 mm, with approximately 50% of cases thicker than 4 mm (4).

A problem in clinical practice is recognizing a pigmented penile lesion as a melanoma. Indeed, one of the major mimickers of mucosal melanoma, and thus of penile melanomas, is melanosis. Clinically, despite its benign behaviour, melanosis can, at times, share features with malignant melanoma: asymmetry, irregular borders, multifocality, variegated pigmentary patterns and large size (6).

Dermoscopy may prove useful for the differential diagnosis between mucosal melanosis, and other mimickers, and early melanoma. However, its potential role has been limited so far because little is known about the dermoscopic features of penile melanoma (7).

We report here a case of a penile melanoma whose dermoscopic features have been investigated.

CASE REPORT

A 70-year-old Caucasian man was referred to the Dermatology Clinic of the University of Florence for the evaluation of a large pigmented lesion of the penis. The lesion had appeared approximately 18 months previously and the patient referred to enlargement of the lesion the year before, reporting no symptoms.

On clinical examination, a large irregular brown to black pigmented asymmetric lesion, with irregular and ill-defined borders was found on the glans penis and balano-preputial fold. Pigmentation was irregularly distributed, dark brown in the centre, shading to a light brown hue at the periphery. The lesion was barely palpable and a slight thickening of the mucosa was found in the balano-preputial fold (Fig. 1). Moreover, homogeneously pigmented maculae were present on the adjacent area of the right side of the glans penis.

Under epiluminescence the lesion appeared non-homogeneous and irregularly pigmented with brown to black areas, irregularly



Fig. 1. Irregular brown to black pigmented plaque with undefined borders on the glans penis and balano-preputial fold.

shaped and distributed. In the upper part of the lesion the vascular component was visible as linear red structures (Fig. 2). Moreover, the lesion presented a multi-component pattern with combination of distinctive dermoscopic features, such as blue whitish veil, irregular streaks and regression structures (Fig. 2).

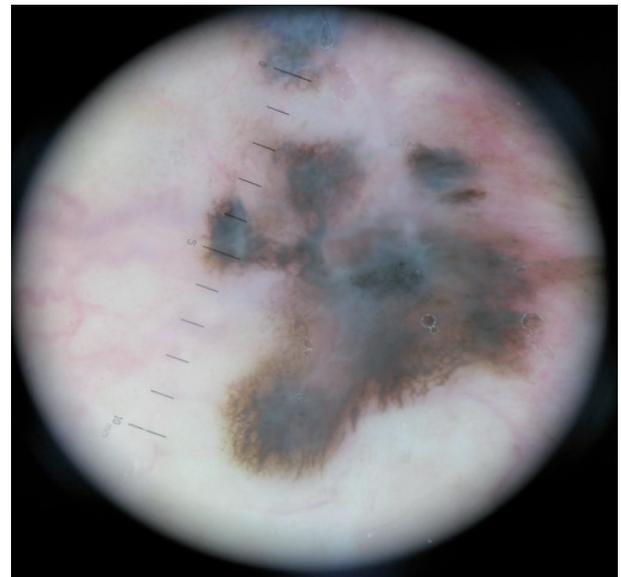


Fig. 2. The dermoscopic picture shows irregular pigmentation with brown to black pigmented areas of irregular shape and distribution. In the upper part of the lesion the vascular component was visible as linear red structures. Moreover, the lesion presented a multi-component pattern with a combination of distinctive dermoscopic structure, such as blue whitish veil, irregular streaks and regression structures.

The patient denied any symptoms of urinary outflow obstruction and at physical examination there was no palpable inguinal lymphadenopathy.

Clinically and on dermoscopy, we suspected malignant melanoma. We performed a 4 mm punch biopsy in 3 different penis sites: glans, small and large balano-preputial folds.

Following histopathological examination, revealing a malignant melanoma with a Breslow thickness of 1 mm, the patient was referred to the urology department for partial surgical resection of the glans penis and sentinel lymph node mapping technique.

The new histopathological examination of the entire lesion showed a IV level melanoma (Breslow thickness 1.8 mm) and the sentinel lymph node was negative. The haematological, radiological and sonographic investigations were also negative.

The post-operative course was uneventful and the patient was clinically free of disease at one year follow-up.

DISCUSSION

Mucosal melanomas arising in the genital tract are more common in women than in men. This is explained by the large concentration of melanocytes at the mucocutaneous border of the vulva. In the penis they represent less than 1% of all melanomas.

Prediction of the clinical course of melanoma is based mainly on tumour thickness (1). However, assessment of tumour thickness alone is not enough: other important variables for prognosis are the tumour's extent of involvement of local structures, and whether there is clinical or histopathological evidence of metastases in the inguinal or pelvic lymph nodes (8).

Adverse prognostic factors are thickness (significant cut-off 3.5 mm or more), ulceration, and diameter (significant cut-off 15 mm or more).

Penile melanomas are usually diagnosed late; clinically, they may vary in presentation from macules to papules and nodules, of varying colour. Considering the particular anatomical site, the often late presentation of patients, the aggressive clinical course and the possibility of misdiagnosis, early detection is mandatory. Indeed, clinicians should be highly suspicious when examining any penile pathology. The absence of symptoms, the low level of public awareness, the difficulty associated with this particular site, and not least in importance, embarrassment at being examined, all contribute to the delay in diagnosis. The fact that melanoma can appear all over the body, including the genital area, should therefore always be stressed, in particular during population awareness campaigns.

The appearance of new areas of pigmentation in the genital region is a diagnostic dilemma for the physician as well as a cause of concern for the patient because these areas may mimic early melanoma (7–9). Therefore, dermoscopy could play a major role in this site too, once the typical dermoscopic parameters for pigmented penile lesions are defined. With dermoscopy, in most cases we are able to distinguish a melanocytic lesion from a non-melanocytic one, and establish whether the melanocytic lesion is benign or malignant.

In our case, of dermoscopic interest were the features typical of cutaneous melanoma: streaks, blue-whitish veil and an atypical vascular pattern, besides an irregular pigment network (Fig. 2). These parameters allowed us to more easily distinguish this lesion from a mucosal melanosis, common benign pigmented lesions of the mucosa that frequently mimic melanoma in this site. Indeed, in other studies we have already described the dermoscopic characteristics of melanoses, which on the penis frequently show a parallel pattern or a diffused pigmentation, sometimes dishomogeneous or irregular, but which never show any typical dermoscopic feature, either of melanoma or of a simple benign melanocytic lesion such as a pigment network, globules, and streaks, whose histopathological correlate is melanocyte proliferation (6, 7). In any case a melanosis never shows a blue-whitish veil, which instead is frequently represented in mucosal melanomas in lesions of lesser thickness, as we have recently published (8).

In our experience, melanoma of the penis presents the same dermoscopic parameters as cutaneous melanoma. This indicates that dermoscopy can be employed in the differential diagnosis of pigmented lesions of the penis, as it allows us to distinguish between benign and malignant lesions.

If early melanoma is curable, as the data in the literature suggest, public awareness of the problem will lead to early consultation and early treatment, as for melanomas in other sites. This objective can, however, be achieved only by closer co-operation between urologists and dermatologists.

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