

Penile Epidermoid Carcinoma: A Case Report

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Abstract

Case Report

Penile epidermoid carcinoma is a rare malignant tumor that affects men between the ages of 60 and 70. There are many risk factors for Penile epidermoid carcinoma, the common of which is infection with the human papillomavirus. Squamous cell carcinoma is the most common histological type of malignant tumors of the penis. Diagnosis is based on clinical findings, medical imaging and, above all, histopathology to confirm the disease. Surgery is the treatment of choice. Survival rates are better for localized disease than for metastatic disease, hence the importance of early diagnosis. We report the case of a localized Penile epidermoid carcinoma in a 67-year-old patient who had undergone conservative treatment, surgery, and is currently under surveillance.

Keywords: Squamous Cell Carcinoma, Penis, Conservative Treatment, Surgery, Brachytherapy.

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INTRODUCTION

Penile epidermoid carcinoma is a rare malignant tumor, accounting for 0.5% of malignant tumors in men [1], with a peak frequency between the ages of 60 and 70 [2-4].

Risk factors for Penile epidermoid carcinoma include human papillomavirus infection, poor local hygiene due to phimosis, chronic penile inflammation, smoking, ultraviolet a phototherapy, and low socioeconomic status [5-7].

The most common histological type of malignant penile tumors is epidermoid carcinoma [8], which is often localized to the glans [9]. Clinically, it presents as ulcerating or budding lesions [10]. Medical imaging involves CT, MRI and ultrasound [11]. Surgery is the treatment of choice [12].

We present here the case of a 67-year-old patient with localized Penile epidermoid carcinoma followed at the Oncology-Radiotherapy Department of the Mohammed VI University Hospital in Marrakech.

CLINICAL CASE

At the end of February 2024, a 67-year-old patient, a chronic smoker for 30 pack-years, consulted a general surgeon privately for a swelling of the penis without other associated signs that had been developing for 1 year. The loco-regional examination on admission

revealed an ulcerating-bourgeois lesion on the left lateral side, located 3 cm from the root of the penis, measuring 2.5 cm in long axis, painless and fixed in depth.

An excision of the penile lesion was performed at the beginning of March 2024, the anatomopathological study concluded that there was an in situ squamous cell carcinoma on a probable condylomatous lesion with suspicion of a microfocus of invasion, measuring 3.4x2.6 cm, with a healthy deep limit and peripheral limits sometimes less than 5 mm from the tumor.

Then, at the end of March 2024, the patient was transferred to the Oncology-Radiotherapy Department of the Mohammed VI University Hospital in Marrakech for adjuvant treatment. On admission, he clinically presented only a clean scar, without other associated signs.

The decision was taken to place him under surveillance as he presented no risk of reoffending.

DISCUSSION

Penile epidermoid carcinoma is a rare malignant tumor, with a peak frequency between 60 and 70 years [2-4], our patient's age (67) falls within this peak frequency range.

Risk factors for Penile epidermoid carcinoma include poor local hygiene due to phimosis, chronic penile inflammation, balanoposthitis, lichen sclerosus, multiple sexual partners, early sexual debut, smoking, ultraviolet A phototherapy and low socioeconomic status [5-7]. Human papillomavirus infection is the main factor [7]. Circumcision has a protective role, except when performed in adulthood [13]. There is a higher risk of penile cancer with HIV, although this has not been formally established [14]. Our patient had smoking as a risk factor.

Ninety-five percent of penile tumors are squamous cell carcinomas [8]. The most common location is the glans (48% of cases) followed by the foreskin (25% of cases) [9].

Penile epidermoid carcinoma is usually a clinically obvious lesion, in the form of ulcerated or budding lesions [10]. It may be hidden under the foreskin in cases of phimosis; thus, examination of the penis must imperatively include its inspection and palpation [8].

Magnetic resonance imaging (MRI) and ultrasound are useful for locoregional assessment of cancer extension and computed tomography-scintigraphy is useful for assessing of distant metastases [11].

Because of the low incidence of this disease, management is often guided by case reports, small case series, and local experience [15]. The goal of treatment should be preservation of the organ to ensure a fulfilling and fulfilling masculinity.

Surgery is the treatment of choice [12]. Other modalities, such as external beam radiotherapy and/or interstitial brachytherapy, have also been reported as alternative approaches to organ preservation [16].

Issa A. *et al.*, [17], evaluated treatment options for penile intraepithelial neoplasia and their outcomes. Recurrence rates after surgery were 25% for wide local excision, 4% for Mohs surgery, 5% for total glans resurfacing, and 10% for glansectomy. Suks Minhas *et al.*, [18], evaluated the surgical excision margin required for local oncologic control in primary penile cancers in 51 patients selected for conservative surgery: 9 wide localized excisions, 26 glans excisions, and 16 partial penectomies. Of the 102 surgical margins (deep and cutaneous), 49 measured less than 10 mm from the tumor edge and 92 less than 20 mm from the resection margin. During follow-up, two patients (4%) developed local tumor recurrence and were successfully treated with partial penectomy. In conclusion for them, a traditional excision margin of 2 cm is not necessary to treat Penile epidermoid carcinoma. This study thus validated surgical margins of 5 to 10 mm as they are as safe as the 2 cm margins that provide adequate disease control. A safety margin of 3 to 5 mm is usually sufficient but must be

adapted to the tumor grade (grade 1=3 mm, grade 2=5 mm and grade 3=8 mm) [19].

Radiotherapy can be administered as external beam radiotherapy with a dose ranging from 60 to 70 Gy combined with brachytherapy or as brachytherapy alone at doses ranging from 55 to 60 Gy (20-22). Since it is only studied for lesions smaller than 4 cm, brachytherapy should be offered to tumors not exceeding this size. The results reported are better with brachytherapy with local control rates ranging from 70 to 90% [21, 22]. Rozan *et al.*, [23], conducted a multicenter study of 259 patients treated with interstitial brachytherapy, including 184 with exclusive brachytherapy and 75 with combined treatment (external surgery + brachytherapy ± external radiotherapy). The five- and ten-year survival rates were 66 and 52% for overall survival and 78 and 67% for disease-free survival, respectively. De Crevoisier R. *et al.*, [22], evaluated brachytherapy in 144 patients with squamous cell carcinoma of the glans penis with a median dose of 65 Gy (37-75 Gy). The 10-year penile recurrence rates were 20% with a 10-year overall survival rate of 92%. Delaunay B *et al.*, [24], evaluated the oncological outcomes of brachytherapy in 19 patients among 47 patients with squamous cell carcinoma of the penis treated in 1992 and 2009. The 5-year disease-specific survival and disease-free survival were 87.6% and 84%, respectively.

Hasan *et al.*, [25], performed a meta-analysis of 19 retrospective studies published between 1984 and 2012 and involving 2178 patients, including 1505 in the surgery group and 673 in the brachytherapy group. The 5-year overall survival with surgery was 76% versus 73% with brachytherapy, while the 5-year local control rate was 84% versus 79% with brachytherapy, respectively. Although surgery provided better control, there was no survival advantage.

With similar advantages, surgery takes precedence over radiotherapy due to its complications: urethral stenosis, necrosis of the glans, and late fibrosis of the corpora cavernosa [26].

Presenting with an early stage tumor (Tis), our patient benefited from organ-preserving treatment, wide tumor excision with healthy margins, the closest to 5 mm from the tumor. These margins were considered sufficient [18, 19], with a low risk of recurrence between 0 and 20% [17-29], the patient was placed under surveillance.

Patients with localized disease showed the best outcome with up to 81% 5-year relative survival. Patients with distant metastases had the worst outcome with only 16% 5-year relative survival [30].

CONCLUSION

This work reports a case of localized Penile epidermoid carcinoma, a rare malignant tumor with a multitude of risk factors, in a 67-year-old patient who underwent wide tumor excision with healthy margins and who is currently under surveillance.

The patient with localized Penile epidermoid carcinoma benefits from organ-conserving treatment, either surgery or radiotherapy; these two therapeutic methods have similar survival rates but radiotherapy carries a higher risk of complications.

Localized disease has shown the best therapeutic outcome than metastatic disease, hence the importance of in-depth knowledge of this rare tumor, thus enabling healthcare personnel to diagnose it a little earlier and the patient to consult at the appearance of even a minimal penile lesion.

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