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# Locally Advanced Squamous Cell Carcinoma of the Penis- Case Report and Literature Review

A. Benkerroum[1*], Y. Ouzidane[1], A. Chenfouri[1], A. Moataz[1], M. Dakir[1], A. Debbagh[1], R. Abouateib[1]

[1]Urology Department, Ibn Rochd University Hospital, Faculty of Medicine of Casablanca, Morocco

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***Corresponding author:** A. Benkerroum
Urology Department, Ibn Rochd University Hospital, Faculty of Medicine of Casablanca, Morocco

**Abstract** **Case Report**

Squamous cell carcinoma of the penis is a rare but aggressive tumor, the prognosis of which depends closely on the stage at diagnosis. Locally advanced forms pose a major therapeutic challenge, requiring multidisciplinary management. We report the case of a patient with advanced squamous cell carcinoma of the penis, detailing the diagnostic approach, treatment strategy, and outcome, while also discussing current data from the literature.

**Keywords:** Penile cancer, Squamous cell carcinoma, Inguinal lymphadenopathy, Late diagnosis, Multidisciplinary management, Oncology.



## INTRODUCTION

Penile cancer accounts for less than 1% of male cancers in industrialized countries, but its incidence remains higher in some developing regions. Squamous cell carcinoma constitutes more than 95% of penile tumors. Diagnostic delays are common due to sociocultural factors, patient embarrassment, and a lack of awareness of initial symptoms. Advanced stages are associated with inguinal lymph node involvement and a poor prognosis, making management complex and burdensome from both a functional and psychological perspective.

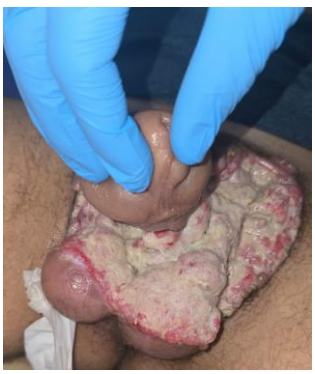
## CLINICAL OBSERVATION

The patient was a 49-year-old man with no significant past medical history, circumcised, who presented with an ulcerated and budding lesion of the penis that had been developing for eight months. He reported local pain, episodes of bleeding, and a progressive deterioration of his general condition.

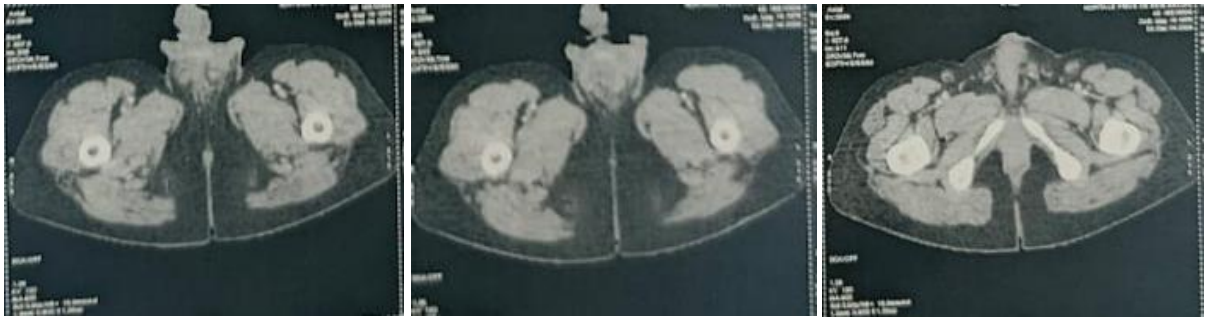
Clinical examination revealed an ulcerated-necrotic mass affecting the shaft of the penis, measuring approximately 6 cm in its longest dimension, indurated, poorly defined, associated with firm, fixed bilateral inguinal lymphadenopathy. The remainder of the physical examination was unremarkable.

The biopsy of the penile lesion revealed a well-differentiated squamous cell carcinoma.

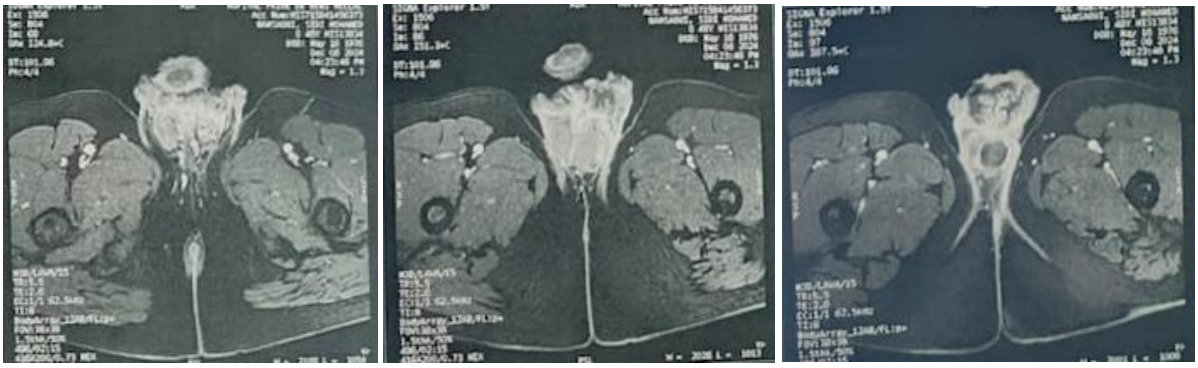
The patient initially refused treatment, which led to a worsening of symptoms, resulting in an ulcerated lesion that spread to the base of the penis.



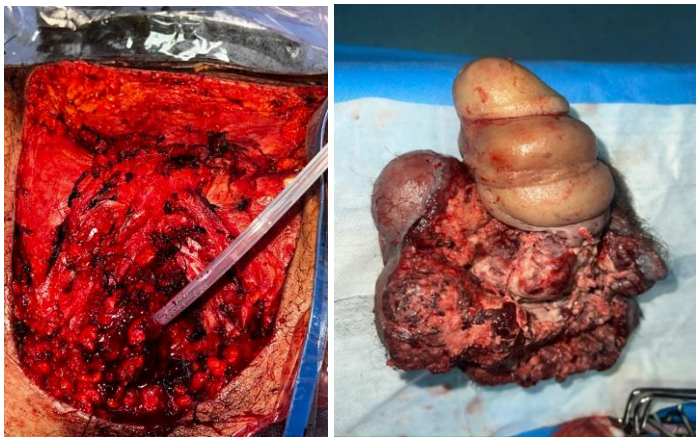
The staging workup included a thoraco-abdomino-pelvic CT scan showing invasion of bilateral inguinal and iliac lymph nodes without distant visceral metastases.



Penile MRI confirmed infiltration of the corpora cavernosa and spongiosum with scrotal invasion and inguinal lymphadenopathy, classifying the tumor at stage pT3N2Mx according to the TNM classification.



Following discussion at a multidisciplinary team meeting, a combined therapeutic strategy was chosen. The patient underwent a total penectomy with perineal urethrostomy combined with bilateral inguinal lymph node dissection. The postoperative course was uneventful.



**The histopathological examination of the surgical specimen revealed:**

**A/ Testicles + penis + scrotal coverings:**

- A moderately differentiated and invasive keratinizing squamous cell carcinoma, measuring 15cm in its longest dimension. Infiltrating the corpus cavernosum, scrotum and tunica vaginalis of the right testicle.
- Presence of vascular emboli and perineural encasement.
- The lower (scrotal) skin resection limit and the posterior soft tissue limit are reached.
- Elsewhere, the closest skin resection limit remains 3mm from the neoplasm.
- B/Right lymph node dissection: 6 lymph nodes with reactive lymphadenitis were isolated. No malignancy was found.
- Left lymph node dissection: 5 lymph nodes with reactive lymphadenitis were isolated. No malignancy was found.
- Proposed stadium: pT4N0Mx.

- Adjuvant chemotherapy with platinum salts was initiated due to the high risk of recurrence.

After 18 months of follow-up, the patient was in clinical and radiological remission, with no signs of local or metastatic recurrence. Psychological support and quality-of-life care were integrated into the follow-up program.

## DISCUSSION

Squamous cell carcinoma of the penis (SCC) is a rare tumor with a poor prognosis when diagnosed at a locally advanced stage. The rarity of this pathology partly explains the lack of large-scale randomized studies, making management largely based on expert recommendations and retrospective series [1,2].

The incidence of penile cancer varies considerably across geographic regions, with higher prevalence in Africa, Asia, and South America. Well-established risk factors include lack of neonatal circumcision, inadequate genital hygiene, phimosis, smoking, and human papillomavirus (HPV) infection, particularly genotypes 16 and 18. Precancerous lesions such as erythroplasia of Queyrat and Bowen's disease also provide a favorable basis for malignant transformation [3–5].

The diagnosis is based on clinical examination and histological confirmation by biopsy. Penile MRI is the reference examination for evaluating local extension, particularly infiltration of the corpora cavernosa and spongiosum, which determines the T stage and therapeutic approach [6].

Inguinal lymph node status is the main prognostic factor, with five-year survival dropping significantly in cases of bilateral or pelvic lymph node involvement [7]. Thoraco-abdomino-pelvic CT is essential for assessing lymph node and metastatic spread [2].

Surgery remains the cornerstone of treatment. In locally advanced forms (≥T2), partial or total penectomy is often necessary to achieve satisfactory oncological control [2].

Bilateral inguinal lymph node dissection is recommended in the presence of clinical or radiological lymphadenopathy, or after histological confirmation of lymph node metastases [1].

Recent data highlight the benefit of neoadjuvant chemotherapy based on platinum salts (TIP regimen: paclitaxel, ifosfamide, cisplatin) in patients with large or fixed lymph node involvement, sometimes allowing tumor reduction and more conservative secondary surgery [8].

In the adjuvant setting, chemotherapy is indicated in the case of unfavorable histoprognostic factors such as multiple lymph node involvement, vascular emboli or extracapsular extension [2].

Radiotherapy has a more limited role but can be offered as adjuvant or palliative treatment, particularly in cases of positive margins or surgical contraindication [9].

The prognosis depends mainly on the stage of lymph node involvement. Patients without lymph node involvement have a five-year survival rate of over 80%, compared to less than 30% in cases of advanced lymph node involvement [1].

Close monitoring is required during the first two years, when the risk of recurrence is highest, combining clinical examination and regular imaging [2].

Total penectomy has a major psychological and sexual impact. Comprehensive care, including psychological support, clear preoperative information, and, when possible, options for urinary reconstruction or rehabilitation, is essential. Quality of life assessment should be an integral part of follow-up [10].

Recent advances focus on immunotherapy targeting PD-1/PD-L1 pathways, particularly in patients with metastatic or chemoresistant forms, with encouraging preliminary results [11].

Primary prevention through HPV vaccination represents a major public health challenge to reduce the future incidence of squamous cell carcinoma of the penis [4].

## CONCLUSION

Advanced squamous cell carcinoma of the penis requires rapid, aggressive, and multidisciplinary management. Early diagnosis remains the best guarantee of prognosis. The combination of radical surgery and adjuvant therapies improves survival, at the cost of a significant functional impact that must be anticipated and managed.

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