**Scholars Journal of Medical Case Reports**
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

**Urology**

# Primary Penile Cancer: A Six-Case Experience and Review of Diagnostic Challenges

M. Cheqboub[1#]*, L. S. Abdalla[1#], M. OUBIHI[1], M. M. Amine[1], A. CHATAR[1], M. A. Lakmichi[1], Z. Dahami[1], M. S. Moudouni[1], I. Sarf[1]

[1]Urology Department, Arrazi Hospital, Mohammed VI University Hospital Center-Marrakech, Faculty of Medicine and Pharmacy Marrakech, Cadi Ayyad University, Marrakech, Morocco
[#]Equal contribution

**DOI:** https://doi.org/10.36347/sjmcr.2025.v13i08.010 | **Received:** 07.05.2025 | **Accepted:** 12.06.2025 | **Published:** 07.08.2025

***Corresponding author:** M. Cheqboub
Urology Department, Arrazi Hospital, Mohammed VI University Hospital Center-Marrakech, Faculty of Medicine and Pharmacy Marrakech, Cadi Ayyad University, Marrakech, Morocco

**Abstract** | **Original Research Article**

Tumors of the penis are very rare and represent less than 1% of adult male cancers. They are very rare in our context due to the fact that neonatal circumcision is commonly practiced; they occur mostly after 75 years of age. There are several favourable factors, notably human papillomavirus or HPV, and in 95% of cases it is a squamous cell carcinoma. The reference treatment remains surgical. We report retrospectively the clinical, diagnostic and therapeutic features and the long-term evaluation of 6 cases of primary cancers of the penis collected in our department.

**Keywords:** Cancer, penis, circumcision, surgery.



## INTRODUCTION

Tumors of the penis represent less than 1% of adult male cancers. They are very rare in our context because neonatal circumcision is commonly practiced; they occur mostly after 75 years [1]. There are several favourable factors, in particular human papillomavirus or HPV [2], the most frequent precancerous lesion is intraepithelial neoplasia (PeIN) [3], which is a squamous cell carcinoma in 95% of cases [5]. The reference treatment remains surgical.

## MATERIAL AND METHODS

This is a retrospective study on the diagnostic conduct, therapeutic management, and evaluation of long-term results of surgical treatment of primary cancer of the penis after analysis of 6 files collected in our department. All our patients had a deep biopsy of the lesion with anatomopathological study. The following data were revealed: history, mode of revelation, site, size, extension workup, TNM stage, histological grade, resection margin and therapeutic attitude.

## RESULTS

The mean age of our patients was 58 years (46-79). The average delay of consultation was 4 months. The 6 patients had squamous cell carcinoma, 4 of them had partial amputation of the penis and 2 other patients had emasculation with bilateral superficial inguinal lymphadenectomy associated with perineal urethrostomy (figure 3). The median lesion size was 4.2 cm (1.5-6cm), all tumors had a distal location (glans, balanopreputial groove) of which 4 patients had localized and non-invasive tumors (PT1-PT2) and 2 patients had infiltrating tumors of the urethra (figure 2). Two patients presented a lymph node metastasis (N2, N1), only one bilateral lymph node curage was performed and was positive on one side only with a lymph node smaller than 3 cm and absence without capsular effraction. One patient was referred for neo-adjuvant chemotherapy. The median survival was 30 months (6-61 months), two patients died, one of whom presented with a metastatic mode.

## DISCUSSION

Tumors of the penis are very rare tumors and represent less than 1% of adult male cancers. They are very rare in our context because of the practice of neonatal circumcision [1]. Squamous cell carcinoma accounts for 95% of all penile cancers [5]. It is mainly located on the glans and in the preputial groove, and the mode of extension is essentially via the lymphatic system towards the inguinal nodes [5]. The precancerous lesions classically associated with the occurrence of squamous

cell carcinoma of the penis are represented by: intraepithelial neoplasia (IEN), lichen sclerosus of the penis, leukoplakia, condyloma acuminatum, erythroplasia of queyrat, Bowen's disease [3,4]. Human papilloma virus has been recognized as a factor favoring cancer of the penis, the subtypes HPV-16 or HPV-18 are the most frequently encountered [2,7]. The protective role of neonatal circumcision has been reported [3].

Clinically, it manifests itself by pain, pruritus, and bleeding from the penis; clinical evaluation of the regional extension by palpation of the inguinal lymph nodes is essential [7]. The clinical examination usually allows to assess the local extension but MRI remains the reference radiological examination allowing a precise evaluation of the degree of infiltration of the corpora cavernosa, the corpus spongiosum and the urethra [8]. However, it is unable to differentiate a metastatic lymph node from an inflammatory reaction of the lymph nodes and only the anatomopathological examination of the cytopuncture or lymphadenectomy allows to make a diagnosis of certainty.

The diagnosis of cancer of the penis is based on anatomopathological examination, and treatment is most often surgical, it must be as conservative as possible with the imperative presence of negative surgical margin with a margin of at least 3 mm [3,7], the management of lymph node areas must be systematic [5]. The main prognostic factors are : lymph node status, degree of extension of the primary tumor, and tumor cell differentiation [9]. The rate of local recurrence after partial surgery is 8% [10] implying a close, medium and long term surveillance.

**Figure 1: tumeur localisée au niveau du sillon ballano- preputial**

**Figure 2: Infiltrating tumors of the urethra.**

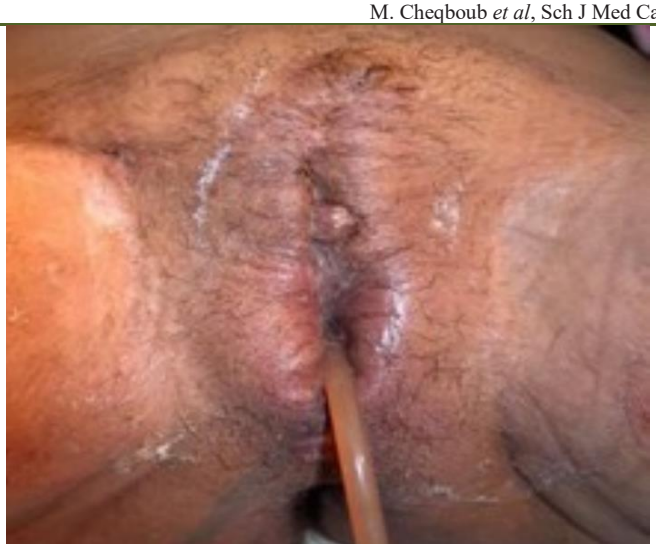

**Figure 3: Emasculation with superficial bilateral inguinal lymphadenectomy associated with perineal urethrostomy**

## CONCLUSION

Primary cancer of the penis is a rare entity and its carcinological and functional (sexual and urinary) prognosis depends on the precocity of the management. Surgery associated with lymph node dissection remains the reference treatment. The main prognostic factor is the lymph node extension which justifies a diagnostic and therapeutic management of the lymph node areas.

**Conflicts of interest:** The authors declare no conflict of interest

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