SUNTEXT REVIEWS

SunText Review of Renal Sciences

Open Access
Research Article
Volume 3:1

Management of Penile Cancer: Emphasizing Prevention and Early Diagnosis - A Case Report

Lakssir J[1], Elaboudi A[1], Kadouri Y[2,*], Ibrahimi A[1], El-Sayegh H[1] and Nouini Y[1]

[1]*Department of Urology A, Ibn Sina University Hospital Center, Rabat, Morocco*
[2]*Guelmim Regional Hospital Center, Guelmin, Morocco*

[*]**Corresponding author:** Kadouri Y, Guelmim Regional Hospital Center, Guelmin, Morocco; E-mail: youcef.kadouri@gmail.com

Received date: 20 December 2023; **Accepted date:** 02 January 2024; **Published date:** 08 January 2024

Citation: Lakssir J, Elaboudi A, Kadouri Y, Ibrahimi A, El-Sayegh H, Nouini Y (2024). Management of Penile Cancer: Emphasizing Prevention and Early Diagnosis - A Case Report. SunText Rev Renal Sci 3(1): 114.

Abstract

Penile cancer is an aggressive rare disease in Europe, occurring in 0.1 to 0.9% per 100,000 men, dominated by squamous cell carcinoma. On average, each urologist in France faces one case per year. This limited experience contributes to diagnostic delays and variable therapeutic management [1]. Risk factors include phimosis with poor hygiene, infections by the human papillomavirus, chronic inflammation, and multiple sexual partners and among other factors. Surgical intervention remains the optimal choice for treating local disease, although organ-preserving procedures offer favorable aesthetic and functional outcomes with acceptable oncologic control [2]. We report a case of a penile lesion revealing a squamous cell carcinoma in a 55-year-old patient.

Keywords: Penile cancer; Piercing; Carcinoma

Introduction

Primary penile cancer is a rare tumor, with an annual incidence of approximately 1 in 100,000 to 1,000,000 men [3]. The incidence varies significantly among different geographic areas, with rates reaching up to 6% of malignancies in developing countries [4]. Over 95% of penile cancer tumors are squamous cell carcinoma (SCC), leading to significant morbidity and mortality. Risk factors include HPV infection, lack of circumcision, phimosis, lichen sclerosus, inflammation, smoking, previous UVA phototherapy, and socioeconomic status [5]. Penile cancer mostly affects older men although it occasionally also may present in younger men [6]. The rarity of this disease creates a challenge for offering the optimal treatment. The surgical approach, in advanced cases, is frequently mutilating, which can have negative impacts on the quality of life and sexual functioning of patients.
We report a case of a penile lesion revealing a squamous cell carcinoma in a 55-year-old patient.

Observation

A 55-year-old patient with a history of smoking weaned 5 years ago, his medical history found a stenosis of the urethra managed surgically 1 year ago. The patient consulted for the appearance of a non-painful, proliferative lesion on the penis, affecting the glans and the prepuce.
On clinical examination, the lesion was solid, reaching the body of the penis. There was an involvement of the urethra without perineal involvement (Figure 1).

Figure 1: *Image showing the clinical examination of the patient.*

The inguinal lymph nodes were free. A squamous cell carcinoma was confirmed by the biopsy (Figure 2).
We completed with a penile ultrasound and a MRI imaging that did reveal a corpus cavernosa and urethral involvement. There was no lymph nodes involvement on imaging. A thoraco-

abdomino-pelvic CT scan showed no long-distance metastases staging the tumor as T3N0M0. The patient underwent a total amputation with perineal urethrostomy (Figure 3). Sentinel lymph node biopsy was negative.

The follow-up was based on surveillance, and it was marked by no recurrence till 1 years and he's still under surveillance.

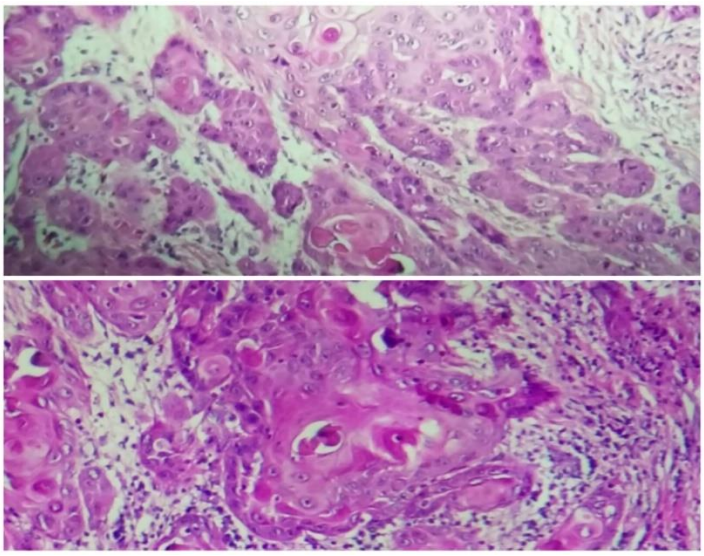

Figure 2: *Image showing the histological aspect of the squamous cell carcinoma of the penis.*

Figure 3: *Image showing the radical amputation with perineal urethrostomy.*

Discussion

Penile squamous cell carcinoma (PSCC) is a rare malignancy, representing about 0.4 to 0.6% of all cancer cases and 2 to 4% of genitourinary neoplasms diagnosed among males in the USA and Europe [7]. The incidence rises with age, reaching its peak during the sixth decade of life [8].

Main risk factors are Phimosis and poor hygiene, chronic inflammation (like the licen sclerosus), PUVA therapy for psoriasis, multiple sexual partners, and Human Papilloma Virus (HPV) infection [9].

Penile cancer typically manifests with a skin abnormality or a painless palpable lesion on the penis. Inguinal adenopathy is observed in approximately 50% of cases at the time of diagnosis, while distant metastases are uncommon during the initial diagnosis, with only 1% to 10% of cases presenting with distant metastases.

The initial diagnosis requires a biopsy for tissue confirmation and risk stratification. Squamous cell carcinoma (SCC) accounts for >95% of cases of primary penile cancer [8]. Penile squamous cell carcinoma follows a predictable pattern of local and regional metastasis, and lymph node metastasis being the most significant predictor of survival [10]. The disease-specific survival rates for patients with stage pN0, pN1, pN2, and pN3 disease are 96%, 80%, 66%, and 37%, respectively [11].

Therefore, following the confirmatory biopsy for primary tumor assessment, the next step involves staging the disease through clinical examination, imaging, pathologic assessment of the primary tumor, and, if necessary, a diagnostic surgical lymph node assessment. The TNM Staging System is employed for staging PSCC and to establish prognostic staging for guiding therapy. The preferred tests for tumor staging are ultrasound and gadolinium-enhanced magnetic resonance imaging (MRI) [12]. Nodal status can be assessed using ultrasound, computed tomography, MRI, and lymph node biopsy [13].

Therapy is determined based on the tumor's location, size, depth, and nodal status of the patient. Premalignant lesions, including carcinoma in situ, may be managed by laser therapy, cytotoxic creams, biopsy-excision or resurfacing. Tumors ≤ T2 can be treated by brachytherapy, resurfacing, biopsy-excision. Partial amputation can be discussed for tumors with proximal gland involvement. Stage T3 tumors may requires an amputation, partial for distal forms if the remaining penis length is adequate (3 cm). Total penectomy with perineal urethrostomy is recommended for proximal penile lesions in cases where a 2-cm tumor-free proximal margin cannot be achieved [14].

Therapeutic lymph nodes management is a major factor of survival. Approximately 20% of patients have palpable inguinal lymph nodes at the time of diagnosis [15]. Managing patients with unremarkable inguinal lymph nodes on physical examination is particularly challenging because, depending on the local stage and degree of tumor differentiation, inguinal lymphatic micrometastases are present in up to 20 to 25% of cases.

In patients with clinically unremarkable inguinal lymph node status, diagnostic imaging does not enhance the detection of

lymph node metastases measuring less than 1 cm in diameter. Consequently, for patients with clinically unremarkable inguinal lymph nodes, invasive diagnostic investigations are initiated starting from stage pT1 and grade G2–3 patients. The two methods used for this are the bilateral sentinel node technique and bilateral modified lymphadenectomy. Which is the case in our patient, in whom the sentinel lymph node was negative, requiring only surveillance.

For patients with inguinal lymph nodes that are suspicious on palpation, surgical removal and in case of positive findings, radical inguinal lymphadenectomy are recommended. Inguinal lymph node dissection is associated with considerable morbidity in the form of lymphedema, lymphoceles and complications of wound healing.

Following radical lymphadenectomy, adjuvant chemotherapy enhances tumor-specific survival. Depending on the extent of lymph node metastasis and the patient's comorbidities, 4 to 6 cycles of adjuvant chemotherapy are necessary to achieve this survival benefit [16].

Conclusion

Penile cancer remains a clinically challenging disease, and its low frequency makes it difficult to conduct clinical trials. The treatment is disfiguring and has a profound and lasting impact on male quality of life and sexual function. Therefore, prevention and early diagnosis play a major role, and dermatologists are crucial figures for the recognition and management of early disease.

Declarations

Our institution does not require ethical approval for reporting individual cases or case series. Written informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

Availability of data and material: Not applicable

Interests

The authors do not indicate any competing personal or financial interest.

Funding

This study received no funding from any resource. All the authors have contributed to the production of this book by studying the medical records, and ensuring the interventions, the care discussions as well as the reading of the book after its writing.

References

1. Bouchot O, Rigaud J. Diagnostic et traitement du cancer du pénis. La Presse Médicale. 2010; 39: 871-877.
2. Letendre J, Saad F, Lattouf JB. Penile cancer: what's new? Current opinion in supportive and palliative care. 2011; 5: 185-191.
3. Hakenberg OW, Compérat EM, Minhas S, Necchi A, Protzel C, Watkin N. EAU guidelines on penile cancer: 2014 update. Euro Urol. 2015; 67: 142-50.
4. Misra S, Chaturvedi A, Misra NC. Penile carcinoma: a challenge for the developing world. The lancet Oncology. 2004; 5: 240-247.
5. Thomas A, Vanthoor J, Vos G, Tsaur I, Albersen M. Risk factors and molecular characterization of penile cancer: impact on prognosis and potential targets for systemic therapy. Cur Opin Urol. 2020; 30: 202-207.
6. Hansen BT, Orumaa M, Lie AK, Brennhovd B, Nygård M. Trends in incidence, mortality and survival of penile squamous cell carcinoma in Norway 1956–2015. Int J Cancer. 2018; 142: 1586-1593.
7. Bleeker MC, Heideman DA, Snijders PJ, Horenblas S, Dillner J, Meijer CJ. Penile cancer: epidemiology, pathogenesis and prevention. World J Urol. 2009; 27: 141-150.
8. Anderson S, Breen KJ, Davis NF, Deady S, Sweeney P. Penile cancer in Ireland-A national review. The surgeon. 2022; 20: 187-93.
9. Savoie PH, Murez T, Neuville P, Ferretti L, Rocher L, Van Hove A, et al. French AFU Cancer Committee Guidelines-Update 2022-2024: penile cancer. Progrès en Urologie. 2022; 32: 1010-1039.
10. Chahoud J, Kohli M, Spiess PE. Management of advanced penile cancer. Mayo Clin Proc. 2021; 96: 720-732.
11. Djajadiningrat RS, Graafland NM, Van Werkhoven E. Contemporary management of regional nodes in penile cancer-improvement of survival? J Urol. 2014; 191: 68-73.
12. Held-Warmkessel J. Penile cancer. InSeminars in oncology nursing 2012; 28: 190-201.
13. Lawindy SM, Rodriguez AR, Horenblas S, Spiess PE. Current and future strategies in the diagnosis and management of penile cancer. Adv Urol. 2011.
14. Misra S, Chaturvedi A, Misra NC. Penile carcinoma: a challenge for the developing world. The lancet Oncology. 2004; 5: 240-247.
15. Persson B, Sjödin JG, Holmberg L. The national penile cancer register in Sweden 2000–2003. Scand J Urol Nephrol. 2007; 41: 278-282
16. Hakenberg OW, Dräger DL, Erbersdobler A, Naumann CM, Jünemann KP, Protzel C. The diagnosis and treatment of penile cancer. Deutsches Ärzteblatt International. Dtsch Arztebl Int. 2018; 115: 646-652.