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Case Report

Penile cancer, a pathology postponed by men

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Abstract:

Objective: To describe eight cases of penile cancer, its presentation and management in

a reference center in Montevideo, Uruguay.

Methods: Retrospective and descriptive study of penile cancer cases from January 2022 to January 2023 presented at Hospital de Clinicals, Dr Manuel Quintela, Montevideo, Uruguay. All cases presented in that period of time were taken regardless of whether their management was surgical, in order to also reflect the increase in the incidence of this pathology.

Results: Eight patients with penile cancer with a confirmed anatomopathological diagnosis are described, 100% of whom have a delay of more than one year to access the health system, consultation when it is complicated, pathological anatomy mostly above T2, conservative treatment mostly with poor oncological and functional results.

Conclusions: Despite the infrequency of this pathology, an increase in the incidence linked to risk factors has been noted in recent years, it is important to raise awareness among the population in identifying and preventing risk factors, early consultation in the face of clinical findings in order to prevent lesion progression with mutilating surgical results and ominous specific cancer survival.

Keywords: squamous cell carcinoma of the penis; penile cancer; penectomy; lymphadenectomy; carcinoma in situ

Introduction

Squamous cell carcinoma of the penis is a rare disease, accounting for 0.4 to 0.6% of all malignancies among American and European men. The incidence is higher in developing countries in South America, Asia and Africa.

The most frequent age of presentation is between 50 and 70 years old.

Early diagnosis is of utmost importance, since it is a disease that can result in devastating mutilation and has a 5-year survival rate of approximately 50%, distinguishing between greater than 85% for those with negative lymph nodes and 29-40% for patients with positive lymph nodes, these being the determinants of cancer-specific survival. [1-2]

The last Uruguayan survey published was in the period of 2014-2018, presenting in those four years a total of 72 patients with penile cancer, predominating in the departments of the interior of the country. [3,4,5]

Risk factors for this pathology are phimosis, balanitis, chronic inflammation, penile trauma, smoking, lichen sclerosus, poor hygiene, HPV (human papillomavirus) infection, especially 6, 16, 18, zoophilia, among other widely known factors.

Most of the time it presents as a palpable or visible lesion on the penis, associated or not with pain, discharge, bleeding, stench. The lesion may be nodular, ulcerative, or fungal and may overlap in phimotic patients. In addition, it may present signs of more advanced disease such as palpable lymphadenopathy or constitutional symptoms as a general repercussion.

Treatment, in addition to having a role in sexual and voiding functioning, the fully functional penis is fundamental to the patient's sense of integrity and masculinity. Therefore, the therapeutic objectives are the complete removal of the primary tumor with the greatest possible organ preservation, without compromising oncological control. (1) (2)

Case presentation:

Methodology:

A one-year retrospective descriptive study was carried out in which a search was carried out for patients with an anatomopathological diagnosis of penile cancer at the Hospital de Clínicas Dr Manuel Quintela, Montevideo, Uruguay in the period from January 2022 to January 2023.

All the cases presented had a complete medical history, a confirmatory pathological diagnosis and data regarding the evolution. (Table 1).

EDAD	ANTECEDENTES PERSONALES	TIEMPO HASTA LA CONSULTA	PRESENTACION	cTNM	pTNM	ANATOMIA PATOLOGICA	TRATAMIENTO	EVOLUCION
71	Tabaquista, enolista	2 años	Úlcera ventral de 2.5cm sobreinfectada	T2N0 M0	T3NxM 0	CE bien a moderadamente diferenciado. No invasión perineural. Embolias vasculares, márgen menor a 1mm.	Penectomía parcial, sin LND.	Recidiva locorregional
65	Tabaquista	1 año	En contexto de gangrena de Fournier.	T2N0 M0	T2N0M 0	CE bien diferenciado, no invasión perineural ni embolias vasculares. Margen < 10mm.	Penectomía parcial, con LND superficial.	Buena evolución
78	Tabaquista, obeso, HTA	1 año	Tumor en glande y cuerpo abscedado	T2N3 M0	T3NxM 0	CE bien diferenciado, invasión perineural, embolias vasculares.	Penectomía radical, meato perineal, sin LND.	Buena evolución, bajo QT
67	Tabaquista, CBP.	2 años	Amputación distal del pene, miasis de base peneana	T3N3 M0	T3NxM 0	CE moderadamente diferenciado, embolias vasculares, invasión perineural.	Penectomía radical, meato perineal, sin LND.	Buena evolución, bajo QT
58	Tabaquista, oligofrénico.	6 meses	Placa necrótica ventral al glande	T1N0 M0	T1bN2 M0	CE bien diferenciado, grado I, bordes +, no asociado a HPV. N+ 2/26	Penectomía parcial +LND inguinopélvica	Buena evolución, bajo QT
64	Tabaquista, higiene deficitaria	2 años	Amputación total del pene	T4N3 M0		Biopsica. CE muy bien diferenciado tipo papilar	Cistostomía suprapúbica, RT, QT	Mala evolución, en UCP

68	Tabaquista	2 años	Úlcera en glande	T2N0 M0	T3N2M 0	CE bien diferenciado, invasor. Embolias linfaticas, borde libre de tumor. AP Extemporanea negaitva para ganglio centinela, AP definitiva positiva.	Penectomía parcial + ganglio centinela	Mala evolución, bajo QT y RT en UCP.
45	HIV+, tabaquista, cancer de ano	1 año	Amputación total del pene	T3N3 M0		Biopsia, CE bien diferenciado	Cistostomía suprapubica, RT, QT	Mala evolución, en UCP

TABLA 1

T=TUMOR PRIMARIO	**cN=GANGLIOS LINFATICOS REGIONALES CLINICOS**	**pN=GANGLIOS LINFATICOS REGIONALES PATOLOGICOS**	**M=METASTASIS A DISTANCIA**
Tx= El tumor primario no puede ser evaluado	Nx= no pueden evaluarse los ganglios regionales	Nx= no pueden evaluarse ganglios metastásicos	
T0= No hay evidencia de tumor primario Tis= Carcinoma in situ o PeIN	N0= no hay ganglios palpables ni visibles	N0= no hay ganglios metastásicos	M0= no hay metástasis a distancia
T1= Tumor invade lamina propia (glande). Tumor invade dermis, lamina propia o dartos (prepucio). Tumor invade tejido conectivo mas allá de su localización, con o sin invasión linfovascular y perineural, con o sin alto riesgo (eje)	N1= ganglio inguinal	N1= dos o menos ganglios inguinales unilaterales metastásicos	M1= hay metátasis a distancia.
T1a= Tumor sin invasion linfovascular ni perineural, no alto grado		N2=metástasis en mas de dos ganglios inguinales uni o bilaterales	
T1b= Tumor con invasión linfovascular o perineural o es sarcomatoide		N3= metástasis en ganglios pelvicos uni o bilaterales, o extraganglionar	
T2= Tumor invade cuerpo esponjoso con o sin invasión uretral			
T3= tumor invade cuerpo cavernoso con o sin invasión uretral			
T4= Tumor invade estructuras adyacentes			

Tabla 2: se adjunta la clasificación TNM de la American Joint Committee on Cancer (AJCC) TNM Staging System for Penile Cancer (8th ed, 2017)

Results:

The average age at diagnosis of the patients analyzed was 64 years, with a range from approximately 45-70 years.

In relation to personal history, we highlight that 100% of the patients were active smokers, mostly since adolescence. Regarding the pathological diagnosis, 100% of the patients presented a positive anatomy for squamous cell carcinoma, only one of the anatomies differentiated the status with

respect to HPV regardless of whether it had been requested from the pathologist. In reference to the time from symptomatic onset to urology consultation, the average was one year, with 80% being superinfected. According to the TNM clinical classification, 100% were invasive tumors at preoperative diagnosis, except for one that was in the T1b anatomy piece.

It is noted that 4 patients (50%) presented as cT2, 4 patients (50%) had negative lymph nodes on physical and imaging examination, and only 2 patients (25%) presented with gland lesion, the rest had involvement of the penile body.

The treatment of choice in those who were eligible was always conservative treatment with partial penectomy and inguinal lymphadenectomy when appropriate. One patient underwent the sentinel node technique with adverse results since the contemporary anatomy showed a negative result for malignancy and later the definitive anatomy was positive for tumor lymph node involvement. [7] Regarding their evolution, 50% had a good evolution, defined as stability of the disease in the stage from diagnosis to one year of treatment under adjuvant treatments, while the remaining 50% are currently on palliative adjuvant treatments, prioritizing symptomatic treatment and comfort.

Figura 1: se evidencia cáncer de pene post denudamiento peneano en contexto de gangrena de Fournier.

Figura 2: se evidencia cáncer de pene a modo de presentación con amputación total de pene.

Figura 3: se evidencia cáncer de pene con presentación de ulcera en glande.

Figura 4: se evidencia cáncer de pene post denudamiento peneano en contexto de infeccion de piel y partes blandas no Fournier.

Figura 5: se evidencia conglomerado ganglionar inguinal de rápida evolución post penectomia parcial + ganglio centinela que en la evolución determino una anatomía patología positiva para células epidermoides.

Discussion:

According to the results of the present research, the average age of onset of penile cancer in our patients was between 50-70 years; This is consistent with the most current evidence reporting an average age of between 50-70 years, however, some patients are outside this limit established in our series. As for the incidence in our country, the last record reported by the cancer commission was in 2018, so it was interesting to publish the current incidence evaluated in one year in a urological reference center such as the Hospital de Clínicas Dr Manuel Quintela.

Uruguay is one of the developing countries in Latin America that is among the subgroups most affected by this pathology. (10)

When talking about risk factors for this disease, the literature agrees on the absence of circumcision in childhood, phimosis, personal hygiene deficit, smoking, zoophilia, HPV infection, among others.

In this descriptive study we were able to report that 100% of the patients had a history of smoking, and a percentage of more than 80% had deficient personal hygiene, the latter linked to the vulnerability of the patients who use this center.

We did not know in most of them their status with respect to HPV, only in one piece of anatomy pathology was it reported.

In reference to the clinical presentation, we highlight the presence of superinfected tumors or amputation of the organ as the most frequent evaluated. 50% of the patients in this series presented with palpable lymphadenopathy at diagnosis, and latency in the clinic was highlighted as the main factor to be modified in these patients. 100% of them had a latency of more than one year from symptomatic onset to urological control.

Regarding therapeutics, the greatest preservation of the organ was tried whenever possible, maintaining the therapeutic pillars previously described. In most of this series, if surgical treatment was indicated, partial penectomy was performed whenever possible. Lymphadenectomy was not performed in all patients due to advanced presentations of the disease, with no benefit in surgical approach, and in one patient the sentinel lymph node technique was performed, presenting unfavorable results due to a confirmatory pathological diagnosis for malignancy not consistent with the contemporary diagnosis. This patient, from initial surgery to definitive pathological diagnosis, presented a rapid lesion progression, which was not indicated for surgery. [8-9]

Advanced-stage systemic treatments, as seen in this series, were based on current cisplatin-based chemotherapy regimens by oncology colleagues. Radiotherapeutic symptomatic treatment was also carried out by colleagues in this specialty.

Our pathological results showed that 100% of the series corresponded to squamous cell carcinomas of the penis, which confirms that it is the most common lineage in this pathology.

Regarding the survival of these patients, assessing their evolution, we confirm again that their survival is determined by their lymph node stage, although at the end of the study 100% of them were alive.

Conclusion:

Despite penile cancer being an infrequent pathology, we can denote that in recent years there has been an increase in the cases that have been consulted in this academic center.

The analysis of this series demonstrates the importance of knowing the risk factors and presenting optimal adherence to health controls.

The stigma associated with this disease leads to the postponement of these patients in consultation, presenting in the evolution with more advanced stages of the disease, with indications for mutilating treatments and with gloomy prognoses for survival.

This pathology, its stigma and the consequent therapeutic mutilation make it necessary to jointly participate a psychological and social team for the follow-up of these patients.

Conflict of interest:

The authors declare that they have no conflict of interest.

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