

Original Research Article

Penile Cancer at the Urology Department of Koutiala Reference Health Center. About Three Cases and Literature Review

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Abstract: Goal: Raise awareness among the population to be consulted early in the event of penile cancer and to accept the treatment proposed by the clinician, based on three observations of penile cancer treated in the urology department of the center of reference health Koutiala. **Material and methods:** This was a prospective review of three cases of penile cancer diagnosed and treated in the urology department of the Koutiala reference health center over a period of two years from January 1, 2021. As of December 31, 2022. The first case was a squamous cell carcinoma of the penile in a 67-year-old patient who suffered amputation of the glans during circumcision, having undergone an adenectomy in December 2020. The second patient was 63 years old and circumcised; having had urinary bilharzia in childhood and also presenting squamous cell carcinoma. The third case was a 74-year-old circumcised patient with ulcerated swelling of the glans. A review of the literature made it possible to identify the frequency and risk factors and/or precancerous lesions of this cancer on both sides in the world in general and more particularly in Africa. **Results:** Over a period of two years, three cases of penile cancer were recorded and treated in the urology department of the Koutiala reference health center. The three patients were aged 67, 63 and 74 years respectively. They were all farmers, circumcised and one had his glans amputated during the circumcision. A cystotomy was performed in one patient but all refused amputation of the penis. No patient received radiotherapy or chemotherapy because they were all lost to follow-up. The histological type encountered in our patients was squamous cell carcinoma. **Conclusion:** Penile cancer remains the least common urological cancer in our practice, behind testicular cancer. Patients are seen late, at stages requiring penile amputation, which few patients accept.

Keywords: Cancer, Penis, Penectomy, squamous cell carcinoma.

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INTRODUCTION

Penile cancer is a rare tumor that most often occurs in people aged over 60. Due to its rarity, it is sometimes neglected or poorly managed, yet national or international recommendations exist and make it possible to obtain a good long-term oncological result when it is managed early [111].

In our context, sex being a taboo subject, which means that people with penile tumors consult late and makes treatment difficult. Penile cancer is a rare malignancy with an incidence of less than one case per 100,000 men. In the United States, it represents

approximately 2,200 new cases and 440 deaths per year. There is, however, significant geographic variation in incidence, likely due to differences in the prevalence of human papillomavirus (HPV) infection, smoking, circumcision, and social risk factors [19-111]. In China and South East Asia, penile tumors account for 20% of all cancers [1-111]. Its relatively stable frequency remains estimated at less than 1% of all cancers in humans [3-111]. The average age of onset is 60 to 70 years [4-14].

Penile tumors appear in patients who are uncircumcised, unhygienic and/or with pre-epitheliomatous lesions sometimes associated with

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Human Papilloma Virus (HPV serotypes 16 and 18). HIV infection, which particularly affects sub-Saharan Africa, could play a determining role in the epidemiology of this cancer [9-14].

Other risk factors include: smoking, chronic inflammatory conditions, obesity, multiple partners, Bowen's disease and previous ultraviolet photo chemotherapy. The diagnosis is primarily clinical, based on palpation of the penile, the tumor and the inguinal lymph node areas.

Penile MRI or penile ultrasound can confirm extension of the corpora cavernosa to the albuginea. Computed tomography can be useful for detecting inguinal metastases that have gone unnoticed on clinical examination, particularly in obese patients. The most frequently encountered histological type is squamous cell carcinoma which progresses slowly in the majority of cases.

The treatment is based on: In the presence of a penile tumor, the search for sentinel inguinal lymph node is necessary.

For the glans tumor, two types of treatment can be offered: partial or total amputation of the penis depending on the extent of the tumor at the glans level, or conservative treatment of the glans by brachytherapy (implantation of needles). Iridium) for limited lesions, less than 30 mm.

In the event of a tumor of the foreskin, circumcision may be sufficient provided that the lesion is far from the glans. In the event of a tumor infiltrating the corpora cavernosa, amputation of the penis is necessary, associated with surgery of the inguinal lymph node areas. In the absence of palpable lymph nodes, the search for sentinel inguinal lymph node ensures the absence of inguinal metastasis. If this sentinel lymph node is positive, extensive surgery removing all of the inguinal lymph nodes is necessary. In case of palpable lymph node, wide inguinal surgery should be performed. If urinary function is preserved, sexual function after treatment depends on the type of treatment proposed for the penile tumor [112].

The clinical stage of the tumor, the histological grade and lymph node invasion are the determining factors of the prognosis [13-100]. The prognosis is good

for a tumor limited to the glans, of small size without infiltration of the corpora cavernosa, for which conservative treatment must be offered. The prognosis is poor due to the presence of lymph node metastases and tumors showing invasion of the corpora cavernosa.

We report three observations, which allowed us to review the literature and highlight the difficulties in the diagnostic delay and the refusal of patients for partial or total amputation of the penis due to late discovery.

Observation 1

Mr. BB, 67 years old, married and father of 7 children, consulted on May 13, 2022 for an ulceronecrotic mass at the distal end of the corpora cavernosa of a totally amputated glans that had been present for 5 months.

In his history, he had suffered a total amputation of the glans during a traditional circumcision, which affected him enormously. He underwent an adenectomy on the ward in December 2020.

Physical examination found an ulcero-budding mass bleeding on contact measuring 4.5 cm in long axis without stenosis of the urethral orifice.

- The diagnosis of a penile tumor in the context of amputation of the glans was mentioned.
- The bursa, perineum and inguinal region were normal.
- HIV serology was negative.
- Testing for human papilloma virus (HPV) is not possible in our rural context. The ultrasound was normal, the CT scan is not possible in our context.
- A biopsy taken on May 14, 2022 concluded with moderately differentiated carcinoma.

In view of this pathologist's result, a partial amputation was proposed to the patient who refused given the social prejudices and the taboo linked to the male sex which constitutes man's virility.

- From then on, the patient was lost to follow-up.
- By telephone call, we learn that the patient died in March 2023.



Figure 1: Ulcerative budding tumor of the penis in a context of total amputation of the glans

Observation 2

- Mr. SS, aged 63, consulted on June 1, 2021 for acute retention of urine and an ulcero-necrotic wound of the glans stenosing the urethral meatus with a painful erection.
- The patient reported the appearance of small, painless sores that grew to the current size approximately 7 months ago.
- In his history, he is circumcised and urinary bilharziasis treated in childhood.
- Physical examination finds ulcero-necrotic wounds (three in number) of the glans stenosing the urethral meatus.
- The bursa, perineum and inguinal region were normal.
- The diagnosis of a penile tumor was made.
- HIV serology was negative.
- Prostate ultrasound was normal.
- Cystotomy and biopsy were performed on the patient.
- The biopsy result revealed poorly differentiated squamous cell carcinoma of the penis.
- A partial amputation was offered to the patient but he refused and the patient was lost to follow-up.



Figure 2: Ulceroinfiltrative tumor in a 63-year-old patient

Observation 3

Mr. YG, aged 74, consulted on March 17, 2021 for dysuria, burning when urinating and an ulcero-necrotic wound of the glans. In his history, he has been circumcised since childhood and notions of urethritis treated in childhood. Physical examination finds an ulcero-necrotic wound of the glans all around the urethral meatus bleeding on contact ravaging the frenulum of the penis with slight lymphedema of the penis.

- The bursa, perineum and inguinal region were normal.

- The diagnosis of a penile tumor was made.
- HIV serology was negative.
- The prostate and abdominal ultrasound were normal.
- A biopsy was performed on the patient.
- The biopsy result revealed moderately differentiated squamous cell carcinoma of the penis.
- A partial amputation was offered to the patient but he refused and the patient was lost to follow-up.



Figure 3: Ulcero-infiltrating tumor of the penis in a 74-year-old patient

DISCUSSION

These observations sparked comments. Penile cancer is a rare tumor [7-111]. It is a very rare cancer in Europe but is increasing sharply. In France, the incidence is estimated at 1 case per 100,000 men, or around 500 cases per year [113].

Several factors have been mentioned that seem to explain this rarity, such as cleanliness of the glans, circumcision, the fight against sexually transmitted infections and chronic inflammation. Our three patients were all circumcised with one patient suffering from total amputation of the glans during circumcision.

The notion of human papilloma virus (HPV) infection in the history or its serological research was not possible and we did not find the presence of other risk factors. In Africa, few cases have been published with a well-detailed algorithm.

In Kenya, 31 cases were reported in 20 years by Magoha and Kaale [6-14] for an incidence of 1.5 cases/year. In Senegal, it represents 0.97% of urological

cancers [1-14]. In an epidemiological study carried out in Benin on urological cancers, no case of penile cancer was found during the three and a half year period of the study [116].

T. Kambou *et al.*, in Burkina Fasso report three in five years [116]. In our study, we identified three (3) cases over a period of two (2) years which is different from that of Guirassy *et al.*, in Guinea reports four cases over a period of five years.

A. Nouri *et al.*, report six cases in twenty years. Diallo AB *et al.*, treated the anatomo-clinical particularities and therapeutic difficulties in Guinea [17-114]. J. Bellin *et al.*, reported ten cases of penile cancer ten years [115].

In our study the respective ages were 67, 63 and 74 years old, consistent with the literature but in contrast with two patients from Guirassy who found a much younger age of 32 and 46 years old due to the fact that these patients were suffering from HIV infection [14].

The penile cancer clinic is based on the clinical examination which makes the diagnosis and which is confirmed by the histological examination of the excision specimen. Of our three observations, two patients presented ulcero-necrotic wounds and one presented a bleeding ulcero-budding mass in a context of total amputation of the glans.

The diagnosis is often made at an advanced stage of the disease in our context (tumor classified T3). In Western series [111], most of the lesions are limited to the glans and the foreskin, making management easy.

Squamous cell carcinoma is the main histological type most often encountered [5-14], which is similar to our study. Locoregional extension occurs mainly by lymphatic route towards the inguinal lymph nodes.

During our study, no patient accepted partial or total amputation of the penis. The therapeutic attitude still remains controversial, there is no consensus yet. Some authors recommend brachytherapy, external radiotherapy or laser photocoagulation. Other authors, however, opt for partial or total amputation of the penis [115].

The prognosis of penile cancers depends mainly on lymph node invasion [115] which is formidable. Indeed, 5-year survival in the event of lymph node involvement is of the order of 30% to 50% [14-115]. The 5-year survival is only 50% in an overall stage-independent analysis, and only 27% in patients with lymph node metastases [111-115].

A multidisciplinary approach, preferably in specialized centers, is therefore imperative to develop an optimal treatment plan, helping to standardize care and facilitating recruitment for clinical trials [14-115]. Deaths are due to lymph node and pulmonary metastases but also to the deterioration of general condition associated with psychological shock

CONCLUSION

Penile cancer remains the least common urological cancer in our practice, behind testicular cancer. Patients are seen late, at stages requiring penile amputation, which few patients accept. Information, education for changing population behavior with respect for hygiene rules, early consultation in the event of genital factors and/or lesions will contribute to the fight against penile cancer.

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