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Infections and Inflammation
Case report

Penile gangrene in a HIV patient

L.E. Mubenga [a,*], **G. Maheshe** [b], **A. Murhula** [c], **D. Chimanuka** [a]

[a] *Department of Urology, Catholic University of Bukavu, Bukavu, Congo*
[b] *Department of Radiology, Catholic University of Bukavu, Bukavu, Congo*
[c] *Department of Internal Medicine, Catholic University of Bukavu, Bukavu, Congo*

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Abstract
Introduction: The good vascularization of penis protects this organ from necrosis. Critical reduction of blood supply and aggressive infection of the genitalia are some of the rare conditions which can lead to penile necrosis. HIV infection can provide the two conditions and lead to a rapidly extensive penile gangrene.
Observation: A 47-year-old man developed a rapidly extensive penile necrosis despite local and systemic care. He was HIV positive and was not adherent with medical follow-up. Classical risk factors of blood vessels damages such are diabetes, hepatitis or cigarette smoking were absent. Total penectomy was performed. We describe the possibilities of HIV infection-induced penile gangrene.
Conclusion: HIV infection should be taken in account among causes of penile necrosis.

Introduction

The gangrene of the penis is a rare situation because of the good vascularization of this organ. Conditions leading to penile necrosis are a significant reduction of blood supply and/or tissue necrosis due to non-vascular causes. HIV infection can provide the two conditions and lead to a rapidly extensive penile gangrene.

Case presentation

A 47-year-old man was admitted to the emergencies service of the Provincial Referral General Hospital of Bukavu/Democratic Republic of Congo for a penile necrosis evolving for a week despite local and systemic care received in his district hospital. No genital trauma was reported.

He was known HIV positive for five years but was not adherent to anti-retroviral therapy (ART).

* Corresponding author.
E-mail addresses: leonmubenga@yahoo.fr, emmanuelmubengalm@gmail.com (L.E. Mubenga).

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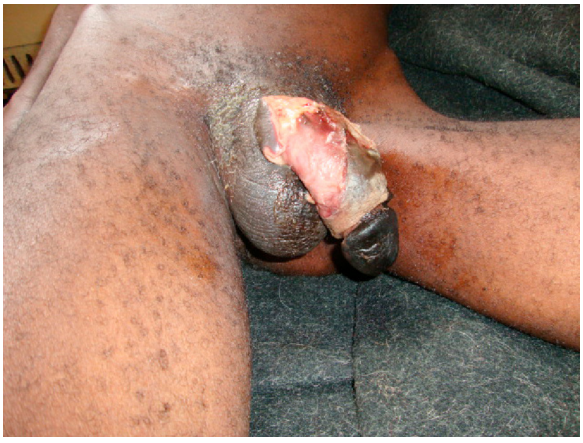

Figure 1 Penile gangrene.

He was neither a cigarette smoker nor a diabetic.

His physical examination revealed a penile necrosis oozing a purulent fluid. There were no inguinal or femoral adenopathy. The prostate gland was normal on digital rectal examination.

The lower limbs presented feet hyperpigmentation, weak pedal pulses and hypoesthesia (Fig. 1).

Nadir CD4 count was 118 cells/cm^3; Hepatitis B and C were negative; glycaemia: 76 mg/dl and normal electrocardiogram.

Arteriogram showed a critical stenosis of external iliac arteries and calcifications in the popliteal arteries. Internal iliac and penile arteries were not visualized (Figs. 2 and 3).

A total penectomy was performed with placement of a urinary catheter. Postoperative care was assured by a multidisciplinary team. The patient received a broad spectrum antibiotics (Cefotaxime and Metronidazole) administered parenterally, supportive measures, and had daily antiseptic dressings. But his general condition worsened despite these treatments and he died in a multiple organ failure state one week after admission.

Histopathological analyses of the specimen revealed an extensive necrosis of both superficial and deeper tissues.

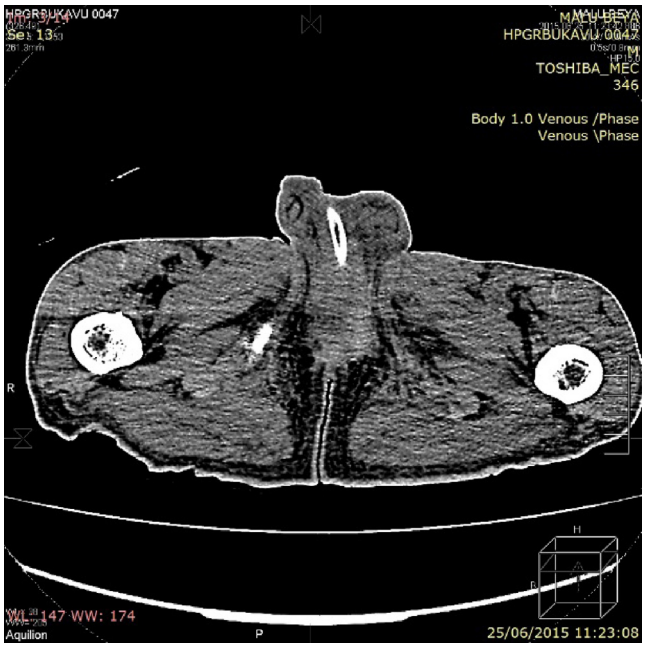

Figure 3 Internal iliac and penile arteries not visualized.

Discussion

There are various causes of penile gangrene; they are listed in Table 1 and can be grouped into vascular, non-vascular and mixed causes.

Some of them are obvious: vasculopathy induced by uncontrolled diabetes mellitus, trauma of the genitalia or priapism.

Iatrogenic causes constitute a large entity that should be avoid as much as possible. One experiences should serve others: penile compression due to tight stitches during circumcision and hypospadias repair, or by a flap during urethroplasty.

Concerning Al-Ghorab operation performed for the treatment of priapism, the main cause of penile gangrene is either priapism itself if the patient is received late or the surgical procedure; the limit of responsibilities between these two etiologies remains unclear.

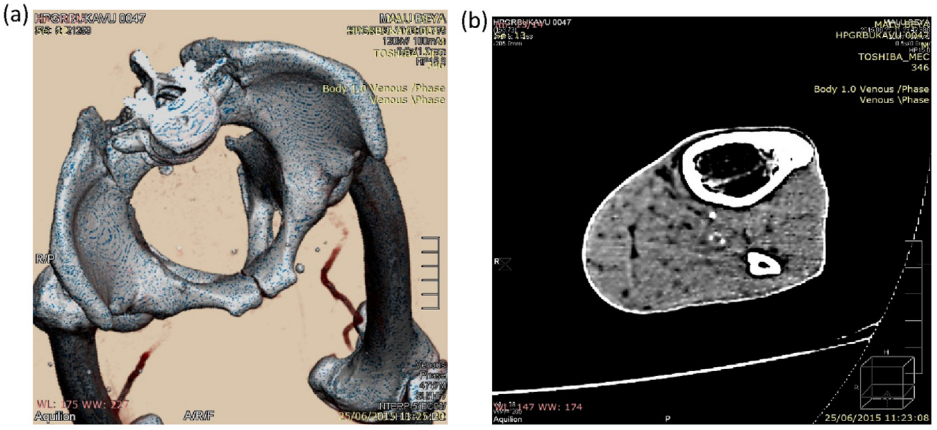

Figure 2 Arteriogram showing stenosis of external iliac arteries (a) and calcifications of popliteal arteries (b).