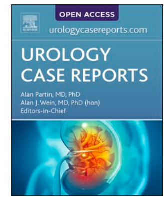
Urology Case Reports 43 (2022) 102118

Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: www.elsevier.com/locate/eucr



Corpus cavernosum abscess: A case report

Alexandre Kyoshi Hidaka [a,*], Renan Murata Hayashi [a], Gabriel Chahade Sibanto Simões [b], Alexandre Gomes Sibanto Simões [a], João Roberto Paladino Jr [a]

[a] Urology Department, Centro Universitário FMABC, Santo André, São Paulo, Brazil
[b] Surgery Department, Faculdade de Ciências Médicas UNICAMP, Campinas, São Paulo, Brazil

ARTICLE INFO

Keywords:
Corpus cavernosum abscess
Penile disease
Priapism
Urology

ABSTRACT

Corpus cavernosum abscess is a rare infection of the genitourinary tract. In this case report, we present a 42-year-old patient admitted with pain and edema in the penile shaft twenty-four days after drainage by puncture of the cavernous body due to ischemic priapism. Al-Ghorab procedure together snake-maneuver and broad-spectrum antibiotic therapy were performed. Despite manifesting erectile dysfunction, he evolved without penile deviations.

1. Introduction

Penile or corpus cavernosal abscesses are rare infections of the genitourinary system and are secondary to several conditions. Cases of corpus cavernosum abscess present a wide age range, sometimes affecting a young population, and may present limiting sequelae.

The present aims to report a case of corpus cavernosum abscess in a 42 year old male treated with Winter drainage and antibiotic therapy.

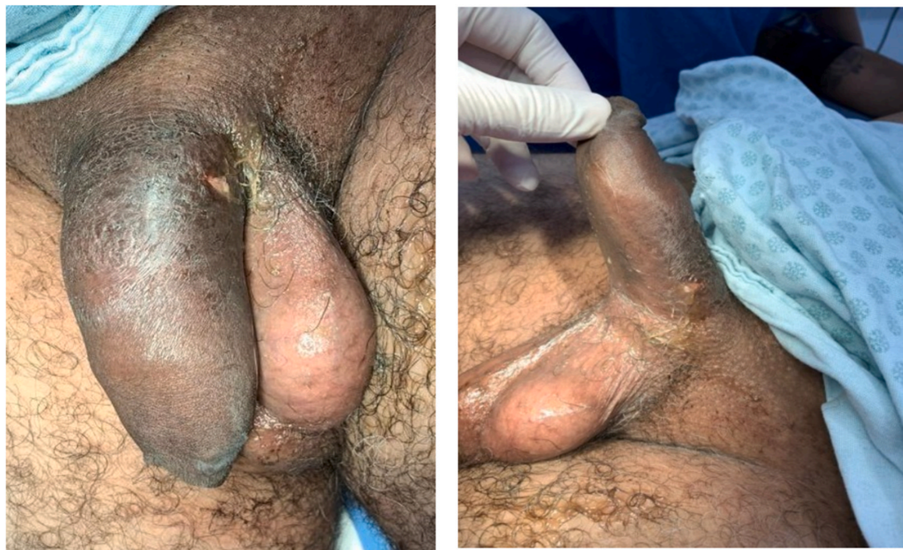


Fig. 1. Patient second presentation.

* Corresponding author. Av. Lauro Gomes Avenue 2000, Santo André, SP, Brazil.
E-mail addresses: alehidaka1@gmail.com (A. Kyoshi Hidaka), renanhayashi@gmail.com (R. Murata Hayashi), gabrielcsimoes@terra.com.br (G. Chahade Sibanto Simões), asibanto@terra.com.br (A.G.S. Simões), urologiapaladino@gmail.com (J.R. Paladino Jr).

https://doi.org/10.1016/j.eucr.2022.102118
Received 18 April 2022; Received in revised form 9 May 2022; Accepted 18 May 2022
Available online 20 May 2022
2214-4420/© 2022 Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Fig. 2. Surgical drainage
a. Abscess drainage
b. Snake-maneuver
c. Final aspect after procedure.

2. Case report

A 42-years-old male, with no comorbities, presented to the emergency room in April 1st with a 60 hours long ischemic priapism following use of cocaine associated with tadalafil, confirmed by cavernous blood gas test. Drainage and saline irrigation with epinephrine injection were carried out until complete resolution of the priapism. First generation cephalosporin for seven days was prescribed and routine follow up was scheduled five days after discharge. He did no presented to the medical appointment.

Twenty-four days after hospital discharge, he presented to the emergency room once again. Penile swelling, pain and bulging at the

base of the penis (Fig. 1). At physical exam, pus discharge was noticed from the previous drainage orifice. Leucocytes with 11300 and PCR 1,7. Penile ultrasonography (US) and magnetic resonance (MRI) was not available, due to indisponibility at night shift, they are available only day shift. Immediately sepsis protocol and surgical drainage was indicated. Intravenous vancomycin and carbapenem was administered at the admission. An incision through pus discharge point was made and penis continuously on hard erection state, so Al-Ghorab surgical drainage with 100 ml of purulent liquid (Fig. 2a), after this procedure penis continuously on hard erection. We decided by "snake-maneuver" through corpora cavernosa (Fig. 2b). The final aspect after all procedure on Fig. 2c. Intraoperative culture negative results for anaerobic and aerobics. Five days with cavernous drain. Seven days after intravenous antibiotic therapy patient was discharged. Oral second-generation cephalosporin was prescribed for 14 days. At 6 month follow up, penile deviation was not reported, however partial erectile disfunction was noticed with daily tadalafil. A penile prosthesis implant was offered to patient, but he declined after prostaglandin intracavernous therapy was successful sexual relationship.

3. Discussion

Penile abscess with corpus cavernosum involvement is a rare entity whose etiology is still uncertain. There are several causal factors, associating it with untreated penile fracture, the use of intracavernous therapy for erectile dysfunction, hematogenous spread after periodontal abscess, perianal or intracavitary abscess, or after drainage or surgical treatment of priapism.[1]

The most common initial clinical presentations are onset of penile swelling, pain, and redness. There have been reports of voiding symptoms, perhaps due to urethral deviation by the cavernous abscess. Other cases presented with priapism by mimetic effect to ischemic priapism.[1]

The analysis of intraoperative cultures showed that the most commonly found pathogens were those typically found on the skin.[1] In some reports, these pathogens were found in blood cultures, which may suggest septicemia with theory of agent inoculation from other infectious foci in the corpus cavernosum, which leads to infection and development of the abscess.[2] Poorly conducted penile fractures and procedures for the drainage or surgical treatment of priapism may favor this inoculation and, eventually, abscess formation.

Notoriously, the more aggressive initial treatment with surgical drainage seems to have been the most commonly used in these rare cases.[1] *Baksh* presented two cases in which the likely association of phosphodiesterase 5 inhibitor (sildenafil) may have increased blood flow to the corpus cavernosum and the efficacy of broad-spectrum antibiotics.[3]

The time between the onset of symptoms and the beginning of treatment may be determinant for a smaller area affected by the local inflammatory process, which may contribute to a smaller fibrotic corpus cavernosum scar. There is lack of evidence to conclude this intuitive conclusion.

References

1. Dugdale CM, Tompkins AJ, Reece RM, et al. Cavernosal abscess due to streptococcus anginosus: a case report and comprehensive review of the literature. *Curr Urol.* 2013; 7(1):51–56. https://doi.org/10.1159/000343555.
2. Capella S, Mahesan T, Taylor J, et al. Bilateral penile cavernosal abscess secondary to Escherichia coli: a case report of a rare diagnosis. *Ann R Coll Surg Engl.* 2019;101(5): E125–E127. https://doi.org/10.1308/rcsann.2019.0038.
3. Bakhsh A, Daqqaq T, Alhasan A, et al. The role of phosphodiesterase inhibitors in the management of cavernositis with multifocal abscesses: a report of case series. *Sex Med.* 2020;8(2):318–322. https://doi.org/10.1016/j.esxm.2020.02.010.