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Case Report

A rare case of penile epidermoid carcinoma^{☆,☆☆}

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ABSTRACT

Penile neoplasms are rare. The main goal of our case report is to demonstrate the important role of imaging in local and regional cancer extension assessment, to guide the treatment plan. We report a case of penile epidermoid carcinoma in a 54 year old uncircumcised man, with a history of chronic smoking, presenting with a mass in the base of the penis.

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Introduction

Penile neoplasms are the rarest tumors of the genito-urinary system, with a prevalence of only 0.5% of malignant tumors in men [1]. The main risk factor is phimosis or the absence of circumcision and lack of sufficient local hygiene, associated to sexually transmitted infections such as human papilloma virus [1]. Epidermoid carcinoma is the most frequent histological type. Imaging is not very useful in the diagnosis of penile tumors. However, magnetic resonance imaging (MRI) and ultrasound are useful for local and regional cancer extension assessment and computed tomography-scan is useful in metastasis evaluation. Surgery is the treatment of choice.

Patient observation

A 54-year-old uncircumcised patient, with a history of chronic smoking was admitted for intermittent episodes of hematuria. Clinical examination found a neurologically and hemodynamically stable patient. Perineal examination revealed a mass in the base of the penis evolving for 8 months, without a cutaneous outgrowth. No regional adenopathies were found on clinical examination and the biology report was unremarkable. While the patient was hospitalised he benefitted from a biopsy of the mass, as well as a computed tomography and a pelvic magnetic resonance imaging. The computed tomography scan of thorax, abdomen and pelvis, not including the penile region, showed no evidence of metastatic lesions. The MRI revealed a penile mass demonstrating hypoattenuation on T1-weighted sequences and intermediate hyperattenuation on T2-weighted sequences, with high signal of diffusion and a heterogeneous enhancement after injection of Gadolinium, with central necrosis (Fig. 1). This mass is centred on the initial part of the cavernous body. A biopsy was performed un-

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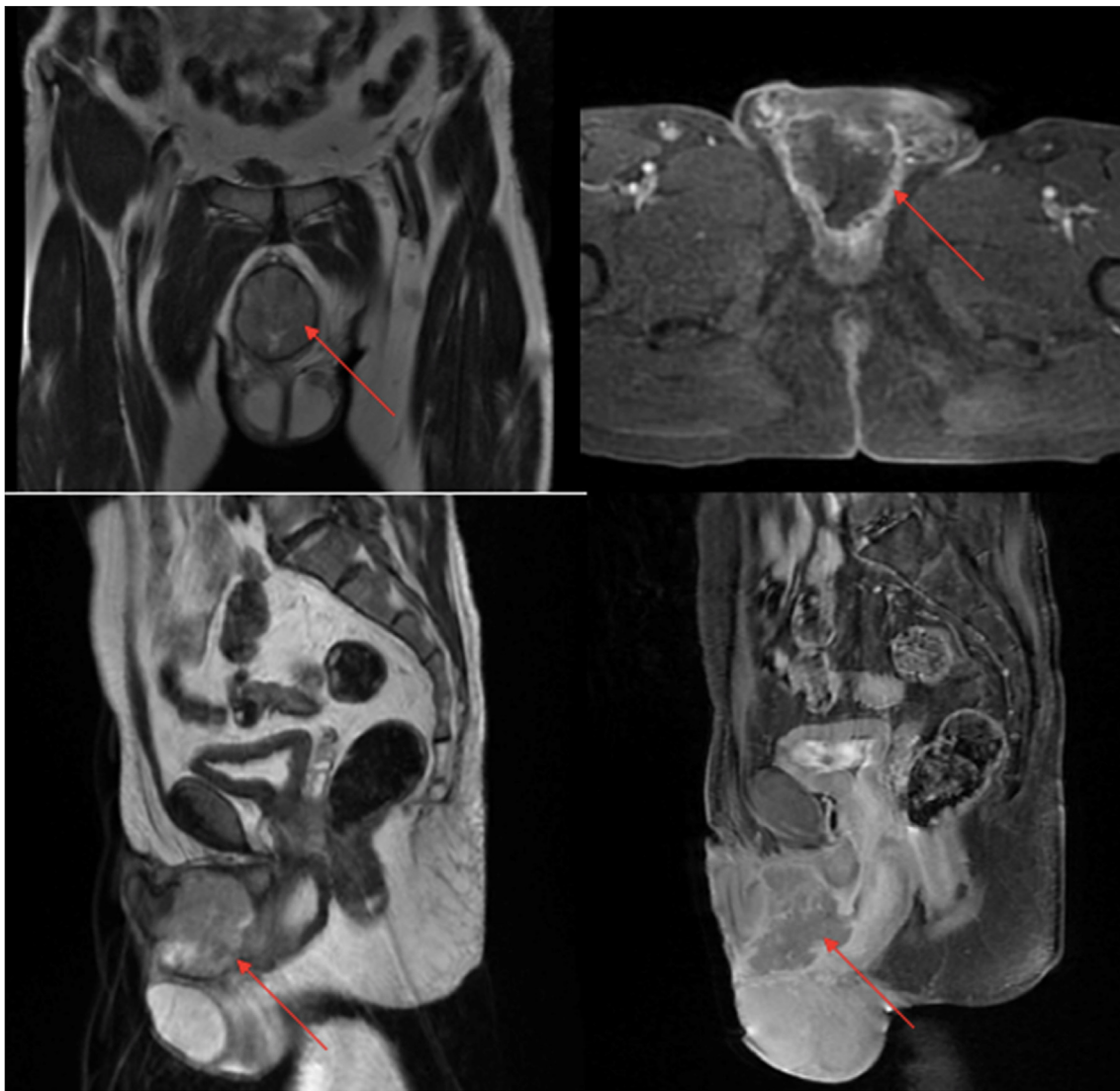


Fig. 1 – Sagittal MRI sequences demonstrating the penile neoplasm (Red arrows), with hyposignal on T1-weighted sequences and intermediate hypersignal on T2-weighted sequences and a heterogeneous enhancement after injection of Gadolinium, with central necrosis. confirmed histologically as an epidermoid carcinoma.

der regional anesthesia, the procedure consisted of an incision of the lateral base of the penis and dissection of the envelopes revealing the mass, where an excision was performed with minimal and controlled bleeding. Microscopically, of the lesion was represented by intraepithelial neoplasia of coalescing atypical blocks SCC, with cornea pearls and extensive areas of keratinization (Fig. 2). The disease was explained to the patient and surgical removal was recommended, but the patient refused.

Discussion

Penile tumors are rare and represent 1% of tumors of the masculine genito-urinary system, this rarity is related to the ritual circumcision widely practiced in Morocco [1]. Epidermoid carcinoma is the most frequent histological type representing

95% of all penile malignant neoplasms. Other penile cancers include melanoma and sarcoma that are extremely rare. The average age of diagnosis is 50 years old. Epidermoid carcinoma can present in different clinical forms: ulcerating or outgrowing and localised or invading all the penile structures [1,2,5]. The diagnosis is based on clinical findings and biopsy. Clinical examination is fundamental to evoke the diagnosis, however, the analysis of the cavernous body infiltration, which is a prognostic element, is difficult to appreciate clinically. Imaging is able to assess the cancer extension. Ultrasound is not imaging modality of choice for local extension assessment, however it can help recognize the cavernous corpus degree of infiltration [3]. The tumor lesions are hypoechoic in 40 to 100% of cases but could also be hyperechoic in 36% of cases, and of mixed echogenicity in 17% of cases. The tunica albuginea of the cavernous body appears as a hyperechoic structure.

Most authors agree that ultrasound is not a good imaging modality for assessing extension to Buck's fascia.

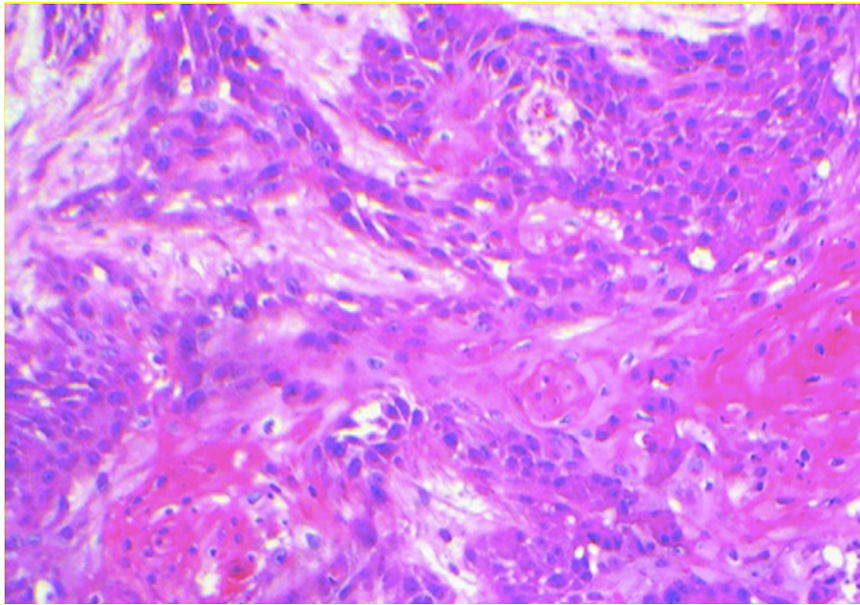


Fig. 2 – Penile epidermoid carcinoma. Well-differentiated and keratinized squamous component (Hematoxylin and eosin, original magnification 100 x).

The radiologist's role is to look for a loss of the hyposignal at the level of the tunica albuginea which indicates the tumor infiltration.

MRI allows simultaneous evaluation of the local and lymph node extension of the lesion, and is considered the gold standard examination to determine the infiltration of the corpora cavernosa.

MRI is mainly indicated in major lesions of the penis when the clinical examination becomes difficult and cannot accurately determine the infiltration of the cavernous body [4].

Cavernosography is an aggressive examination, used in old series for the proximal evaluation of tumor extension and currently has no place in the assessment of tumors of the penis [4].

Urethral fibroscopy is not performed systemically; however it can be indicated when the tumor invades the urethra [4].

Conclusion

Penile neoplasms are rare and epidermoid carcinoma is the most frequent histological type. Circumcision plays a protecting role. The diagnosis is mainly based on clinical examination and biopsy. Imaging is useful in the assessment of cancer extension.

Author Confirmation of Patient Consent to Publication I confirm that I have obtained written consent from the patient's guardian to publish.

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Research ethics

We further confirm that any aspect of the work covered in this manuscript that has involved human patients has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

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Patient consent

A rare case of penile epidermoid carcinoma I informed the patient of the following:

- Although the patient's name will not be published, details of her case may mean that complete anonymity cannot be guaranteed.
- This article will be published in a medical journal, which is distributed electronically and on paper to doctors, nurses, and other medical personnel.
- The article, in whole or in part, may be available on websites accessible to members of the public.
- Nothing contained in the article will be used for commercial purposes or used out of context.
- The signed consent form will be retained by the corresponding author of the paper; copies will not be sent to anyone else involved in the publication or distribution of the article.

I will retain a signed copy of the patient consent form. Date: 22/04/2022

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