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Lesion of the urethra and corpus spongiosum in the event of a misstep of the coitus without fracture of the corpus cavernosum: About one case

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ABSTRACT

INTRODUCTION: Traumatic lesions of the anterior urethra during coitus strikes are essentially described as lesions associated with 20 percent of corpus cavernosum fractures. However, no cases of isolated lesions of the urethra and corpus spongiosum in the context of sexual trauma seem to be reported in the literature.

Thus, we report the observation of a patient who was diagnosed with a corpus spongiosum fracture associated with a penile urethra injury during a coitus lapse.

PRESENTATION OF CASE: Patient aged 36 years with no particular pathological history, other than unprotected sexual intercourse, who has been admitted to the urology service for urethrorrhagia due to a sexual traumatism.

A forced angulation and then a cracking followed by an instantaneous detumescence was described by the patient. On examination we noted a normal-looking penis without angulation or eggplant haematoma, with the presence on palpation of a small infra-centimetric hematoma on the ventral surface of the middle part of the penis.

Surgical exploration was therefore indicated in front of the isolated urethrorrhagia, and which objectified a fracture of the corpus spongiosum measuring 1 cm at the level of the distal part of the penis. A linear lesion of the urethra was associated at the same level. The patient was therefore sutured with these two lesions.

The postoperative course was simple with removal of the bladder catheter three weeks later with satisfactory urination and urinary stream.

DISCUSSION: sexual trauma is described as a rupture of the corpora cavernosa, resulting from forced flexion or twisting of the erect penis that can be associated in about 20 % of cases with ruptures of the urethra. We described a trauma occurrence that is similar to the one in the definition responsible of a lesion of the anterior urethra but no lesions of the corpora cavernosa have been objectified.

CONCLUSION: the absence of similar cases reported in the literature leaves this type of lesion subject to ambiguous behaviour. Indeed, this brings us back to questions about the pathophysiological mechanisms of sexual lesions of the urethra in order to better codify the indication for surgical exploration, even in front of a normal looking penis.

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1. Introduction

Traumatic lesions of the anterior urethra are relatively rare lesions and can easily be mentioned in the presence of urethrorrhagia. More particularly in the context of sexual trauma of the penis, the lesion of the anterior urethra is an attack feared by the

urologist during a surgical exploration, and this is due to the great risk of an evolution towards stenosis of the urethra.

Indeed, this exploration is generally indicated in front of the trauma mechanism, often well described by the patient, with a notion of angulation of the penis associated to a cracking followed by immediate detumescence. Also, the presence of urethrorrhagia is an almost certain sign of a lesion of the urethra [1].

However, urethral involvement, without injury of the corpora cavernosa during sexual trauma does not seem to be described. Hence the interest of our work which describes, after a misstep of coitus, a fracture of the corpus spongiosum with solution of

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Fig. 1. Normal looking penis 4 h after the injury.

continuity of the penile urethra without any other lesion of the cavernous body. In fact, in this publication we want to describe this lesion of the urethra which can go undiscovered during a lapse in the coitus which does not result in a typical clinical picture, notably an eggplant aspect of the penis.

2. Observation

We report the observation of a 36-year-old Moroccan patient, with no particular pathological history other than repeated sexually transmitted infections, who has been admitted, three hours after the event, to the urology service for urethrorrhagia due to a sexual traumatism.

During questioning, the patient was able to describe, during anal intercourse, the notion of angulation of the penis associated with an audible cracking followed by immediate detumescence and accompanied by urethrorrhagia, which motivated the patient to consult in the urgency department of urology. Moreover, the patient reported the notion of repeated sexually transmitted infections (Figs. 1 and 2).

On clinical examination, we found a normal-looking penis as well as urethrorrhagia at the glans expression. We also noted, on palpation, an infra centimetric hematoma on the ventral surface of the middle part of the penis. There was no angulation of the penis or eggplant hematoma typically described during corpus cavernosum fractures.

Faced with this clinical picture, surgical exploration was indicated after informed consent of the patient. A balano-preputial incision followed by a degloving revealed a lesion of the corpus spongiosum measuring 1 cm next to a small hematoma. An incomplete rupture of the anterior urethra was also found. No lesions of the cavernous bodies have been objectified. It should be noted that the operation was performed by a urological surgeon with five years of experience.

We thus performed the suture of the corpus spongiosum and the penile urethra. Then the patient was put under anti-oedematous and antibiotic treatment (amoxicillin + clavulanic acid) for 10 days and was declared out at D2 post-operatively to be followed up in ambulatory. The post-operative consequences were simple. Ablation of the bladder catheter was scheduled for three weeks after surgery, and went without incident. We also performed a retrograde urethrocytography on D45 postoperative, revealing no anomalies of the anterior urethra (Fig. 3). Three months after hospitalization the patient has no lower urinary tract disorders, no pain or angulation of the penis during erection and has returned to normal sexual activity.

This case report has been reported in line with the SCARE Criteria [6].

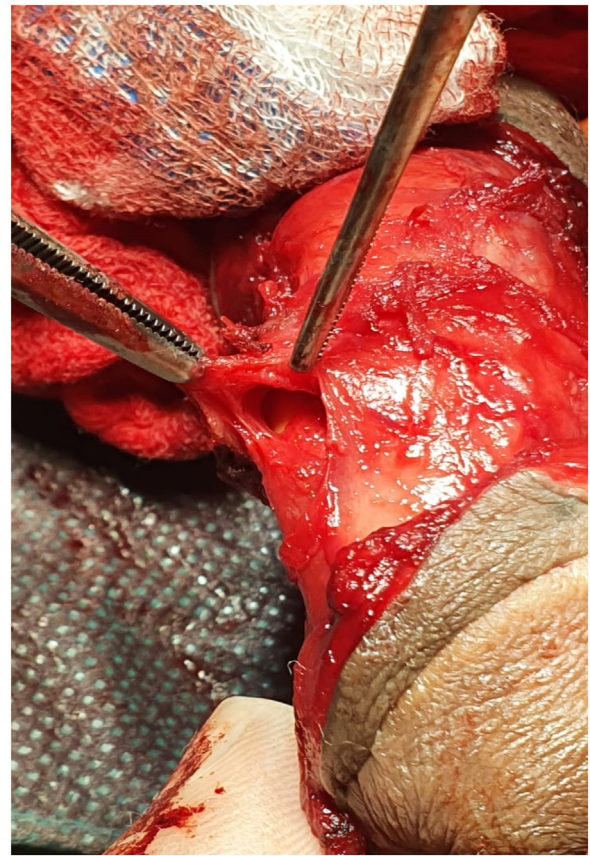


Fig. 2. Lesion of the urethra.

3. Discussion

The definition of sexual trauma, in almost all publications, is described as a rupture of the corpora cavernosa or coitus misstep, resulting from forced flexion or twisting of the erect penis [2]. It is also explained that these ruptures of the corpora cavernosa are associated in about 20 % of cases with ruptures of the urethra [3]. It should therefore be noted that we can think, according to this definition, that a lesion of the penile urethra cannot occur independently during a coitus misstep. In our observation we described a mechanism of trauma occurrence that is similar to the one in the definition, namely the forced angulation of the erect penis. However, no lesions of the corpora cavernosa have been objectified. Indeed only the penile urethra and the corpus spongiosum were injured, which seems very peculiar when referring to the literature where these lesions do not seem to be described without being accompanied by a fracture of the corpus cavernosum.

Mechanisms of isolated injuries to the urethra, like in our case, are somewhat more difficult to comprehend. The urethra and its ensheathing corpus spongiosum are relatively fixed between the glans penis and the urogenital diaphragm. During tumescence, the urethra becomes stretched, extended, and elongated like a bowstring, due to the expanding of the corpora cavernosa. Engorgement of the corpus spongiosum also adds turgidity to this bowstring effect. A dorsally bending force is more likely to overstretch and snap or tear the urethra. Associated factors such as periurethral fibrosis or urethral stricture disease may predispose to urethral tear by rendering the urethra less compliant to bending forces.

Immediate surgical management is now recommended for all penis fractures, especially those with an associated rupture of the

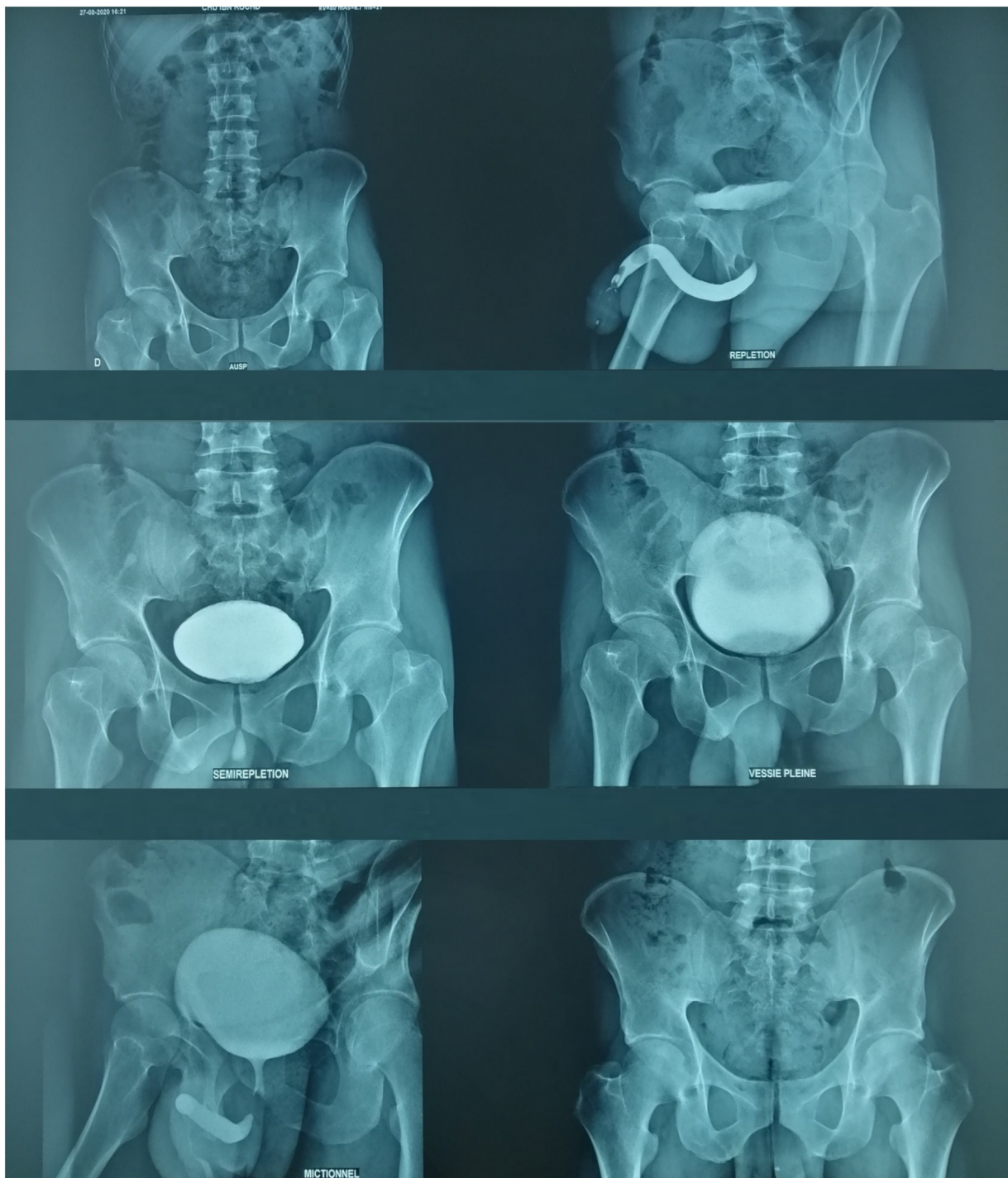


Fig. 3. Retrograde urethrocytography 45 days after the surgery.

urethra [4,5]. In our case, the circumstances of the trauma and the urethrorragia were the manifestations which required surgical exploration.

4. Conclusion

Because of the infrequency of this lesion, a case of traumatic rupture of the urethra and corpus spongiosum, the first seen in our hospital, is herein presented with a resume of the treatment and clinical course. Trauma of the penis is easy to diagnose despite the presence of atypical cases like ours. The precocity of the care

remains the guarantor of recovery of urinary and sexual functions.

Declaration of Competing Interest

The authors report no declarations of interest.

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Ethical approval

This case report is exempt from ethical approval at our institution.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

Dr. Ettanji Adnane, Dr. Hannaoui Ali and Dr. Bencherki Youssef analysed and performed the literature research; Pr. Dakir Mohammed, Pr. Debbagh Adil and Pr. Aboutaieb Rachid performed the examination and performed the scientific validation of the manuscript. Dr. Ettanji Adnane was the major contributors to the writing of the manuscript. All authors read and approved the manuscript.

Registration of research studies

The datasets in this article are available in the repository of the urology database, CHU Ibn Rochd, upon request, from the corresponding author.

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