



Case Report

Primary urothelial carcinoma of the male anterior urethra; A case report

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A B S T R A C T

Introduction: and importance: Urethral cancer is a rare condition. It represents less than 1% of all cancers and the clinical signs are not very specific and confusing, which explains the often-late diagnosis. The prognosis can be poor. The objective of our observation is to discuss, through a review of the literature, the diagnostic and therapeutic means of tumors of the male anterior urethra.

Case presentation: This is a 54-year-old patient, smoker, followed for urinary lithiasis. He initially consulted us for right nephritic colic, with an obstructive iliac ureteral stone on a CT scan. He had drainage by JJ stent followed by extracorporeal lithotripsy. After three months, it was decided to remove the JJ Stent. During urethrocystoscopy, a papillary tumor of the anterior urethra was found, measuring 0.5 cm on the long axis. Endoscopic resection of the tumor was performed. Pathological examination revealed a low-grade malignant urothelial carcinoma. No tumor recurrence was noted after one year of follow-up.

Discussion: Primary urethral cancer is a rare condition. Most series in the literature show a male predominance. The main risk factors are chronic inflammation, history of urethritis, and urethral stricture. The clinical signs of urethral cancer are usually discrete and not very specific. The reference examination for positive diagnosis remains urethroscopy, which allows a more precise diagnosis thanks to a direct view of the urethral mucosa. The management of tumors of the anterior urethra consisted of aggressive excisional surgery. The main goal was to achieve satisfactory local control. conservative treatment by resection, fulguration or laser vaporization is indicated for small lesions (<1 cm).

Conclusion: Tumors of the anterior urethra in men are often diagnosed late. More effort should be made to diagnose this disease earlier, especially in high-risk groups. Conservative treatment can be offered in patients with a small lesion.

1. Introduction

Primary urethral tumors are rare and often of late discovery. It occurs in the urethra in the absence of other urothelial locations [1]. The clinical signs are unspecific and confusing. The rarity of this condition explains the lack of a clear consensus on its therapeutic management. The therapeutic challenge is to achieve good local control of the disease while maintaining the patient's quality of life [2]. The prognosis can be guarded, particularly in some cases of tumors of the posterior urethra. In the absence of early diagnosis and aggressive treatment, the prognosis remains poor. We herein present a case of anterior urethral tumor and propose through literature to review the particularities of this pathology. **The work has been reported in line with the SCARE 2020 criteria [3].**

2. Case report

This is a 54-year-old patient, smoker, followed for urinary lithiasis. He had 2 ureteroscopies with ballistic lithotripsy of right ileal calculus one year before. He initially consulted us for right nephritic colic, with an obstructive iliac ureteral stone on a CT scan. He had drainage by JJ stent followed by extracorporeal lithotripsy. The patient was reviewed after 3 months. The ureteral stone was fragmented. It was decided to remove the JJ Stent. During urethrocystoscopy, a papillary tumor of the anterior urethra was found, measuring 0.5 cm on the long axis (Fig. 1). The rest of the urethra and the bladder were normal. Endoscopic resection of the tumor was performed. The patient had a very good postoperative convalescence. Pathological examination revealed a low-grade malignant urothelial carcinoma (G2), invading the mucosal

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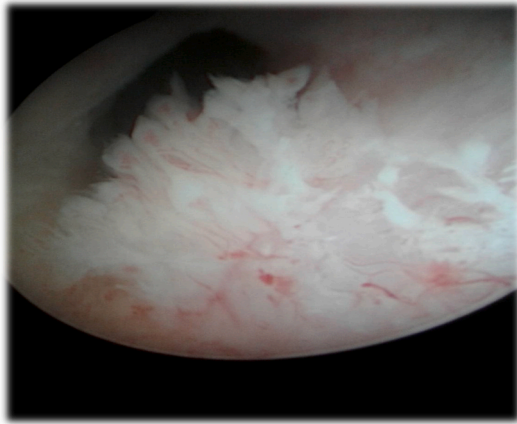


Fig. 1. The endoscopic appearance of the anterior urethral tumor.

chorion (Pta), (Fig. 2). After six months, the patient did not report any complaints. He urinates normally, with a wide stream. He was monitored endoscopically every three months during the first year. No tumor recurrence was noted.

3. Discussion

Primary urethral cancer is a rare condition. It represents less than 1% of all urothelial tumors [1]. It is defined by the development of a malignant tumor at the expense of the urethral epithelium or peri-urethral glands. The incidence of urethral tumors increases with age. Most series in the literature show a male predominance [1,2]. The main risk factors are chronic inflammation, history of urethritis, and urethral stricture. Other rarer factors have been incriminated such as urethroplasty, intermittent urethral catheterization, external pelvic radiotherapy, and brachytherapy [3]. It should be noted that some classic risk factors for bladder cancer, such as smoking, are not clearly implicated in the occurrence of urethral cancer. The three main histological types are squamous cell carcinoma, followed by urothelial carcinoma and finally adenocarcinoma [1].

The clinical signs of urethral cancer are usually discrete and not very specific. This explains the late diagnosis and the often-unfavorable prognosis. They are usually obstructive urinary signs that may be mistakenly attributed to benign prostatic hypertrophy or urethral stricture [4]. More rarely, other more specific signs may be present such as: urethrorrhagia, hematuria, pain in the perineum or penis, painful erections [4].

The physical examination should look particularly for a mass or

induration in the perineal and penile area. Examination of the inguinal lymph nodes, draining the distal portion of the urethra, allows the clinical extension assessment to begin.

The positive diagnosis of urethral tumors can be made on the basis of retrograde and permictional urethrocytoscopy [1,2]. Indeed, the presence of swampy lacunar lesions, or those of irregular urethral stenosis, are suggestive of the diagnosis. The reference examination for positive diagnosis remains urethroscopy, which allows a more precise diagnosis thanks to a direct view of the urethral mucosa. Endoscopy also allows histological confirmation through resection [2]. In order to allow a precise histological evaluation of the surgical margins, biopsies of the proximal and distal limits of the tumor lesion are necessary. Forceps biopsies are preferred as they avoid damage to the tumor tissue [1,4]. Transurethral resection for therapeutic purposes may be considered for some lesions [1,4]. The sensitivity of urine cytology in the positive diagnosis of primary urothelial carcinoma is quite low, around 55–59%.

As far as the extension is concerned, computed tomography (CT) is used to assess extension at a distance, while the local extension is best assessed by pelvic MRI [1,4]. The two imaging methods (CT and MRI) are equivalent in the assessment of lymph node extension, essentially pelvic and inguinal [4]. The main secondary locations are the lungs and liver. There is no clear therapeutic consensus for urethral tumors given the paucity of published series. Management depends mainly on tumor location and locoregional extension [5].

The management of tumors of the anterior urethra was modeled on tumors of the penis and consisted of aggressive excisional surgery. The main goal was to achieve satisfactory local control, a wide healthy surgical margin was considered necessary. Currently, some studies show interesting oncologic results with a surgical excision margin of no more than 5mm of healthy tissue [1,2,4]. The European guidelines for the management of primary urethral carcinoma indicate conservative treatment by penile-preserving urethrectomy for localized anterior tumors (p T1-3) [6]. This conservative treatment may even be proposed for patients with iliac or inguinal lymph node involvement (N1, N2), in combination with lymph node dissection [6].

The recommendations of the French Association of Urology are even more conservative [7]. Indeed, conservative treatment by resection, fulguration or laser vaporization is indicated for small lesions (<1 cm) not invading the corpus spongiosum (Tis, Ta, T1) [7]. Only for T2 or T1 tumors not accessible to conservative surgery, and for very distal tumors (meatus or navicular fossa) is a glanssectomy followed by a reconstruction procedure considered the best option [7]. In the case of proximal infiltrating lesions or those inaccessible to conservative treatment, segmental urethrectomy with a safety margin of 2 cm is the reference treatment, with associated urethroplasty [7]. For locally advanced tumors (T3), partial penectomy with a safety margin of 2 cm is the standard treatment [7].

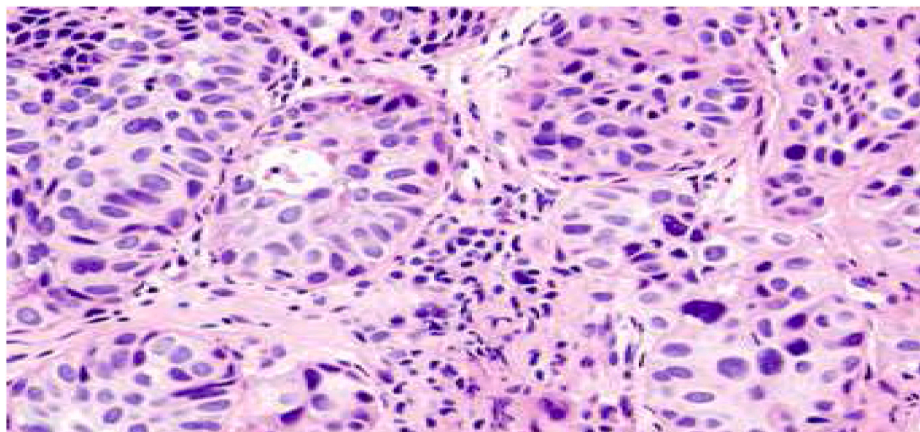


Fig. 2. Pathological examination showing an appearance of urothelial carcinoma.

4. Conclusion

Tumors of the anterior urethra in men are often diagnosed late. More effort should be made to diagnose this disease earlier, especially in high-risk groups. Large multicenter studies should provide a clearer therapeutic consensus for this disease.

Ethical approval

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Author contribution

Rahoui Moez: Data collection, Manuscript writing, Results discussion. Boulma Rami: Manuscript writing and revision. Hassen Khouni: Paper revision.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

Guarantor

Rahoui moez is the guarantor of the study and accept full responsibility for the work and/or the conduct of the study, had access to the data and controlled the decision to publish.

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.

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Declaration of competing interest

Authors do not report any conflict of interest.

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