



Female Urethral Stenosis After Papiloma Acuminata Infection – Case Report

João Ernesto Aldred Pinto Filho, Edgard Costa Scopacasa, Luiz Felipe Costa Mello, João Pedro Paulino Ruas, Antônio Cláudio Ahouagi Cunha

Urology Service, Federal Hospital of Ipanema, Rio de Janeiro, Brazil.

Correspondence

João Ernesto Aldred Pinto Filho
Department Head of Urogynecology and
Reconstructive Urology Surgery, Federal
Hospital of Ipanema, Rio de Janeiro, Brazil.
Tel: +55 22 99994-6202
E-mail: joaoadred@gmail.com

Abstract

Simply Stated

In the present article, we describe a rare case of urethral involvement by condyloma acuminata (HPV), in which we describe the signs and symptoms presented by the patient, how the diagnosis is made and the treatment options that offer the best results. That way it can be useful for other people who suffer from the same problem and don't know where to turn.

Why this matters?

In this present article, we describe a rare case of urethral condyloma acuminata, evolving with stenosis and urinary retention with the use of a suprapubic catheter. An extremely complex and challenging case that is described in detail by a group of authors who have extensive experience in the subject. When talking about diagnosis, tips and tricks are revealed, as well as surgical treatment to obtain the highest success rate. A report like these is very useful for scientific society and serves as a reference for the treatment of new cases, which can change the final outcome in the lives of many other patients.

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Keywords

Positive and negative likelihood ratios,
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Introduction

Human papillomavirus (HPV) is a DNA virus of the papovavirus group, with high sexual transmissibility, frequently found in the ano-genital region and rarely in the oral mucosa. Some of the manifestations of the infection are characterized by papilloma, condyloma acuminata, common wart, focal epithelial hyperplasia, leukoplakia, lichen planus and carcinoma [1].

The urethra may be the site of viral installation in approximately 5% of cases, with a predominance of females [2]. The condylomatous lesion is usually caused by subtypes 6 and 11 that have a low oncogenic potential, however, the vegetative growth can affect the orificial and sphincter function of the urethra.

The urethral closure mechanism has been the subject of intense discussion in the last decade and its origin remains uncertain. Although it may be a rare disease, female bladder outflow obstruction is reported in 2.7% to 8% of women, usually presenting as lower urinary tract voiding symptoms (LUTS) diagnosed by high bladder pressure and low voiding flow during the urodynamic test. Other forms of presentation may appear as recurrent urinary tract infections (UTIs),

overflow urinary incontinence, urethral pain and/or high post-void residual urine [3].

As well as the urethral sphincter mechanism, dysfunctional female stress urinary incontinence (SUI) has been investigated in this population. There are numerous contributing factors behind SUI and some hypotheses have been studied, but the answer is still unclear. A damaged sphincter unit or support system, urethral deformity or impaired sensory innervation are potential causes of an insufficient closure mechanism [4-6].

Since this is a rare condition, the management of this disease is inconsistent in the literature, with the main forms of treatment being: urethral dilations, endoscopic urethrotomy and urethroplasty with flap rotation or healthy tissue graft. Success rates show great variability, reaching something around 14% with dilations, up to close to 100% with urethroplasties [7].

In this article we describe a rare case of condyloma acuminata affecting the female urethra, demonstrating its presentation, diagnostic methods, surgical management and postoperative evolution. Secondly, we give urologist and gynecologist colleagues a view that when such a challenge arises, it is necessary to offer women adequate treatment for this condition, which is often neglected.

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Clinical case

Female patient, 33 years old, without comorbidities, with a 2-year history of progressive voiding difficulty evolving with acute urinary retention and painful bladder. On this occasion, she was seen close to her home and had partial improvement of symptoms after using antibiotic therapy and relief bladder catheterization, however, sequentially evolved with occasional urinary loss and use of pads.

After 5 weeks, he developed significant voiding difficulty, looking for another nosocomium where he underwent cystourethroscopy and visualized a pale area, configuring a probable area of stenosis. Delayed bladder catheterization was chosen, in addition to a biopsy of this described region, condyloma acuminata was revealed in the sample. Thus, the team accompanying her decided to perform a suprapubic cystostomy for the study and surgical planning of the urethra. Afterwards, she was referred to our hospital, where she was submitted to new complementary exams. When performing the voiding cystourethrogram, there was no clear evidence of urethral stenosis, at the time, she was also submitted to a urodynamic study; which showed increased detrusor contractility in the Flow X Pressure phase, compatible with bladder outlet obstruction.

Having decided on a joint evaluation, she was referred to gynecology, colposcopy, gynecological examination and cytopathology were performed, without evidence of papillomatous lesions in the uterine cervix.

Due to the severe obstructive condition, it was proposed to perform intraoperative urethroscopy (Figure 1) associated with urethroplasty with dorsal oral mucosa graft (Figure 2A-B) and resection of the fibrotic zone evidenced during urethroscopy, trying to preserve as much as possible the sphincter mechanism. After urethroplasty, an 18Fr indwelling bladder catheter was implanted and fixed in the pubic region, avoiding passive tension exerted by the weight of the device and inadvertent traction. The final urethral caliber reached was 28Fr and the final appearance was very satisfactory.

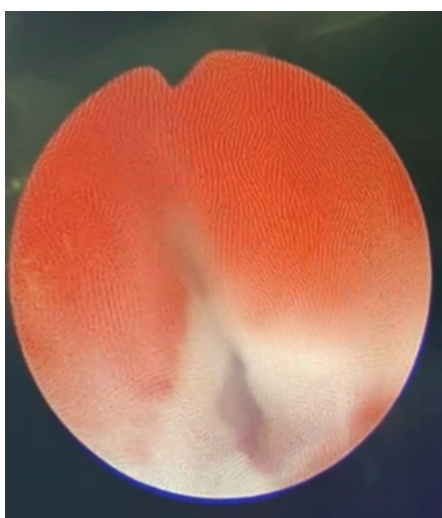


Figure 1. Urethroscopy

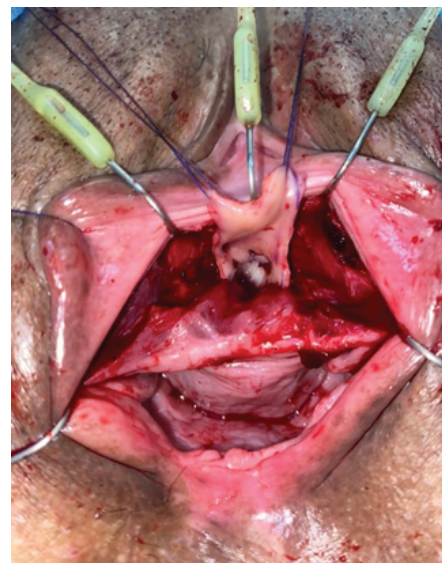


Figure 2A. XXXX



Figure 2B. XXXXX

Patient currently under outpatient follow-up, asymptomatic, with a 9-month follow-up after surgery, postoperative histopathological report showing chronic inflammatory process and fibrosis, compatible with urethral stenosis (no lesions visualized by HPV). He does not use pads or diapers, being completely continent.

Discussion

The importance of HPV with its various subtypes is known in the pathophysiology of condyloma acuminatum, as well as in urethral carcinoma, which is a rare pathology with approximately 2,400 cases described in the literature [8,9]. This viral infection is confirmed by histopathological examination and its various clinical manifestations can evolve with some complications, especially bleeding, however, urethral obstruction can be part of the picture, coursing with characteristic findings in voiding propaedeutics.

The location of this involvement is predominantly in the external genitalia and, when it occurs in the urethra, it is limited to three distal centimeters, mainly in the external meatus [10]. Due to the infrequency in this topography, there are no specific guidelines for management of intraurethral condyloma and the most established treatments such as Imiquimod and Podophyllotoxin are not recommended for application in the urethra. In addition to the aggression to the mucosa caused by these therapies, which can lead to stenosis, the difficulty of access limits the application of alternatives such as cryotherapy and trichloroacetic acid. Thus, resection is generally well indicated in condyloma, and may be performed endoscopically and associated with topical application to achieve complete response with lower recurrence rates [11].

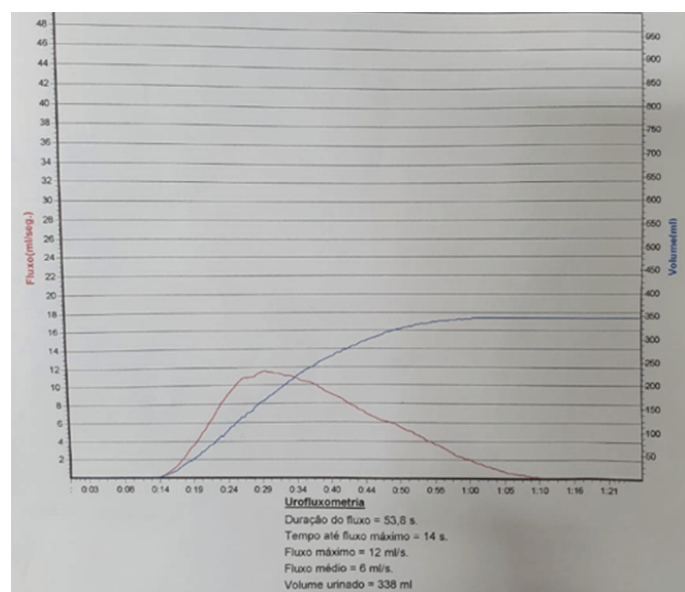


Figure 3A. Uroflowmetry before dilation.

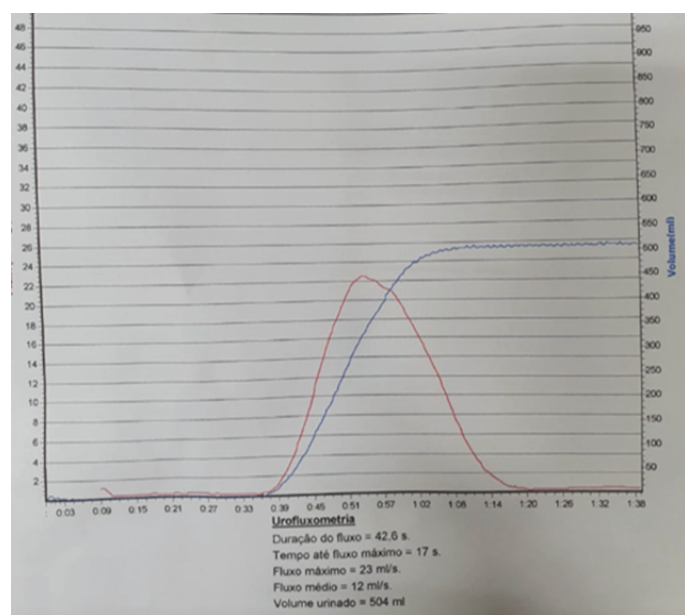


Figure 3A. Uroflowmetry after dilation.

The diagnosis of female urethral stricture represents a separate challenge, and it is not always easily identified when compared to male strictures, due to anatomical issues, mechanisms involved in the pathology and difficulty in performing imaging tests. Classically, we have a physical examination and genital evaluation, which is an initial and indispensable examination. Voiding cystourethrography is the gold standard in the evaluation of male urethral strictures, but it requires specific care to perform, often being a challenge in female stenoses. The urodynamic study is of great value and should always be performed when concomitant evaluation of the bladder is required. Urethral calibration can be performed, but it is highly controversial in the literature and, in our experience, it is not a reliable tool, since in some cases the calibration itself can lead to urethral dilation and it is not possible to accurately identify the stenosis. Endoscopic exams are useful, but it is not always possible to accurately visualize the real area of stenosis and these patients commonly present a high level of pain, requiring sedation and operative structure. In our experience, the watershed for making the diagnosis is free uroflowmetry without urethral dilation and a new uroflowmetry immediately after it (Figure 3A-B). In cases of strict stenosis, we identified a significant improvement in the flow curve and chose these patients for definitive treatment, so that the chances of success increase considerably.

When urethral stricture is present, treatment can be directed towards various forms of surgical approaches, including urethroplasty with a patch of local vaginal tissue, urethroplasty with free graft or endoscopic dilations, which, among these, present a higher number of recurrences [12]. The position of the urogenital sphincter is also a reason for caution during surgical repair of female stenosis, and, according to anatomical studies, proximal dissection intensifies the risk of damaging the perineal membrane and the sphincter complex [13].

In the case in question, after urethral dissection, it was possible to perceive a clear area of fibrosis located in the proximal third of the urethra, extending close to the urethral sphincter. This entire fibrotic zone was resected, compromising a portion of the urethral circumference, but the continence mechanism seemed to be preserved.

Conclusion

Urethral involvement by HPV can evolve with rare complications such as urethral stenosis that causes representative findings and symptoms. Thus, urologists and the multidisciplinary team must be aware of this possibility to avoid mistakes in the diagnosis and treatment of this predominantly benign entity. It is worth emphasizing the great superiority of surgical treatment and some characteristic findings in urinary workup, however, etiological confirmation in selected cases with histopathological examination is of great importance, differentiating benign from malignant pathologies, which may be potentially fatal, such as carcinomas.

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