

# *Successfully treated urethral condyloma acuminatum utilizing intraurethral self-application of 5-fluorouracil via Q-tip*

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*Condyloma acuminatum is a benign genital lesion associated with low-risk human papillomavirus subtypes. Approximately 20% of HPV-associated genital warts occur in the urethra. Topical treatment of urethral*

*condyloma in women can be challenging to treat due to difficulty applying the medication such that it maintains contact with the urethra long enough to be effective. We present a case of a successfully cleared urethral condyloma acuminatum treated via self-application using a Q-tip.*

**Key Words:** condyloma acuminatum, urethral warts, 5-FU, self-treatment

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## Introduction

Condyloma acuminatum (CoA) is a common benign genital lesion caused by human papillomavirus (HPV), most commonly the low-risk subtypes HPV 6 and 11. Upwards of 20% of HPV-associated genital

warts involve the urethra.<sup>1</sup> Treatment options include observation, topical 5-fluorouracil (5-FU) or interferon, BCG, thermal or laser ablation, and excision.<sup>2</sup> Procedural therapies may be complicated by urethral strictures or fistulae. Topical treatment of urethral condyloma in women can be challenging to treat as it is difficult to apply the medication such that it maintains contact with the urethra long enough to be effective. We present a case of a successfully cleared urethral CoA treated via self-application using a Q-tip allowing adequate contact time with medication.

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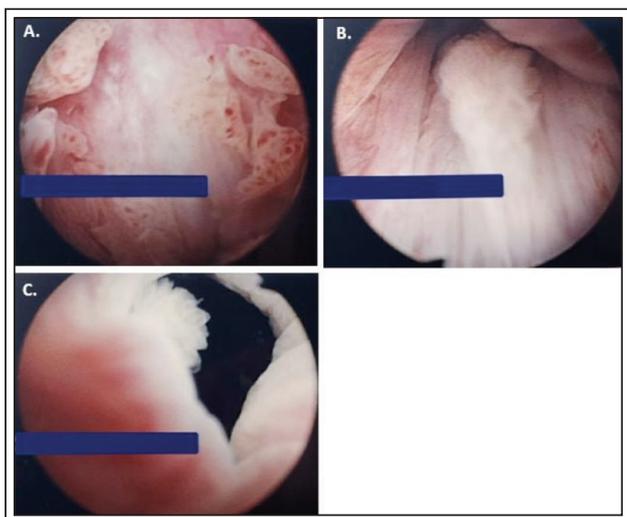
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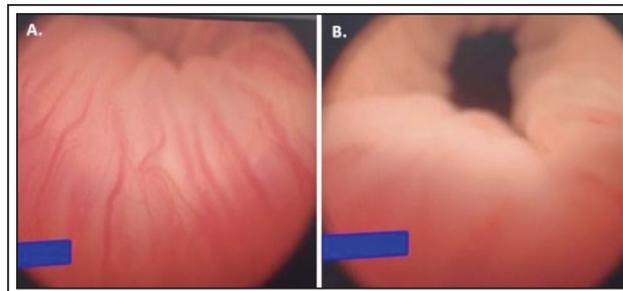
**Figure 1.** Condyloma acuminatum at urethral meatus. Physical exam finding from patient's initial presentation, demonstrating a frondular lesion at the urethra meatus. In-office biopsy confirmed diagnosis of condyloma acuminatum.

## Case report

A 63-year-old female with chronic idiopathic urinary retention on clean intermittent catheterization presented with a urethral meatal mass, Figure 1. The remainder of her vulvar and pelvic exam was normal. Cystoscopy demonstrated frondular lesions



**Figure 2.** Urethral condyloma acuminatum. Cystoscopic images of urethral condyloma lesions at the (A) distal, (B) mid and (C) proximal urethra. Majority of lesions were in the distal urethra. Blue bands on images are artifact from the cystoscope tower.



**Figure 3.** Clean urethroscopy following intraurethral 5-FU therapy. No lesions in distal (A) or (B) mid and proximal urethra. Blue bands are artifacts from the cystoscope tower.

throughout the urethra, Figure 2. Biopsy revealed CoA, and chromogenic in situ hybridization testing revealed a low-risk HPV subtype.

The patient desired non-surgical management. A novel intraurethral 5-FU protocol was initiated: 5% 5-FU cream was applied to a Q-tip and placed intraurethrally 4 cm to approximate the bladder neck for 10 minutes. This was repeated with the tip placed more distally. Additional cream was then applied to the meatus. Gauze was used to minimize labial contact and patient was instructed to hold self-catheterization for 2 hours. She was taught this technique over 3 weekly office treatments then transitioned to every other day home application. She tolerated the Q-tip application and regimen well, possibly related to baseline use of self-catheterization.

Repeat cystoscopy at 3 months demonstrated significant improvement in number of lesions, and she was titrated to twice weekly application. Due to the COVID-19 pandemic, she preferred to continue the regimen and deferred in-office follow up to 1 year from initial treatment, continuing twice weekly application in the interim. At the 1-year follow up, cystoscopy revealed complete clearance of urethral CoA lesions, Figure 3. The 5-FU treatment regimen was discontinued with plan for surveillance cystoscopy every 4 months.

## Discussion

Although CoA is common and affects upwards of 1 million North Americans annually,<sup>3</sup> urethral involvement is less common, and isolated urethral involvement is rare.<sup>2</sup> Patients often present with externally visible distal urethral or meatal lesions, as in our case, and biopsy will confirm the diagnosis. However, patients with non-visible lesions may present

with hematuria, irritative lower urinary tract symptoms, or obstructive symptoms.<sup>2</sup> Cystourethroscopy should be performed to assess the extent of urethral involvement. Bladder condylomas are rare but should be identified and resected if found due to risk of progression to squamous cell carcinoma.<sup>4,5</sup> Patients with urethral CoA on intermittent self-catheterization may be at higher risk of seeding the bladder.

Most literature on treatment of urethral CoA focuses on male patients, and the majority of case reports of intraurethral CoA in women are isolated meatal or distal lesions amenable to surgical resection or topical therapy.<sup>2,6,7</sup> However, management of more extensive or proximal urethral CoA disease in women is complicated by anatomy. Extensive surgical excision, for example, risks causing significant urinary incontinence or fistula, and extensive ablative therapies risk stricture formation. The short length of the female urethra also makes achieving adequate dwell time with topical instillations challenging. Here, we circumvented this issue using a Q-tip and thus spared the patient the risks associated with surgical or ablative resection. Topical therapy could also be used in cases with extensive lesions to reduce disease volume, which might facilitate easier surgical resection and minimize risk to the urethra. Topical therapy is also an option to reduce risk of recurrence in patients status post resection or ablation.

To our knowledge, the self-applied Q-tip technique we used is novel. Other previously reported self-application techniques include a 1978 case report of 5-FU urethral suppositories for treatment of urethral CoA in both men and women,<sup>8</sup> as well as a 1977 case series of self-administered 5-FU cream using urethral application in 11 men.<sup>9</sup>

In summary, our 5-FU Q-tip application technique offers a non-surgical option for women with intraurethral CoA who wish to avoid risks associated with traditional surgical therapy. Ongoing surveillance is necessary, especially in patients on intermittent self-catheterization and at risk for recurrent seeding. □

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