



Intraurethral Condyloma Acuminata Treated with Electrocauterization without the Use of Cutting Mode: A Case Report and Literature Review

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Condyloma acuminatum is one of the most commonly occurring sexually transmitted diseases, caused by the human papillomavirus. We report the case of a male with intraurethral condyloma acuminata treated through electrocauterization. He presented to our genitourinary outpatient department with several days of painless gross hematuria. Patient history indicated 3 years of ongoing hemodialysis and a prior ureteroscopy. Multiple intraurethral tumors and bulbar urethral strictures were found by cystoscopy. Eventually, the patient underwent transurethral resection with electrocauterization. The patient recovered well, and there was no evidence of recurrence at the 1-year follow-up consultation. While there are many different methods for the treatment of intraurethral condyloma acuminata, panurethral condyloma acuminata are rare and difficult to treat. Here, we report a case of panurethral condyloma acuminata where urethroscopy with electrocauterization, without the use of the cutting mode, was performed with rapid, safe, and effective results.

Keywords: Case report, condyloma acuminata, electrocauterization, intraurethral, panurethral

INTRODUCTION

Condyloma acuminatum is a highly infectious sexually transmitted disease caused by the human papillomavirus (HPV), a double-stranded DNA virus. There are more than 100 types of HPV, and more than 40 types infect the genital organs. Approximately 90% of condyloma acuminata are positive for HPV types 6 or 11, although co-infection with other high-risk types is also possible.¹ Condyloma acuminata is most commonly encountered on mucocutaneous surfaces of the external male genitalia; sometimes, they extend into the distal urethra, and very rarely do they progress into multiple intraurethral lesions.² The treatment of this disease aims to eliminate warts and reduce the viral load; however, this may be difficult due to widespread infection or subclinical lesions that are not identified at the time of treatment. The European guideline for the management of anogenital warts recommends an 80%–90% trichloroacetic acid solution, cryotherapy with liquid nitrogen, and photodynamic therapy

with 5-aminolaevulinic acid as part of medical treatment.³ Surgical treatment using electrosurgery, laser therapy with carbon dioxide laser, and neodymium-yttrium aluminum garnet laser are commonly used.^{3,4} Here, we report the case of a 70-year-old male patient with pan-intraurethral condyloma acuminata. Urethroscopy with electrocauterization was used to eradicate the intraurethral lesions, and we maintained rapid, safe, and effective clinical results after 1 year of follow-up consultations.

CASE REPORT

A 70-year-old male visited our genitourinary outpatient department reporting several days of painless gross hematuria. Medical history indicated both hypertensive cardiovascular disease and chronic renal disease and 3 years of ongoing

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hemodialysis. Prior surgeries included a bilateral ureteroscopy and arteriovenous shunt surgery. Upon physical examination, the external genitalia appeared normal. Urinalysis disclosed pyuria and microscopic hematuria. The initial cystoscopy revealed multiple cauliflower-like verrucous masses extending from the penile to the bulbous urethra. Bulbar urethral stricture and moderate trabeculation of the urinary bladder were also found [Figure 1a and b]. The lesions were clinically presumed to be papillary urothelial carcinoma; therefore, we performed a cystoscopy–biopsy to rule out malignancy, and condyloma was confirmed. Surgical intervention with transurethral resection of the tumor, followed by an optical urethrotomy [Figure 1c] was subsequently performed. The entire procedure was performed through cold resection. The cutting mode of electrosurgery was avoided to prevent fibrosis and subsequent urethral stenosis. The coagulation status of the bladder was checked for hemostasis.

Microscopically, the papillary fragments were composed of acanthotic and papillomatous proliferation of stratified squamous epithelium with extensive koilocytosis but without high-grade dysplasia (H and E, $\times 100$) [Figure 2]. The histological findings were diagnostic of condyloma acuminata.

The postoperative course was uneventful. The surgical intervention was well-tolerated and no intraurethral medical instillation was administered for impaired renal function. The patient was kept under regular surveillance every 3 months following a substantial improvement of the symptoms. In general, normal voiding was experienced and no new cutaneous lesions were found upon examination. There were no recurring intraurethral lesions found during the 1-year follow-up after the cystourethroscopy [Figure 3]. The patient has now been on biannual surveillance for 2 years.

DISCUSSION

Genital warts, or condyloma acuminata, are benign epithelial tumors associated with HPV type 6 or 11 in more than 90% of total cases.⁵ Other HPV types, including types 16, 18, 31, and 33 can cause high-grade dysplasia or

cervical carcinoma.⁵ In men, they are predominantly found on the external genitalia; however, intraurethral condyloma acuminatum is uncommon. Retrograde infection is known to be less likely to occur as a result of urethral mucosal immunity; although, pan-intraurethral condyloma acuminata⁶ may be seen in immunocompromised or immunosuppressed patients.^{1,6,7} In their study, Fralick *et al.* reported that among 114 biopsy-proven HPV-infected men, only 14 (12.3%) had intraurethral lesions. Eight patients exhibited a single lesion, while the others six had two or more lesions, all of which were confined to the anterior (penile and bulbous) urethra.²

In contrast, our case involved pan-intraurethral condyloma acuminata in an immunocompetent patient, without the simultaneous presence of condyloma of the external genitalia.

Sumino *et al.* reported the development of condylomata following several urological procedures in the anterior urethra of a 70-year-old male without any history of external genital or urethral lesions.⁸ Zayko *et al.* also reported a patient with a history of intermittent bladder self-catheterization who developed isolated condyloma acuminata in the prostate urethra.⁹ They suggested that the repeated surgical instrumentation of the patient's urethra might have contributed to the proximal dissemination of HPV, leading to these clinical findings.^{8,9} Similarly, we believe that the mucosal disruption from repeated ureteroscopies in our patient was responsible for the introduction of HPV and its retrograde spread to the bulbar urethra.

As intraurethral condyloma acuminata are relatively rare, there are no definite guidelines for their treatment.³ Several treatment modalities have been reported; topical treatments, such as 5-fluorouracil (FU) instillation, topical Bacillus Calmette – Guérin, and photodynamic therapy with 5-aminolaevulinic acid, are often used. Surgical modalities used to remove condyloma lesions include excision, along with laser therapy, cryotherapy, or electrocautery.^{4,6-9} Many studies have shown that combination therapy can improve the effectiveness of the treatment.^{6,7} For example, the combination of surgery with 5-FU or cidofovir instillation has been a recommended mode of treatment for immunocompromised

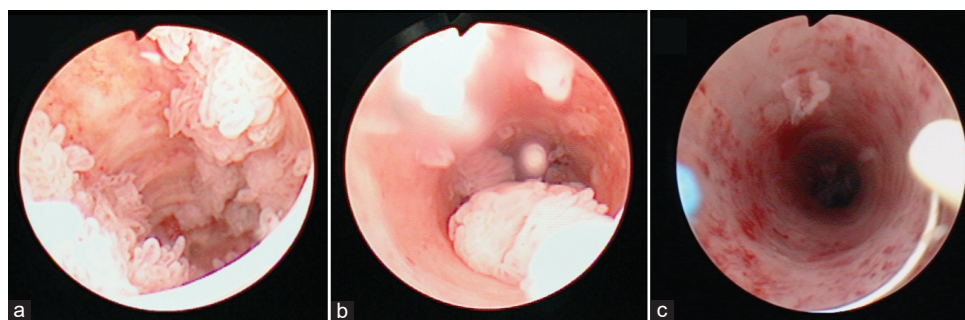


Figure 1: Pan-urethral condyloma under a urethroscope (a); diffuse intraurethral condyloma and bulbar urethra stricture (b); transurethral resection of the tumor with a resectoscope using a wire loop (c)

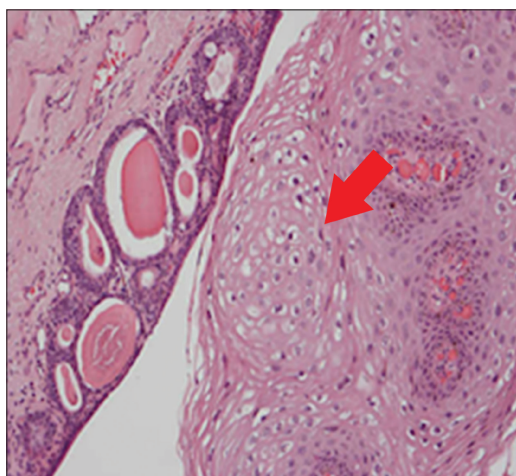


Figure 2: Intraurethral condyloma acuminata featuring acanthotic and papillomatous proliferation of stratified squamous epithelium with areas of koilocytotic atypia (H and E, $\times 100$)

patients.⁶ However, relative complications such as urethral stenosis, meatitis, and painful sensations of the scrotum are common.⁷ In addition, clinical therapy has been discouraged due to the higher recurrence rate (25%–40%).¹⁰ Although our study was limited by the relatively short follow-up duration of 2 years, we report a rare case with effective treatment. Through this case report, we opine that electrocauterization, without the use of the cutting mode, is an effective and safe technique with an initial success rate of more than 90%.¹⁰

CONCLUSION

We reported a rare case of panurethral condyloma acuminata. Immunosuppression and urethral instrumentation were found to be potential risk factors for the condition. Although the disease is difficult to treat, we achieved a successful outcome through urethroscopy with electrocauterization, avoiding the cutting mode. The results obtained were rapid, safe, and effective. The patient recovered well and there was no evidence of recurrence at the 1-year follow-up consultation.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has provided written consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal their identity; however, anonymity cannot be guaranteed.

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Nil.



Figure 3: No recurrence after 1 year of follow-up

Conflicts of interest

There are no conflicts of interest.

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