

# Pan-urethral Wart Treated with 5-Fluorouracil Intraurethral Instillation

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We evaluated whether or not intraurethral instillation of 5-fluorouracil (5-FU) solution can rapidly, safely, and effectively eradicate intraurethral condyloma acuminata in a human immunodeficiency virus (HIV) carrier. A 43-year-old man presented with the major complaint of difficult micturition and blood dribbling from the urethral meatus for more than 6 months. He was an HIV carrier for more than 10 years and had undergone diathermy for perianal warts. Physical examination showed cauliflower lesions over the orifice of the urethra and frenulum base of the penile prepuce. Urinalysis disclosed pyuria and microscopic hematuria. Cystourethroscopy on the following day showed extensive wart lesions extending from the urethra to the bladder neck. Biopsy of the lesions was compatible with condyloma acuminata. 5-FU solution (500 mg in normal saline 50 mL) urethral instillation with massage at the ventral side of the penile shaft for 20 minutes was given once a week for 7 doses. The urine routine was normal. Management was then prescribed once a month until the lesions became invisible under urethroscopy. After 18 doses of 5-FU solution urethral instillation, no visible wart lesions were noted. He has been asymptomatic with no voiding difficulty for more than 1 year. [J Chin Med Assoc 2006;69(8):391–392]

Key Words: 5-fluorouracil, intraurethral instillation, urethral wart

## Introduction

Although the prolapsing, glistening, cauliflower-like lesions of intraurethral condyloma acuminata appear innocuous, they are commonly associated with urethral irritation and infection, resulting in total urinary tract obstruction and fistula formation.<sup>1</sup> Treatment of urethral warts aims to induce a wart-free state and reduce the amount of infectious virus present. Medical treatment with podoflox 0.5% solution or gel,<sup>2</sup> imiquimod 5% cream, trichloroacetic acid or bichloroacetic acid in 80% or 90% solution, and cryotherapy with liquid nitrogen and solid carbon dioxide are useful. Surgical treatment with laser therapy with both carbon dioxide and Nd:YAG lasers has been successful in treating condyloma.<sup>3</sup> However, intraurethral warts may be difficult to treat. In our search for an agent that can eradicate intraurethral condyloma acuminata rapidly, safely, and effectively, we used 5-fluorouracil (5-FU) solution intraurethral instillation and got an excellent outcome.

## Case Report

We report a 43-year-old man with the major complaint of difficult micturition and blood dribbling from the urethral meatus. He is an HIV carrier and has been on Ritonavir, Saquinavir-gel, and Zidovudine 3-combined therapy for more than 10 years. Previously, he had also received diathermy for perianal warts. Physical examination showed cauliflower lesions over the urethral meatus and at the base of the frenulum. Urinalysis disclosed pyuria and microscopic hematuria. Diathermy was performed for external genital warts. Cystourethroscopy on the following day showed extensive wart lesions extending from the penile urethra to the bladder neck. No vesical lesions were found (Figure 1A). Biopsy of the lesions revealed epithelial hyperplasia manifestations of hyperkeratosis, parakeratosis, acanthosis and papillomatosis, compatible with condyloma acuminata. 5-FU solution (500 mg in normal saline 50 mL) urethral instillation with massage at the ventral side of the penile shaft for 20 minutes was

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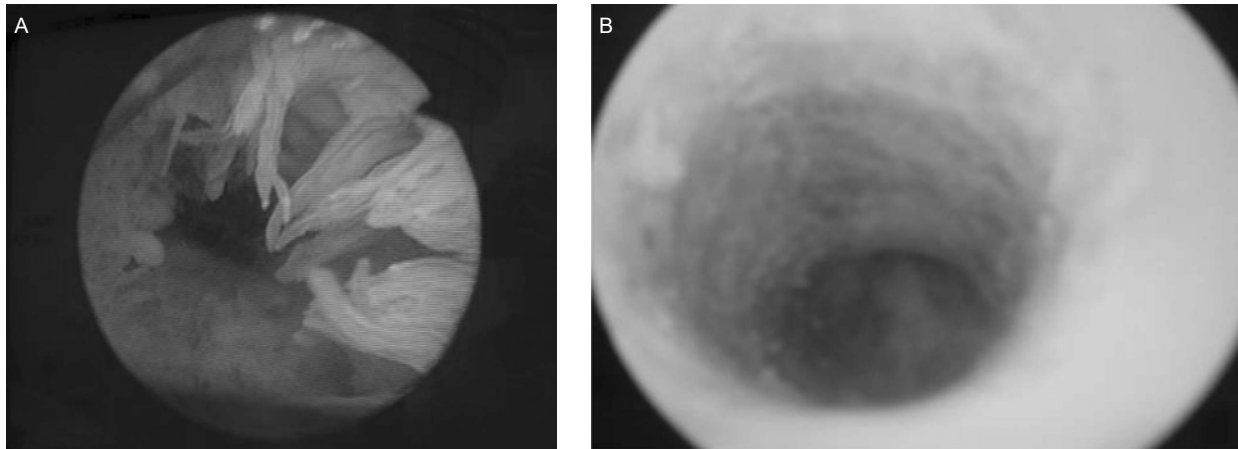


Figure 1. (A) Before and (B) after therapy with 5-FU urethral instillation; warty lesions have shrunk.

given once a week for 7 doses. Management was then prescribed once a month until the lesion became invisible under urethroscopy. Urinalysis results were normal. The condyloma acuminata of the urethra shrank under cystourethroscopy every week. However, recurrent perianal and rectal warts were found. The patient was admitted to the colorectal surgery ward for electrocauterization. 5-FU solution intraurethral instillation was held. However, cystourethroscopy revealed recurrent urethral warts and urethritis 3 months later. After 18 doses of 5-FU solution intraurethral instillation, no visible wart lesions were noted in the urethra by cystourethroscopy (Figure 1B). He has been asymptomatic with no voiding difficulty for more than 1 year.

## Discussion

Genital warts or condylomata acuminata is a sexually transmitted disease caused by the human papilloma virus (HPV). It usually affects the skin or external urethral meatus, and less commonly affects the proximal penile urethra. They are associated with dysuria, urethral bleeding, and infection.<sup>4</sup> Those affecting the anterior urethra are usually single and rarely multiple. Extensive urethral warts presenting as voiding dysfunction are less common. Immunosuppressed and immunocompromised individuals are at risk of developing extensive urethral condyloma.<sup>5</sup> With better medicine, quality of life and survival in these patient groups, urethral condyloma is encountered more often in urologic practice.

Papillomaviruses are small DNA viruses measuring 50 nm in diameter causing squamous epithelial cell proliferation. There are over 60 types of HPV

recognized so far, and probably more will be recorded in the future. Anogenital warts are caused by mucosotropic HPV, type 6 and 11. For anogenital HPV infection, considerable data indicate a strong association between certain oncogenic “high risk” mucosotropic HPV types and the risk of developing epithelial and genital cancers. 5-FU is a widely used chemotherapeutic agent that inhibits cancer cell growth and initiates apoptosis by targeting thymidylate synthase and by direct incorporation of 5-FU metabolites into DNA and RNA. 5-FU cream<sup>1</sup> and gel injection<sup>6</sup> had good therapeutic response to genital wart. The patient had successful eradication of intraurethral condyloma acuminata by the intraurethral instillation of 18 doses of 5-FU 500 mg. However, complications such as scrotal irritation or meatitis are not avoidable. Cystourethroscopic examination may be delayed until distal lesions have been eradicated. This minimally invasive method is safe, convenient, inexpensive, painless, and effective.

## References

1. Marrow RP, McDonald JR Jr, Emmett JL. Condyloma acuminata of urethra. *J Urol* 1952;68:909–10.
2. Culp OS, Magid MA, Kaplan IW. Podophyllin treatment of condylomata acuminata. *J Urol* 1944;51:655–6.
3. Volz LR, Carpinello VL, Mallory TR. Laser treatment of urethral condyloma. *Urology* 1994;43:81–2.
4. Rothman I, Berger RE, Kiviat N, Navarro AL, Remington ML. Urethral meatal warts in men: results of urethroscopy and biopsy. *J Urol* 1994;151:875–7.
5. West AF, Leung HY, Powell PH. Pan-urethral warts as a cause of acute retention of urine. *BJU Int* 1991;84:1100–1.
6. Swinehart JM, Korey A, Orenberg EK. Relationship of genital wart burden to therapeutic response to fluorouracil/ epinephrine injectable gel. *Int J STD AIDS* 1997;8:639–42.