

Recurrent Urethral LGSIL Causing Macroscopic Hematuria

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Abstract

Case Report

Primary epithelial urethral cancers are very rare cancers, comprising <1% of all malignancies in male patients. Age specific incidence reported in the European epidemiological study is 0.2/million before age of 55 peaking to 7.6/million over age of 74. History of sexually transmitted diseases, especially Human Papilloma Virus (HPV) infection appear to increase the risk of urethral cancer. Mostly histological subtype of urethral carcinoma is transitional cell carcinoma and squamous cell carcinoma. Conservative management with local excision may be an option for low-grade neoplasms. In this case presentation we aimed to describe clinical evaluation of a young adult man with recurrent macroscopic hematuria, caused by recurrent primary urethral low grade squamous intraepithelial lesion.

Keywords: Urethral LGSIL, Cancers, clinical evaluation.

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INTRODUCTION

Primary epithelial urethral cancers are very rare cancers, comprising <1% of all malignancies in male patients [1, 2]. Cancer of the urethra occurs in both sexes and its etiology is multifactorial. History of sexually transmitted diseases, especially Human Papilloma Virus (HPV) infection appears to increase the risk of urethral cancer. The histologic type was classified as transitional cell carcinoma, squamous cell carcinoma, adenocarcinoma, and other (including sarcoma and melanoma). Advanced age, higher grade and T stage, nodal/systemic metastases, other histology versus TCC, and no surgery versus radical resection were predictive of increased likelihood of death. Conservative management with local excision may be an option for low-grade neoplasms.

Case Presentation

A 21 year old young adult admitted to the urology clinics with the complaint of intermittent initial macroscopic hematuria lasting for a year. He claimed to be male to male sex partner and previously he had been treated for genital, perineal and perianal warts with electro-cauterization and topical agents, else his past medical history was unremarkable. His physical examination revealed urethral bloody discharge

together with many genital warts with varying sizes from a few millimeters to 13 millimeters spreading over genitals, perineum and perianal area. He was checked for any other associated sexual transmitted disease including HIV and confirmed none to be present else than genital warts. Ultrasonography was performed and any other urological pathology causing macroscopic hematuria was ruled out. Urethra-cystoscopy revealed 5 mm verrucous lesion within 20 mm of distal urethra, else urethra and bladder was normal. Urine cytology was obtained, and urethral lesion was taken by cold-cup biopsy and its base was cauterized. Urine cytology was normal. Histopathological examination of genital and perianal warts revealed condylomata acuminata. Histopathological examination of the urethral lesion revealed epithelial basal one-third nuclear enlargement and increased proliferation, profound koilocytotic atypia with Ki-67 and p16 positivity indicating low grade squamous intraepithelial lesion (LGSIL) associated with high-risk HPV infection (Figure 1-3). During his follow up to date, lasting 1 year, he had two metachronous urethral recurrences associated with macroscopic hematuria. Repeated cytological examinations of the patient was normal. Written informed consent was obtained from the patient for the publication of the case report.

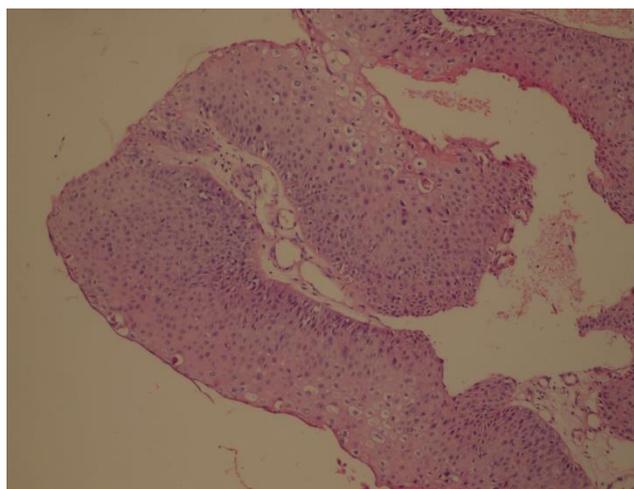


Fig-1: Enlarged nucleus & diffuse koilocytic atypia in the squamous epithelia (H&E, X200)

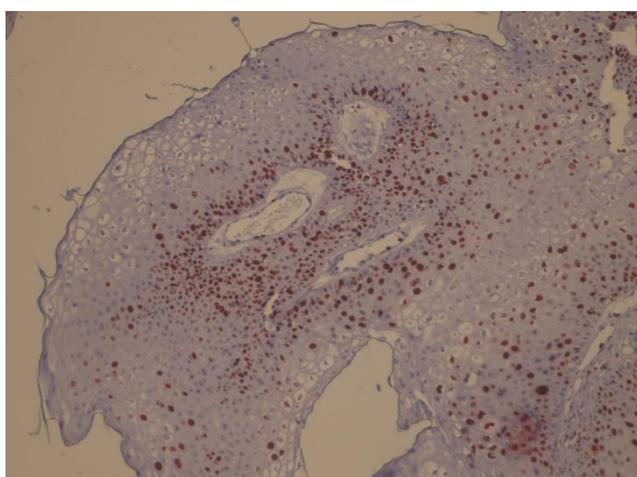


Fig-2: Increased proliferation in the squamous epithelia (Ki-67, X200)

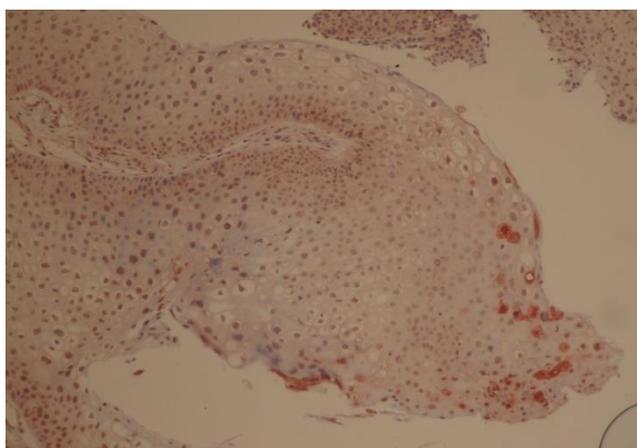


Fig-3: Positivity of p16 protein in the squamous epithelia (P16, X200)

DISCUSSION

Primary epithelial urethral cancers are very rare cancers with age-standardized ratio of 1 per million (1.6/million in men vs. 0.6/million in women) [1]. Age specific incidence reported in the European epidemiological study is 0.2/million before age of 55 peaking to 7.6/million over age of 74 [1]. Similarly, age specific incidence reported in the United States

increased with age to a peak of 32 per million men and 9.5 per million women in the 75 to 84-year age group, with very low incidence before age of 34 (0.09 per million men and 0.03 per million women) [2]. Histological types with order of decreasing frequency are transitional cell carcinoma (55%), squamous cell carcinoma (22%) and adenocarcinoma (17%) [1, 2].

For male primary urethral cancer, various predisposing factors have been reported, including urethral strictures, chronic irritation after intermittent catheterization/urethroplasty [3-5] and chronic urethral inflammation/urethritis following sexually transmitted diseases (i.e. condylomata associated with human papilloma virus 16) [6, 7]. As well, the presented patient had history of sexually transmitted disease and genital warts. Though not as higher rate as in penile cancer, some high risk human papilloma viruses (HPV) have been shown to play role in the pathogenesis of urothelial cancer in up to approximately 60% of the cases [6-10]. Histopathological examination of the urethral lesion in this patient also has positivity with HPV infection.

At initial presentation visible hematuria is reported in up to 62% of the cases. Symptoms of locally advanced disease include; an extra-urethral mass (52%), bladder outlet obstruction (48%), pelvic pain (33%), urethrocutaneous fistula (10%), abscess formation (5%) or dyspareunia [11].

The role of urinary cytology in primary urethral cancer is limited. In male patients, the sensitivity for TCC and SCC was reported to be 80% and 50%, respectively [12]. Repeated cytological examinations of the presented patient was normal.

Careful cystoscopy examination is necessary to exclude the presence of concomitant bladder tumors [13]. A cold-cup biopsy enables accurate tissue retrieval for histological analysis, in patients with larger lesions, transurethral can be performed for histological diagnosis. There was no abnormal or suspicious lesion in the bladder mucosa of our patient.

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