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Urology

Transitional Cell Carcinoma of the Female Urethra: A Case Report and Review of Literature

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Abstract **Case Report**

Transitional cell carcinoma of the urethra is a rare cancer with limited prognostic. We report a 75- year old female presented a hematuria and urinary incontinence. She had a history of hypertension, hysterectomy for uterine fibroma and dermatomyositis followed in dermatology. Radiological and histological examinations confirmed the diagnosis of a locally advanced transitional cell carcinoma of urethra. Cysto-urethrectomy with pelvic lymph node dissection was performed with acceptable oncological outcome at three-month follow-up without recurrence.
Keywords: Hematuria, female urethra, transitional cell carcinoma.

INTRODUCTION

Primary carcinoma of the female urethra is an uncommon cancer which has the risk to progress around the urethra and inguinal or pelvic lymph nodes and provides distal metastases. Hematuria is the most present symptom. The treatement choice should respect the efficacity of tumor control and quality of life.

The prognostic is limited with an overall survival of 42% and disease specific survival of 50% at 5 years [1]. We report a case of primary urothelial carcinoma of urethra in a 75-year-old woman, who was treated with cystectomy and urethrectomy.

CASE PRESENTATION

A 75 year old female presented a hematuria and urinary incontinence. She had a history of hypertension, hysterectomy for uterine fibroma and dermatomyositis followed in dermatology. She underwent a hematuria evaluation with CT urogram and cystoscopy. CT urogram demonstrated an enhancing soft tissue mass inferior to the bladder and anterior to the vagina, along the course of the urethra *(Fig.1)*. Cystoscopy demonstrated a flat lesion with connection to the posterior urethra. An MRI of the pelvis demonstrated a large urethral mass 3.0×2.9×3.8 cm with heterogeneous enhancement in the bladder neck and urethra *(Fig. 2)*. A biopsy was significant for high grade papillary transitional cell carcinoma. A CT of chest, abdomen and pelvis showed no clear evidence of metastatic disease.

The patient underwent radical cystectomy with urethrectomy, bilateral pelvic lymph node dissection, and ileal conduit urinary diversion *(Fig. 3)*. The postoperative period was uneventful.

The final pathological staging was pT3N0M0 with negative margins. Follow up was conducted every 3 months with MRI pelvis and CT of chest, abdomen and pelvis. She was well at her three-month follow-up without recurrence or metastases.

Fig-1: Axial CT urogram section demonstrated a soft tissue along of the urethra

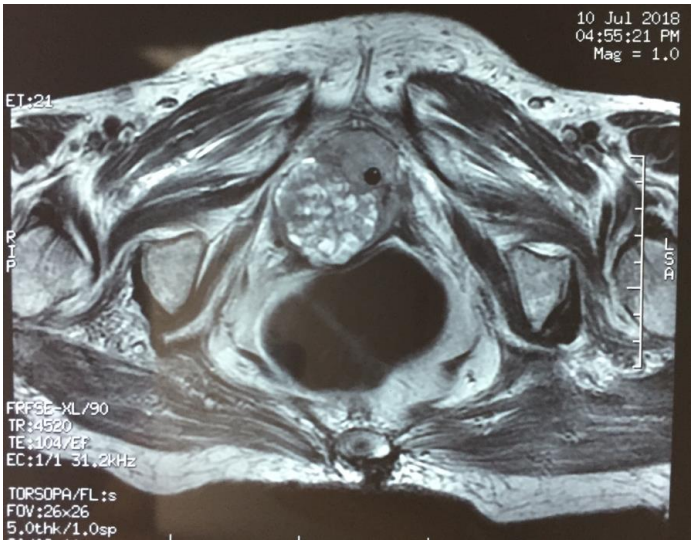

Fig-2: Axial MRI T2-weighted image of the pelvis showing a large urethral mass with heterogeneous enhancement in the bladder neck and urethra

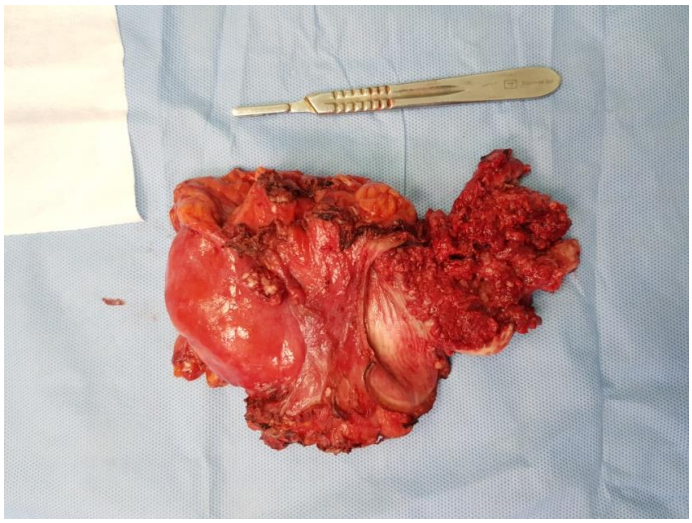

Fig-3: Cysto-urethrectomy specimen showing the tumor mass in the urethra

DISCUSSION

Primary carcinomas of the urethra are rare and only represent <1% of all cancers with an incidence rate of 4.3/million in males and 1.5/million in females [2].

Urethral stricture, chronic inflammation or irritation of urethra, and irradiation therapy are the major risk factors. Transitional cell carcinoma is the most frequent histological type (55%), while the rest are squamous cell carcinoma (21.5%), and adenocarcinoma (16.4%)[2].

There exist different symptoms where hematuria is the most important, and we can also find urinary hesitancy, urinary incontinence, and recurrent urinary tract infection [3].

MRI is useful at the diagnosis and staging of disease [4, 5]. Urethral tumors show low signal intensity on T1-weighted images and intermediate signal intensity higher than the skeletalmuscle on T2-weighted images.

The tumoral extension is aggressive; it is done locally touching the corpora and periurethral tissue. The site of the lymph nodes can be inguinal in relation to the spread of distal urethra or pelvic and hypogastric of the spread of proximal urethra [6].

In the majority of cases without a distal metastasis, the treatment is radical that consists of cysto-urethrectomy with pelvic lymph node dissection [7]. Adjunct radiotherapy has been utilized in a few cases with pelvic lymph node involvement. Few reports support the use of chemotherapy.

There isn't any standard at the surveillance and follow-up for primary carcinomas of the urethra. Our patient has received repeat imaging every 3 months.

CONCLUSION

Transitional cell carcinoma of the female urethra is an extremely rare disease. Its common symptom is hematuria, MRI imagery is important for local and regional staging. Radical surgery followed by regular surveillance achieved excellent oncologic outcomes in non-metastatic forms.

Conflict of interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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