

Oncology

Primary malignant urethral melanoma resembling a urethral caruncle

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1. Introduction

Primary malignant melanoma of the urethra is extremely rare, accounting less than 1% of all melanomas.¹ It is more common in women,^{1,2} and it usually originates from the distal urethra. For these reasons, it may be confused with a urethral caruncle.^{2,3} Only a few cases of urethral melanoma that were initially suspected to be urethral caruncle have been reported in the literature.³

2. Case report

A healthy postmenopausal 52 year-woman presented to our hospital with intermittent vaginal spotting. On physical examination, there was a mass protruding from the urethral meatus. It was 3-cm in diameter, tan colored, ulcerated, and hemorrhagic [Fig. 1]. Gynecological examination was otherwise normal. The lesion was primarily diagnosed as a symptomatic urethral caruncle. Therefore, it was removed by surgical excision. Urethrocystoscopic examination showed no abnormal findings in the urethra and the bladder. Histological examination of the surgical specimen revealed

malignant melanoma, spindle cell type [Fig. 2]. PET-CT scan revealed no evidence of metastasis or any other primary tumor. Based on these findings, the patient was diagnosed with primary urethral malignant melanoma.

3. Discussion

Primary malignant melanoma of the urethra is extremely rare, accounting less than 1% of all melanomas and 4% of all urethral cancers.¹ It has a 3:1 female predominance,^{1,2} and its more frequent in Caucasian population.² Most cases are diagnosed after the fifth decade,³ with an average age of 65 years.¹ Presenting symptoms include vaginal bleeding, palpable urethral mass, hematuria, dysuria and obstructive voiding symptoms.^{1,2}

Microscopically, urethral melanoma has a variable appearance,¹ up to one-fifth of primary malignant urethral melanomas are amelanotic,² requiring specific immunohistochemical stains such as S-100 for diagnosis.¹ Spindle cell melanomas are generally strongly and diffusely positive for S-100 protein, whereas second line melanocytic markers, such as Melan-A, HMB-45, and MITF are rarely useful, being expressed in less of 10% of cases.⁴



Fig. 1. Macroscopic appearance of the urethral melanoma at presentation. A 3 cm,tan colored, ulcerated and hemorrhagic mass protruding from the urethral meatus.

Abbreviations: PET-CT, Positron emission tomography–computed tomography.

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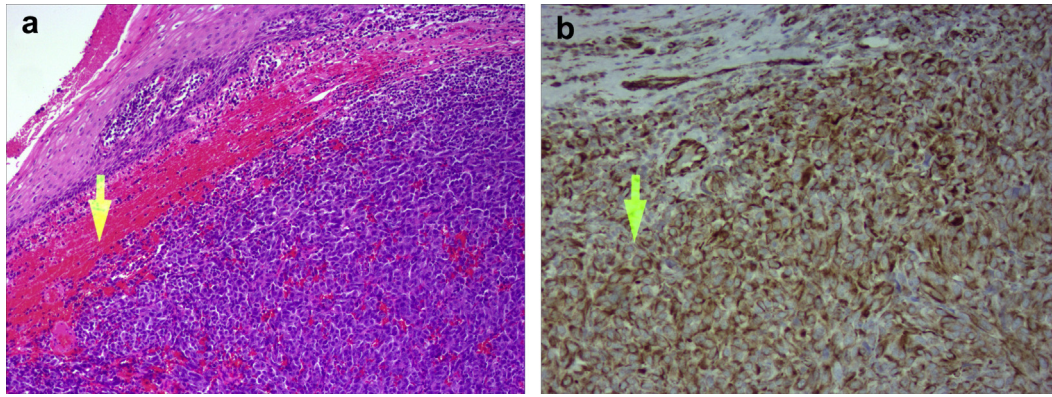


Fig. 2. Histopathology of the urethral specimen (a) H&E stain showing malignant spindle cells (b) immunohistochemical staining is positive for S-100 which is typical for melanoma.

Urethral caruncle occurs primarily in postmenopausal women, its generally appears as a soft pink or red polypoid nodule protruding from the meatus.⁵ Most cases of urethral melanoma in the female involve the distal third of the urethra.^{2,3} It is usually polypoid and it can be amelanotic, therefore, it may be confused clinically with a urethral caruncle.² In addition, a urethral caruncle can be in some cases purple or black in color,⁵ which makes it difficult to distinguish from a melanotic melanoma.

Other lesions that may be confused with a urethral melanoma include urethral polyp, mucosal prolapse, chancres and other malignancies of the urethra such as transitional cell carcinoma and sarcomas.^{2,5} Physicians should carefully differentiate primary neoplasms involving the urethra.²

Early diagnosis of urethral melanoma is very important due to the tendency to early metastasis.^{1,2} Delayed or misdiagnosis can result in a poor prognosis.^{1–3} Therefore, if the diagnosis of a urethral caruncle is uncertain, if the mass is irregular, firm, or has other characteristics suspicious for malignancy such as increasing size, local extension, induration, inguinal adenopathy, failure to respond to topical estrogen cream, it is indicated to perform an excisional biopsy to exclude melanoma or other malignancies.⁵

4. Conclusion

Primary malignant urethral melanoma which resembles a urethral caruncle is extremely rare with only few cases reported in the literature. However, it has a poor prognosis in cases of delayed or

misdiagnosis. Therefore, physicians should carefully assess a urethral caruncle to exclude urethral melanomas or other malignancies of the urethra.

Conflicts of interest

None.

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