



Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: <http://www.elsevier.com/locate/eucr>

Oncology

Primary malignant melanoma of the urethra in women: About a case



Fasnewinde Aristide Kaboré^a, Boureima Ouédraogo^{b,*},
 Franck Auguste Hermann Ademayali Ido^c, Tiennou Hafing^b, Haidjikiema Karama^b,
 Oumarou Traoré^b

^a Department of Urology of Yalgado Ouedraogo Teaching Hospital, Burkina Faso^b Department of Surgery and Surgical Specialties of Tingandogo Teaching Hospital, Burkina Faso^c Department of Pathological Anatomy of the Tingandogo Teaching Hospital, Burkina Faso

ARTICLE INFO

Keywords:

Urethra
 Melanoma
 Female

ABSTRACT

Primary malignant melanoma of the urethra in women is a rare tumor with a poor prognosis. We report the case of a 48-year-old patient who consulted for a mass in the urethral meatus associated with symptoms of the lower urinary tract. The result of the biopsy of the mass revealed a malignant melanoma confirmed by immunohistochemistry. The extension workup was negative. She had a total cystectomy with lymph node dissection done. The one-year follow-up was without particularity.

Introduction

Primary malignant melanoma of the urethra in women is an extremely rare cancer.¹ It accounts for 4% of urethral cancers and 0.2% of all melanomas.¹ It usually occurs in the distal urethra and has a poor prognosis due to early metastasis.²

We report one case of urethral melanoma in a woman and her surgical management.

Observation

48 years female, consults for a mass on the urethral meatus that she noticed and that has been growing for 2 weeks, associated with dysuria. She has no personal or family history of cancer, no alcohol or smoking intoxication. The clinical examination noted a good general condition, a painless ulcero-necrotic blackish mass exceeding the urethral meatus of soft consistency and bleeding (Fig. 1). On vaginal touch the distal urethra is hard, the vaginal wall is soft and the cervix is normal. There was no palpable inguinal adenopathy. Dermatological and other systems examinations, were normal. The cystoscopy noted a tumor in the distal third of the anterior wall of the urethra - the bladder was normal. A biopsy of the mass was done which revealed a malignant melanoma (Fig. 2). The tumor cells were negative for cytokeratin epithelial markers (AE1/AE3) and were immunoreactive for melanic markers (HMB45 and PS100) which confirmed the diagnosis of melanoma. On pelvic MRI

there was a 24x17 × 15 mm oval formation of the right anterolateral wall of the distal urethra (Fig. 3), and there was no adenopathy, nor rectal and vaginal involvement. The extension workup including a thoracoabdominal.

A total cystectomy was performed. The histological results of the resected specimen showed an urethral malignant melanoma involving the distal 1/3 of the urethra infiltrating the muscle, the internal 2/3 are healthy as well as the bladder. It was a malignant melanoma classified as pT2N0M0. The patient had no adjuvant treatment.

The thoraco-abdomino-pelvic CT scan performed at 3, 6 and 12 months after surgery were all normal.

After a one year follow up, the patient is free of any local recurrence.

Discussion

Malignant melanoma of the urethra in women is an extremely rare cancer, accounting for 0.2% of all melanomas.² To date there are less than 200 publications related to malignant melanoma of the urethra.^{3,4} No etiological factors are identified, but they occur in chronic inflammatory lesions, recurrent urinary tract infections and proliferative lesions such as papilloma, adenoma, polyp or leukoplasia.⁴ No etiological factor was found in our patient.

The main symptom is dysuria, in some patients there may be urethrorrhagia, burning sensation during urination, hematuria, pelvic-perineal pain, or a mass in the urethral meatus.^{4,5} The circumstances

* Corresponding author.

E-mail address: boureims@gmail.com (B. Ouédraogo).<https://doi.org/10.1016/j.eucr.2020.101542>

Received 14 November 2020; Received in revised form 13 December 2020; Accepted 15 December 2020

Available online 18 December 2020

2214-4420/© 2020 The Authors.

Published by Elsevier Inc.

This is an open access article under the CC BY-NC-ND license

<http://creativecommons.org/licenses/by-nc-nd/4.0/>.



Fig. 1. Blackish polypoid mass on the urethral meatus protruding into the vulva.

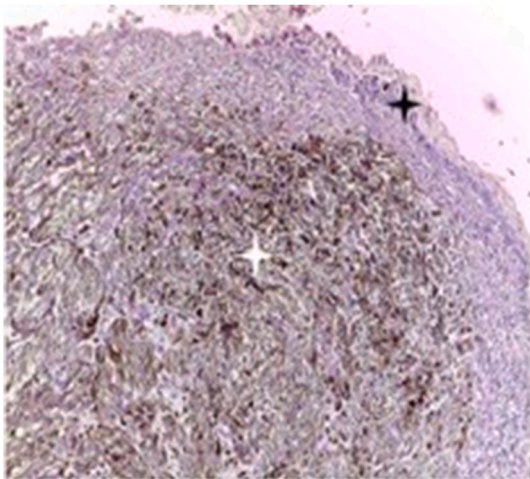


Fig. 2. Microscopy of the urethral melanoma G100 HE (hematoxylin and eosin) staining: partially abraded urothelium (black star) surmounting a chorion site of diffuse pigmented melanocyte proliferation (white star).

of discovery in our patient were dysuria and urethral mass.

The cystoscopy is performed to directly visualize the lesion, the mensuration, and detect associated bladder tumor. Urethral melanoma frequently presents as polypoid tumors and can be confused with other benign diseases.⁴ Initial management to confirm the diagnosis can be performed either by endoscopic resection of the tumor or biopsy when the mass bulged through the urethral meatus. We biopsied the mass because the tumor was external in our patient. Histologically, mucosal melanomas are different from cutaneous melanomas; they are most often undifferentiated tumor proliferation.³ Since the immunohistochemical characteristics are similar to those of cutaneous melanomas, tumor markers are often used to refine the diagnosis. The most frequent positive markers are the anti-protein antibody S100 and the HMB 45 antibody, the last being more specific for melanoma cell but less sensitive than S100.³ Both antibodies were positive in our patient.

MRI is currently the reference workup for urethral tumor spread



Fig. 3. MRI of the pelvis showing the oval formation of the right anterolateral wall of the distal urethra.

assessment. MRI showed a 24x17 × 15 mm oval formation of the right anterolateral wall of the distal urethra, and there was neither lymph node nor rectal and vaginal involvement. For the distant extension a thoracoabdominal CT scan was performed which did not reveal any metastasis.

There is no gold standard treatment for urethral melanomas. Management includes a less radical surgery (local excision; partial or total ureterectomy), with or without inguinal lymphadenectomy, and radical (anterior pelvic) surgery, but none has been shown to be the best in patient survival.² Total ureterectomy causes urinary incontinence after surgery. We had performed a total cystectomy with a one-year follow-up, and the patient did not develop any local or distant extension. Nevertheless, a one year's follow-up does not assure us of the final income, hence the importance of keeping on with the follow-up every three months. Some authors have combined radiotherapy or chemotherapy with no apparent benefit.²

Conclusion

Malignant melanoma of the urethra in women is very rare. The clinical signs are dominated in our patient by dysuria and urethral mass. Histology with immunohistochemistry examination confirmed the diagnosis. Management consisted of a total cystectomy. The prognosis is good after one year.

Author contribution

All authors have contributed to this work and have read and approved the final version of the manuscript.

Declaration of competing interest

The authors declare no conflict of interest

References

- Avances C, Lesourd A, Michel F, Mottet N. Tumeurs primitives de l'urètre. Épidémiologie, diagnostic et anatomopathologie. Recommandations du comité de cancérologie de l'Association française d'urologie. *Prog Urol.* 2009;19:165–169.
- Di Marco DS, Di Marco CS, Zincke H, et al. Outcome of surgical treatment for primary malignant melanoma of the female urethra. *J Urol.* 2004;171:765–767.

3. Nianqin Y, Jdong L, Yongning L, Jianming G, Hang W. Primary malignant melanotic melanoma and hypomelanotic melanoma of the female urethra :case series and a review of the literature in China. *Melanoma Res.* 2019;29:59–64.
4. Filipkowski LA, Barker MA, Karram MM. Primary genitourinary melanoma presenting as voiding dysfunction. *Int UrogynEcol J Pelvic Floor Dysfunct.* 2009;20:1141–1143.
5. Bhutani Namita, Pradeep Kajal, Devendra Pawar. Primary malignant melanoma of the female urethra: report of a rare neoplasm of the urinary tract. *Int J Surg Case Rep.* 2017;41:319–322.