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Primary Melanoma of the Female Urethra: About One Case

Armel Quentin Essomba[1], Frantz Epoupa Ngalle[2], Jean Cedric Fouda[2,3], Akade Nfor-Budi Nli[2], Philip Fernandez Owon'Abessolo[1], Stephane Ebongue Njoume[3], Bright Awah Awondo-Che[3], Herve Moby Mpah[1]

[1]Department of Surgery and Specialties, Faculty of Medicine and Pharmaceutical Sciences, University of Douala, Douala, Cameroon
[2]Department of Surgery and Specialties, Faculty of Medicine and Biomedical Sciences University of Yaoundé 1, Yaoundé, Cameroon
[3]Urology Service, Yaoundé Central Hospital, Yaoundé, Cameroon
Email: armelessomba81@gmail.com

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Abstract

Melanomas of the urinary tract are rare aggressive cancers, often with very poor prognoses. We report a case of primary melanoma of the female urethra in a 69-year-old female farmer who was referred for the management of a vulvar mass associated with dysuria and urinary frequency. Clinical examination revealed a blackish mass measuring approximately 4 cm at the distal end of the urethra, mobile with necrotic and purulent plaques, bleeding on contact. The anterior vaginal wall was not involved. Diagnostic cystoscopy showed mild bladder trabeculations. A CT scan of the thorax, abdomen and pelvis did not reveal any distant metastases. The mass was resected after a straightforward procedure. The diagnosis was established after a histopathology report. We discuss this case as we review the literature relevant to the case.

Keywords

Malignant Melanoma, Female, Urethra

1. Introduction

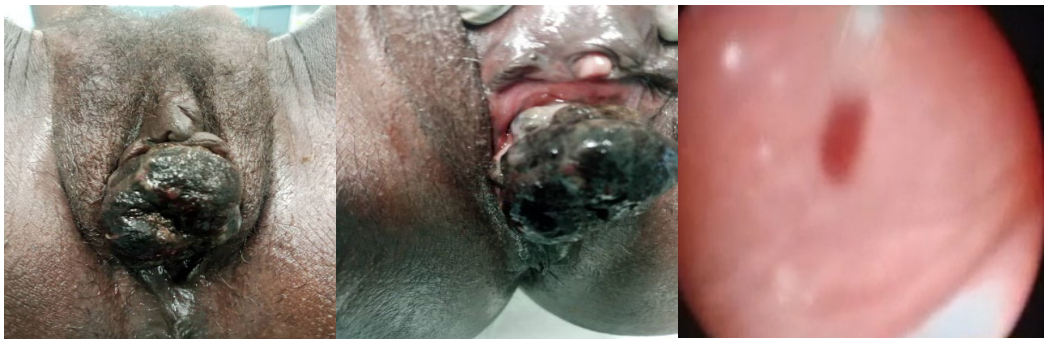
Mucosal Melanomas are a rare histologic subtype of melanomas. As a result of being rare, they are poorly represented in clinical trials. This makes most of their management based on extrapolations from studies of the more prevalent cutaneous type. Melanomas can arise from the respiratory, genitourinary and gastrointestinal mucosae because melanocytes are found in every epithelium. Compared to their cutaneous counterparts, they have a stable incidence, no discrimination by race exists, and their incidence is UV-light independent. Wide local excision is

recommended for localised resectable lesions. For more advanced disease states, the advent of immunotherapy and systemic chemotherapy has led to a modest improvement in the already established high recurrence and poor survival rates [1]. Melanomas of the genitourinary mucosa account for about 18% of mucosal melanomas and are the third most common site of predilection for mucosal melanomas behind the head-neck and anorectal areas [1] [2].

We present a case of primary malignant melanoma of the female urethra in an elderly patient. The diagnosis was confirmed by histopathology after excision of a urethral mass. The patient was sent to an oncology centre for chemotherapy. Given the paucity of publications on this rare pathology, we found it interesting to share our experience in managing this case.

2. Case Presentation

We received a 69-year-old female farmer referred for the management of a vulvar mass associated with dysuria and pollakiuria. Symptoms started 07 months prior to referral. The physical exam was remarkable for a 4 cm fungating, black, mobile mass on the urethral meatus, with necrotic, purulent plaques and contact bleeding. There was no anterior vaginal wall induration or suspicious lesions. Dermatological examination was unremarkable. The rest of the general physical exam was normal. Diagnostic cystoscopy revealed mild bladder trabeculae without any other significant lesions. A contrast CT scan of the thorax, abdomen, and pelvis showed no evidence of local or distant metastasis. Having established the localised nature of the mass, we opted for a wide excision of the mass under general anaesthesia, and the excised tissue was sent for histopathology. The pathology result found a malignant invasive melanoma level 3, according to Clark, with positive margins pT4b M0 Nx. Immunohistochemistry was not done. Cognisant of the presence of residual tumour, the patient opted out of any further surgery. She was referred to an oncology centre, where an adjuvant chemotherapy protocol was planned, combining cisplatin and dacarbazine. Unfortunately, she didn't receive any course of adjuvant treatment before becoming lost to follow. (**Figures 1-3**)



(A) (B) (C)

Figure 1. Clinical findings. Aspect of tumour around urethral meatus (A), Tumour seen from slightly aerial/upper view with superior margins exposed, following retraction of the clitoral hood (B), cystoscopy showing no abnormal mucosa pigmentation (C).

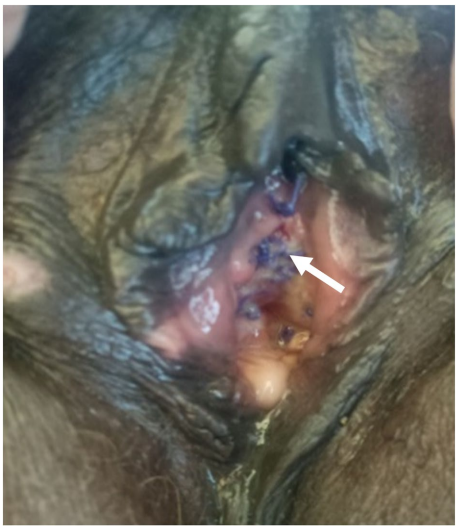
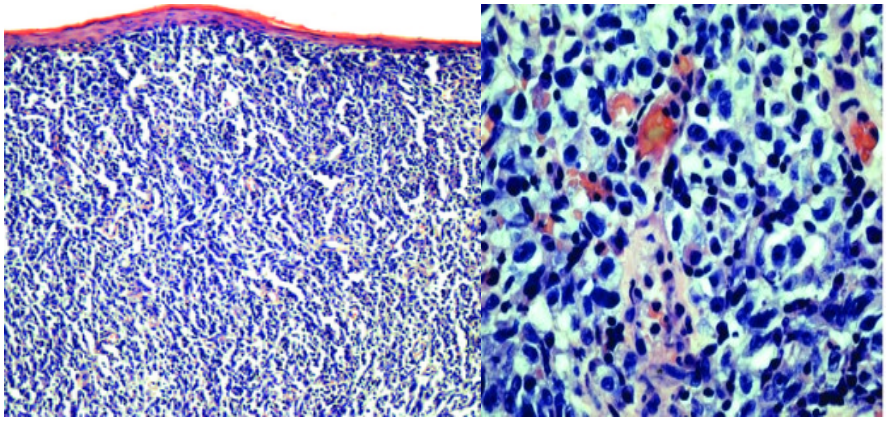


Figure 2. Image of the external genitalia 1 week after resection. The white arrow points to urethral orifice. Beneath is the vaginal orifice.



(A) (B)

Figure 3. Histology of urethral melanoma. (A) Sheet-like arrangement of epithelioid tumour cells just underneath the epithelium. (B) Pleomorphic epithelioid tumour cells with pale cytoplasm are seen.

3. Discussion

Malignant melanomas involving mucosal surfaces are a rare form of cancer, accounting for 1% of all melanomas [1]-[3]. Urethral malignant melanoma is reported to be among the rarest of mucosal melanomas [2].

Urethral malignant melanomas are mainly cancer of the elderly with a female preponderance [1]-[5]. Median ages ranging from 60 to 70 years and average ages ranging from 68 to 75 have been reported in the literature. Our patient matches this age profile and distribution. Female-to-male ratios of 3:2 to 2:1 are reported in the literature, *i.e.*, about 60% to 70% of cases are women. Patients as young as 32 years have been reported to suffer from this cancer [1]-[5].

The location of predilection is the distal urethra [3] [6], and the main clinical findings in decreasing frequency include urethral mass, dysuria and local bleeding

[4]. Our patient conforms to the typical clinical presentation. This cancer easily spreads contiguously as 40% to 44% of patients present with invasion of periurethral tissue at diagnosis [4]. The histopathology findings in our patient suggest that there was a local invasion, given that there were positive margins after excision.

The definitive diagnosis of malignant melanoma relies on the results of histopathology, which includes a wide range of abnormal findings. Specific markers also exist that can help refine the diagnosis, including Melan A/MART-1, HMB 45, and s100a protein. No marker was requested in our case, and we relied solely on histopathology results. The use of immune histochemistry is not a routine test in our setting, and it is requested on a case-by-case basis. A number of staging systems exist to determine the prognosis of these lesions, such as the Clark staging and Breslow classifications. Both grading systems focus on tumour depth. However, they are of limited use in mucosal melanomas. Some authors recommend Chung's index for prognostic evaluation of urethral melanomas, but not much detail is given as to its utilisation, and there seems to be no universal consensus advocating for its use [6] [7]. We opted for the Clark staging because it is more common and easy to use.

A consensus concerning treatment protocols for urethral melanoma has not been reached. Most case reports and systematic reviews report wide primary excision as the first-line treatment. Wide primary excision is suitable for localised lesions without clinical signs of locoregional spread or distant metastasis. The options for primary surgery usually involve a partial urethrectomy or radical urethrectomy with sentinel node removal. Adjuvant treatment is employed in cases of recurrence or distant metastasis and includes variable combinations of chemotherapy, radiotherapy, immunotherapy and anterior pelvic exenteration. The approach to unresectable tumours is geared towards palliative treatments and precludes any forms of surgery [1] [2] [4]-[6] [8] [9]. Our patient was managed with primary excision and adjuvant chemotherapy.

Most, if not all, literature agrees on its aggressive nature. It has a high recurrence rate and a poor cancer survival rate. This poor survival rate is further compounded in resource-limited settings such as ours, where patients present late and sometimes management is truncated.

4. Conclusion

Melanoma of the female urethra is a pathology infrequently encountered by clinicians, resulting in a scarcity of literature and definite recommendations regarding management. Patients with localised disease will show some clinical improvement if radical surgery is combined with adjuvant chemotherapy. Nonetheless, in the majority of cases, the prognosis is very poor.

Consent

Written informed consent was obtained from the patient for publication of this

case report and accompanying images.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Abbreviations

CT scan: Computed tomography scan