

FEMALE URETHRAL MALIGNANT MELANOMA WITH VESICAL INVASION: A CASE REPORT

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We report a 75-year-old female with a primary urethral malignant melanoma. A mass protruding from inside the urethra was detected on physical examination. Abdominopelvic magnetic resonance imaging revealed a mass extending from the urethra with dimensions of 4 × 2 cm, and periurethral heterogenous fatty planes consistent with infiltration. The histopathologic examination was consistent with HMB45(+) malignant melanoma. We performed cystourethrectomy and bilateral inguinal and pelvic lymphadenectomy in one session. The pathology report revealed primary malignant melanoma of the urethra invading the inferior bladder wall. The patient received no adjuvant therapy because of cardiopulmonary morbidities and the presence of multiple pulmonary metastases. The patient eventually died 13 months after surgery.

Key Words: female, malignant melanoma, urethra, vesicle invasion
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Malignant melanoma originating from the urethra in females is very aggressive with poor prognosis, and accounts for 0.2% of all malignant melanomas and 4% of urethral cancers [1]. In this case report, vesical invasion of a large primary urethral malignant melanoma and the need for cystectomy are discussed.

CASE PRESENTATION

A 75-year-old, non-smoking female presented at our clinic with voiding dysfunction and a urethral mass. Physical examination revealed a 4–5 cm brown mass covered with dirty yellowish material protruding from inside urethra through the labia majora (Figure 1).

On abdominopelvic magnetic resonance imaging, a mass extending from the urethra with dimensions of 4 × 2 cm, and periurethral heterogenous fatty planes consistent with infiltration, were noted (Figure 2). Since the histopathologic examination was consistent with HMB45+ (melanoma antibody) malignant melanoma, cystourethrectomy, and bilateral inguinal and pelvic lymphadenectomy were performed in one session (Figure 3). The final pathology report revealed a primary urethral malignant melanoma with a largest diameter of 4.5 cm, which covered 3 cm² of the inferior bladder wall (Figure 4). The primary tumoral mass was 1 mm away from the surgical margin. Histopathological examination of the bilateral lymph nodes (10 right-sided and 7 left-sided lymph nodes) stained with hematoxylin/eosin and Mason-Fontana dyes did not show any evidence of metastatic foci.

Postoperative adjuvant chemotherapy was not deemed appropriate because of the patient's cardiopulmonary morbidities and the presence of multiple pulmonary metastases. The patient eventually died 13 months after surgery.



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Figure 1. Mass expanding from inside the urethra and labia.

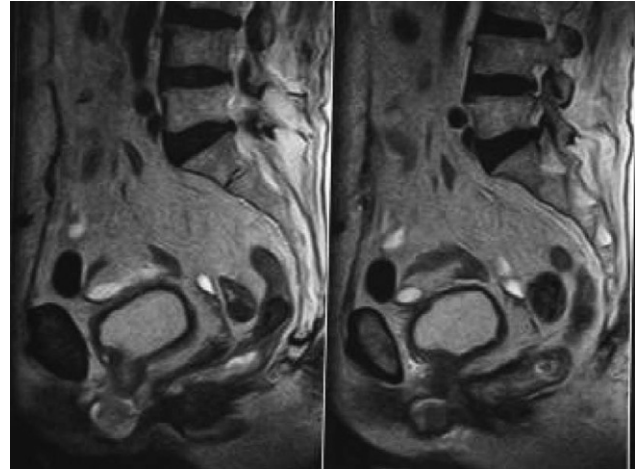


Figure 2. Magnetic resonance imaging of the urethral mass and bladder.

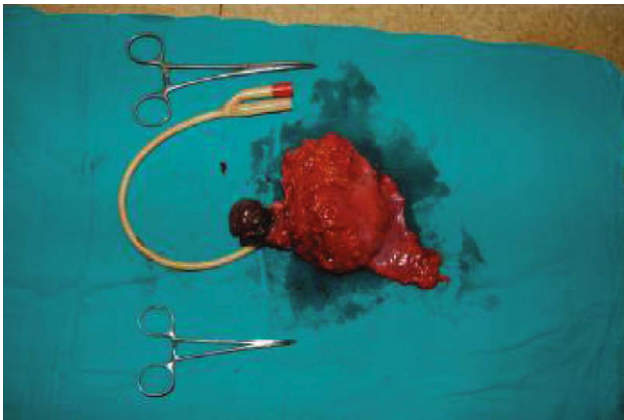


Figure 3. Cystourethrectomy material.

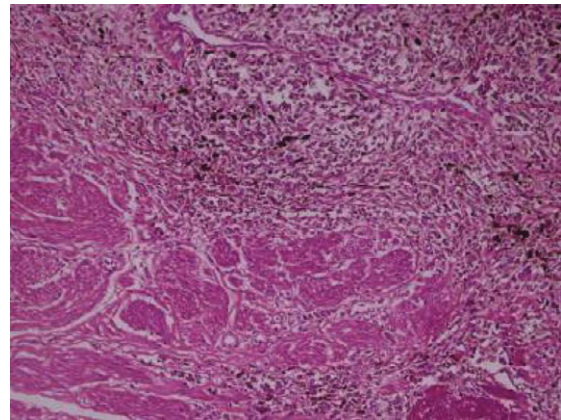


Figure 4. Histologic assessment of the urethral malignant melanoma with vesical involvement (hematoxylin and eosin; original magnification, 125 \times).

DISCUSSION

This rarely seen, primary malignant melanoma of the urethra usually originates from the distal urethra [2]. The prognosis of urethral malignant melanoma is worse than that of skin melanoma. The prognosis is related to the time of the patient's referral, delay in diagnosis, depth and the level of invasion, and the mitotic ratio. Other important etiologic factors affecting prognosis is the failure to reach and excise adequate surgical margins due to anatomic limitations [3].

Other approaches to manage urethral malignant melanoma include partial or radical urethrectomy. Partial urethrectomy is not considered adequate for local control. DiMarco et al reported local recurrence

in six of seven patients who underwent partial urethrectomy with a minimum negative surgical margin of 2.5 mm [4]. In the present case a 0.1-cm negative surgical margin was achieved. Because of the local aggressiveness of malignant melanomas, a minimum negative surgical margin of 2.5 cm is recommended [5]. In some studies local recurrence was reportedly increased to 100% after partial urethrectomy [6,7]. Considering these data, the length of the negative surgical margin is thought to be an influential parameter on local recurrence and survival.

DiMarco et al concluded that none of the patients who had undergone partial urethrectomy with subsequently detected recurrence had bladder involvement. However, as reported in the literature, bulky

(>0.76 mm) malignant melanomas progress more rapidly with increasing rates of local recurrence and metastases [8,9]. In our case a tumoral mass measuring 4.5 cm in diameter, and covered an area of 3 cm² within the muscular layer of the inferior vesical wall. This finding suggests a positive correlation between the size of the tumor and vesical invasion. Since the female urethra is about 4–5 cm long, and considering the difficulty in achieving a sufficiently longer negative surgical margin during the resection of tumors with larger diameters, radical cystourethrectomy might be a preferred approach.

Local relapse and systemic metastases often develop in the early postoperative period after surgery for urethral malignant melanoma. Therefore, surgery alone is not adequate to control local relapses and systemic metastases, and effective postoperative adjuvant therapy is required to prevent the progression of the disease. Combined use of multiple chemotherapeutic agents such as cisplatin, dacarbazine, carmustine, and tamoxifen has been recommended in lieu of monotherapy [10]. However, even combination regimens do not satisfactorily increase the survival rates of patients with metastatic melanoma. Immunotherapy based on α -interferon and tumor vaccines has also been suggested in recent studies [11]. Unfortunately, a chemotherapeutic regimen could not be administered to our case because of the adverse cardiopulmonary side effects.

In conclusion, because partial urethrectomy is inadequate for local control of tumors, radical urethrectomy is recommended for the surgical treatment of urethral malignant melanoma in females. Therefore, cystourethrectomy should be considered based on

the possibility of vesical involvement, particularly in females with larger urethral malignant melanomas.

REFERENCES

1. Robutti F, Betta PG, Bellingeri M, et al. Primary malignant melanoma of the female urethral meatus. *Eur Urol* 1986;12:62–3.
2. Ander H, Esen T, Tellaloglu S, et al. Successful management of malignant melanoma of male urethra with local excision and adjuvant radiochemotherapy. *Prog Clin Biol Res* 1991;370:379–83.
3. Schrader AJ, Probst-Kepper M, Grosse J, et al. Molecular and prognostic classification of advanced melanoma: a multi-marker microcontamination assay of peripheral blood stem cells. *Melanoma Res* 2000;10:355–62.
4. DiMarco DS, DiMarco CS, Zincke H, et al. Outcome of surgical treatment for primary malignant melanoma of the female urethra. *J Urol* 2004;171:765–7.
5. Podratz KC, Gaffey TA, Symmonds RE, et al. Melanoma of the vulva: an update. *Gynecol Oncol* 1983;16:153–8.
6. Oliva E, Quinn TR, Amin MB, et al. Primary malignant melanoma of the urethra: a clinicopathologic analysis of 15 cases. *Am J Surg Pathol* 2000;24:785–96.
7. Nguyen AT, Kavolius JP, Russo P, et al. Primary genitourinary melanoma. *Urology* 2001;57:633–8.
8. Breslow A. Thickness, cross-sectional areas and depth of invasion in the prognosis of cutaneous melanoma. *Ann Surg* 1970;172:902–8.
9. Lehman JA, Cross FS, Richey WG. Clinical study of forty-nine patients with malignant melanoma. *Cancer* 1966;19:611.
10. McClay EF, McClay ME. Tamoxifen: is it useful in the treatment of patients with metastatic melanoma? *J Clin Oncol* 1994;12:617–26.
11. Yoshizawa T, Kawata N, Sato K, et al. Primary malignant melanoma of the female urethra. *Urology* 2007;70:1222.e13–6.