

Malignant Melanoma of Glans Penis and Prepuce Treated with Organ-Preserving Surgical Procedure

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SUMMARY The authors present a case of malignant melanoma of glans penis and prepuce. An organ-preserving operative procedure using buccal mucosa was performed with subsequent inguino-femoral modified lymphadenectomy. There was no disease progression during the follow-up period of twelve months.

KEY WORDS: malignant melanoma, glans penis, prepuce, organ-preserving surgical procedure, buccal mucosa

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INTRODUCTION

Genitourinary localization of malignant melanoma is extremely rare and is associated with poor prognosis. Its frequency is below 1% of neoplasms of genitourinary tract (1). Literature review yields isolated reports on malignant melanoma of glans penis (2,3); malignant melanoma of prepuce (4); and malignant melanoma of corpus of the penis (5-8). Reports of multifocal localization of genitourinary malignant melanoma are also extremely rare (9,10). The low number of reported cases does not allow for development of a standardized therapeutic protocol, which results in treating malignant melanoma very often similarly as other malignant tumors of the penis.

We present a case of malignant melanoma of glans penis and prepuce, which was treated with an organ-preserving operative procedure and bilateral inguinal and femoral lymphadenectomy.

CASE REPORT

Our patient was a 65-year-old Caucasian male with a major complaint of a dark-bluish spot on the back of glans penis. The patient had noticed the lesion two years before, but in the past two months it grew substantially and colored black. On physical examination, a tumor growth measuring 20x10 mm was observed, originating from glans penis near corona glandis, of inhomogeneous



Figure 1. Non-homogenous, brown-black tumor measuring 20x10 mm, located on glans penis.

brown-black color and comparatively smooth but firm surface (Fig. 1). Another mobile rounded lesion of 5x6 mm in dimension and bluish color was found on the inner preputial surface.

On palpation of lymph nodes in the left inguinal area, a slightly enlarged lymph node measuring 10x12 mm and suspect of metastasis was found. Computer axial tomography (CAT) and ultrasonog-



Figure 2. Partial glansectomy with circumcision in healthy tissue.

raphy (US) of pelvic and abdominal area did not reveal any pathologic signs. Colloid scintigraphy of inguinal lymph nodes revealed a single zone of increased activity in the left inguino-femoral area.



Figure 3. Buccal mucosa graft for covering the defect on glans penis.



Figure 4. Excised lymph nodes with a macroscopic metastasis.

Following thorough discussion with the patient, upon his explicit request, an organ-preserving operative procedure was performed, i.e. partial glansectomy with circumcision into healthy tissue, confirmed with histologic slides (Fig. 2). The defect in glans penis was covered with a free buccal mucosa graft (Fig. 3), followed by bilateral inguinal

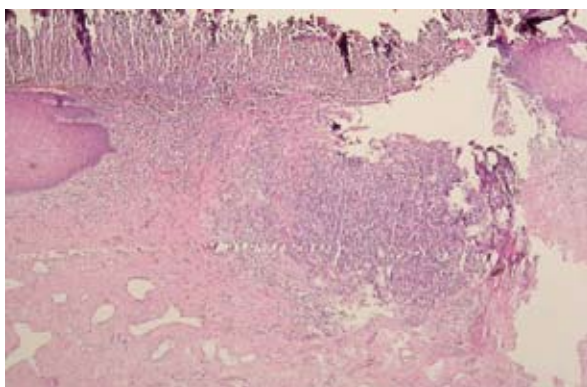


Figure 5. Histopathologic examination with hematoxylin-eosin staining (x100): malignant melanoma exulcerating the epithelium with marked vertical expansion and scarce deposition of pigment in superficial layers.

and femoral lymphadenectomy (Catalona) as the second procedure. In one of the excised lymph nodes, a macroscopic metastasis of characteristic black color was found (Fig. 4).



Figure 6. The patient one year after the surgery.

Pathology report indicated malignant melanoma ulcerating the epithelium, with marked vertical expansion. There were scarce pigment deposits in superficial layers (Fig. 5). On immunohistochemistry, S100 reaction was positive in 50% and HMB reaction in 45% of tumor cells.

One year after the operation, the patient felt healthy, with organ preserved function and no signs of new metastasis (Fig. 6).

DISCUSSION

Malignant melanoma is one of the most malignant neoplasms in human pathology. It is a pigment tumor, which results from malignant transformation of nevi or precancerous melanosis of Dubreuilh. Nowadays it is generally accepted that most melanomas develop *de novo*, while only 25%-40% of melanoma arise in conjunction with a melanocytic nevus (11). Malignant melanoma is an extremely rare tumor in the region of male genitals, where its most frequent localization is glans penis (8). The diagnosis is based on the characteristic brown-black color of the lesion and results of histopathologic examination. The prognosis depends on clinical stage (Bracken and Diokno classifications), and on the depth and level of tumor invasion (Breslow index, Clark's degree of dermal invasion) (8).

The case described is interesting because of the rare localization, involving both glans penis and prepuce.

The treatment of malignant melanoma is predominantly surgical, the scope being determined by tumor stage, patient age and his sexual activity. Partial glansectomy followed by inguino-femoral bilateral lymphadenectomy provides an opportunity the disease control and better quality of life (3). Covering the defect in glans penis with a buccal mucosa graft yields superior cosmetic results and allows for effective closure of the wound.

CONCLUSION

Surgical treatment of penile melanoma using Mohs micrographic surgery as well as sentinel lymph node biopsy should also be considered (12).

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