PRIMARY VAGINAL AMELANOTIC MELANOMA

Hsia-Kuei Huang, I-Feng Liu, Chung-Liang Ho, Cheng-Yang Chou, Ya-Min Cheng*
Department of Obstetrics and Gynecology, and 1Department of Pathology, College of Medicine,
National Cheng Kung University and Hospital, Tainan, Taiwan.

SUMMARY

Objective: Primary vaginal melanoma is a very rare tumor entity, with a poor prognosis. The diagnosis is evident when melanin pigment is present within the tumor. However, the diagnosis of an amelanotic melanoma is problematic and should be differentiated from other conditions such as sarcoma, adenocarcinoma or small cell carcinoma. We present a patient with abnormal vaginal bleeding, with a diagnosis of amelanotic melanoma of the vagina confirmed by immunohistopathologic examination.

Case Report: A 78-year-old woman was brought to our hospital because of postmenopausal vaginal bleeding for several days. Physical examination revealed two erythematous nodules, about 1 cm in size, in the upper-third of the vagina. Biopsy of the vaginal tumor showed a high-grade sarcoma. She underwent a wide local excision of the lesion, and histology confirmed the diagnosis of amelanotic melanoma due to strong staining of Melan-A.

Conclusion: The diagnosis of amelanotic melanoma of the vagina is sometimes difficult. Immunohistochemistry may be required to provide additional diagnostic information in problematic cases. [Taiwanese J Obstet Gynecol 2005;44(2):177–179]

Key Words: amelanotic melanoma, HMB-45, immunohistochemistry, Melan-A, S-100

Introduction

Primary vaginal melanoma is an aggressive and rare malignancy of the vagina, accounting for 0.3–1.3% of all melanomas in women and 3% of all vaginal malignancies [1,2]. They tend to occur in the sixth and seventh decades of life, and present mostly on the distal or lower one-third of the vagina, especially in the anterior and anterior-lateral aspects of the vaginal wall. Although several therapeutic modalities have been suggested, the reported 5-year survival rate is dismal, ranging from 0% to 25% [1,3,4]. Diagnosis is based on the presence of melanin pigment within the tumor. However, additional immunohistochemical examinations are required for non-pigmented lesions to establish the diagnosis and to differentiate these tumors from other cancers.

We report a case of amelanotic melanoma that occurred on the unusual site of the upper one-third of the vagina. Diagnosis was confirmed by the positive staining for Melan-A, rather than S-100 or HMB-45.

Case Report

A 78-year-old, gravida 5, para 5, woman was brought to our hospital with the chief complaint of postmenopausal vaginal bleeding. Review of her past medical and family history did not reveal any contributory factors. Menopause occurred when she was in her forties, and she had never used hormone replacement therapy.

Physical examination revealed two erythematous lesions about 1 cm in size on the upper-third of the vaginal wall (Figure 1). Biopsy of the lesion revealed a high-grade sarcoma, although the possibility of malignant melanoma was also suspected. Immunohistochemistry studies showed that the tumor cells were positively stained with vimentin and CD-10, only focally
positive for S-100, and negative for HMB-45 and cytokeratin, indicating that the diagnosis of melanoma was less likely (Figure 2). A series of examinations, including pelvic computed tomography scan, ultrasonography, chest X-ray, and blood chemistry, showed no evidence of distant metastasis or tumor invasion to adjacent organs.

The patient underwent wide local excision of the vaginal tumor, total hysterectomy, and pelvic lymph node sampling. The operative findings were a vaginal tumor with no obvious extension to adjacent tissues. The surgical margin was almost 1 cm free from tumor involvement. The corpus uteri, adnexal and pelvic lymph nodes were unremarkable. The postoperative course was uneventful. Adjuvant therapy was suggested, but the patient sought help from alternative medicine. No evidence of tumor recurrence was detected 3 months after surgery.

Histopathologic examination showed a high-grade tumor with marked cellular atypia (Figure 3). The mitotic counts were 2–3 per 10 high-powered fields. The tumor cells involved the vaginal stroma, with depth of invasion up to 2.5 mm. The corpus uteri, adnexal and pelvic lymph nodes were free of tumor invasion. Immunohistochemistry studies showed that the tumor cells stained with Melan-A (Figure 4), were only focally positive for S-100 and CD-10, but negative for cytokeratin, indicating its origin from melanocytes. The tumor cells did not exhibit enhanced expression of CAM5.2, inhibin, and CD31 (results not shown).

Discussion

Malignant melanoma of the vagina is a very rare tumor entity that is mainly characterized by the presence of melanin pigment within the tumor. However, less than 10% will lack pigmentation. Immunohistochemistry may be required to provide additional diagnostic information in these amelanotic tumors to establish the diagnosis and to differentiate these tumors from other cancers such as adenocarcinomas, small cell carcinomas, and...
Vaginal Amelanotic Melanoma

S-100 is a calcium-binding protein that is present in the nucleus and cytoplasm of melanocytes, and it is one of the most sensitive markers for melanoma. However, it is also positive in several other benign and malignant tumors. Therefore, stains such as HMB-45 may be used concomitantly to confirm a diagnosis of melanoma [6]. More recently, Melan-A has been introduced as a marker for the diagnosis of melanoma, especially when the results of S-100 or HMB-45 staining are equivocal [7].

In clinical appearance, most patients with malignant melanoma of the vagina are postmenopausal with a range of complaints and symptoms. Most patients present with nonspecific symptoms such as vaginal bleeding, vaginal discharge and vaginal mass. Due to the rarity of this disease, treatment modalities are far from established. In most reports, treatment is most commonly by surgery combined with or without chemotherapy, cytokine or radiation. The role of combined therapeutic modalities in improving survival remains to be determined, and most of the patients in the reported cases died or succumbed to recurrence [8–14].

In summary, vaginal melanoma is an uncommon disease with a poor prognosis. It may appear as a pigmented or amelanotic lesion which needs to be differentiated from other malignant tumors. Immunohistochemistry with S-100 and HMB-45 staining, or with Melan-A as in this particular patient, may be required to provide additional diagnostic information to establish the diagnosis.

References


Figure 4. Immunohistochemical studies of the vaginal tumor cells showed strong staining with Melan-A (original magnification x 400).