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CASE REPORT

Vaginal Amelanotic Nodular Malignant Melanoma in A Middle-Aged Female: A Rare Case Report and Review of Literature

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About the Author

Satyanarayan is a second year Resident in the Department of Radiation Oncology. He always self starter, disciplined, confident and goal oriented. He have a keen interest in the area of publication as author as well reviewer and this has been resulted in several publications in indexed journals and conferences (National and International)

Introduction

Primary vaginal malignant melanoma accounts for <1 % of all malignant melanomas and <3 % of primary malignant tumors of vagina. The tumor was typically reported in the sixth and seventh decades, and occurs in the distal third of the vagina, mostly on the anterior vaginal wall. Amelanotic melanoma is a unique variant due to the absence of melanin pigmentation and accounts for only 2 % of all vaginal melanomas. So, it is difficult to differentiate from other epithelial and nonepithelial malignancies. The malignant melanoma is an aggressive tumor and has a poor prognosis with a 5-year survival rate of 5–25 % [1].

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Case Report

A 45-year-old lady (G_4P_4) presented with complaints of bleeding per vagina and feeling of foreign body sensation in the lower one-third of vagina for the previous 2 months. Physical examination revealed approximately 3 × 2 cm size, raised irregular nodular thickening of the anterior vaginal wall, and the color of the abnormality was similar to the surrounding mucosal lining. MRI scan reveals thickening of the anterior wall of the vagina, appearing hypointense on T1-weighted images and hyperintense on

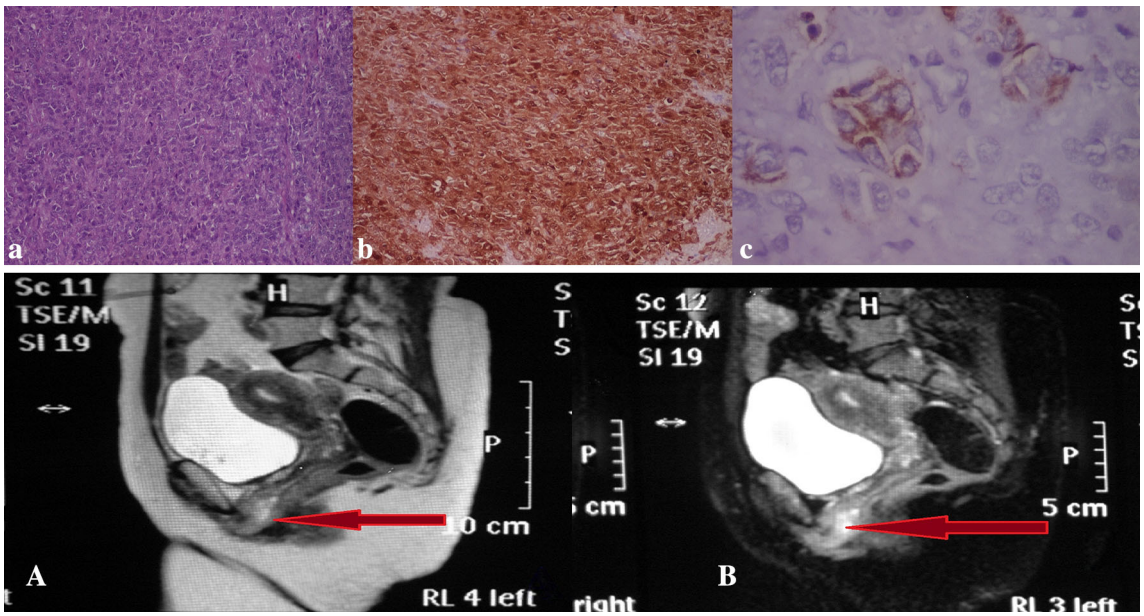

Fig. 1 **a** Microscopic findings, **b** S-100 strongly immunoreactive (4+), **c** HMB-45 focally immunoreactive in deeper invasive cells (1+) and strongly immunoreactive in junctional mucosal nests (4+). MRI scan revealing thickening of the anterior wall of the vagina appearing hyperintense on T2-weighted (**A**) and SPAIR (**B**) images. No other abnormalities were found on local and pelvic examination

T2-weighted and spair images (Fig. 1 A,B). The excisional biopsy was undertaken, and the specimen tissue was fixed in formalin and embedded in paraffin. After a routine processing, the pathological examination revealed the possibilities of poorly differentiated carcinoma or malignant nodular amelanotic melanoma. The specimen showed lymphovascular invasion. The maximum tumor thickness was 15 mm (Breslow's grade V), and distal margin was uninvolved and only 1mm (close margin) away from invasive carcinoma. The immunohistochemistry (IHC) studies revealed that S-100 and vimentin stained strongly positive, while HMB-45 was focally immunoreactive in deeper invasive cells (1+) and strongly immunoreactive in junctional mucosal nests (4+) and cytokeratin and leukocyte common antigen (CD45) were nonimmunoreactive (Fig. 1 a,b,c). She underwent wide local excision followed by adjuvant external beam radiotherapy. The patient was disease free at the 6-month follow-up after treatment.

Discussion

The amelanotic melanoma has chances of being misdiagnosed as undifferentiated carcinoma or sarcoma due to the absence of melanin pigmentation. The most commonly reported complaints in vaginal melanomas are vaginal bleeding, discharge per vagina, and feeling of a mass in the vagina. Grossly, the tumor is of almost pigmented polypoid-nodular appearance, and only 10–23 % are amelanotic. IHC study of such lesions is recommended to confirm the diagnosis. Various immunohistochemical staining methods are available for the diagnosis of melanoma, including S-100, HMB-45, and Melan-A. S-100 was reported to be the most sensitive marker. The specificities of markers HMB-45, S-100, and Melan-A, are almost 100, 75–87, and 95–100 %, respectively [2]. In our case, IHC analysis revealed that tumor cells were strongly positive with S-100 protein and HMB45. Thus, the case was confirmed as amelanotic melanoma. Primary vaginal melanoma is uncommon and rarely reported, and so it is difficult to make definitive treatment guidelines. There is a high rate of distant metastases (66–100 %). The Food and Drug Administration (FDA) previously approved interleukin-2 and dacarbazine for distant metastasis; in clinical trials, each had response rates of 10–20 % without improving overall survival benefit. Presently, ipilimumab, a fully humanized antibody that binds to cytotoxic T-lymphocyte-associated antigen 4 (CTLA-4), was approved by the FDA for use in the metastatic setting [3]. A randomized study showed that ipilimumab improved survival from 6 to 10 months compared with an experimental vaccine. The selective inhibitors of mutant BRAF Val600, vemurafenib and dabrafenib, showed major tumor responses, resulting in improved progression-free and overall survival in patients with metastatic disease, compared with chemotherapy [4].

In conclusion, the mainstay of treatment for amelanotic malignant melanoma of vagina is WLE and postoperative radiotherapy for localized disease. The amelanotic melanoma of vagina has a poor prognosis with high risk of distant metastasis, most commonly in the lungs and liver.

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Conflicts of Interest None

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