Case Report

Vaginal Amelanotic Malignant Melanoma in a Young Patient

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Malignant melanomas of female genital tract are rare malignancies occurring in older individuals. Amelanotic melanomas are consequently rarer as they make up a small fraction of vaginal melanomas. Amelanotic malignant melanoma, a unique variant of melanoma, is difficult to differentiate from other epithelial and nonepithelial malignancies due to absence of melanin pigmentation. This report describes a case of vaginal amelanotic melanoma occurring in a young patient, which was confirmed on immunohistochemistry using S-100, HMB-45 and Melan A.

Introduction

Malignant melanoma is a tumor of skin and mucus membranes. Malignant melanomas of the female genital tract, including vagina, are rare tumors. True amelanotic vaginal melanomas showing no melanin on histological examination are exceedingly rare, accounting for only 2% of all vaginal melanomas. We describe a case of amelanotic malignant melanoma of the vaginal wall, occurring in a young patient.

Case Report

A 27 year old female patient, P3+0, presented to the gynecology department, Railway hospital Rawalpindi with the complaints of vaginal discharge for few months. On examination, a nodular growth was found on the lateral vaginal wall. Growth was resected and sent for histopathology along with a specimen of endometrial curettings.

Grossly the growth was circumscribed and nodular with grey to black external surface. Cut section was white in appearance.

Microscopic examination revealed an invasive malignant neoplasm composed of sheets and tight whorls formed by plump to spindle shaped cells having pleomorphic vesicular nuclei and prominent eosinophilic nucleoli (fig 1). There was superficial ulceration of epithelium. Focal intact areas showed junctional activity (fig 2). Mitoses were >15/HPF. Resection margins were involved by the tumor.

No pigmentation was observed in any area. Endometrial tissue was unremarkable. A provisional diagnosis of malignant melanoma was made and immunohistochemistry was done for confirmation.

Immunohistochemistry of the tumor showed positivity for HMB 45, S-100, Melan A and Vimentin (fig 3). Cytokeratins AE1/AE3 and Myogenin were negative.

A diagnosis of amelanotic malignant melanoma was confirmed, with Breslow’s thickness 14mm and Clark’s level V.

Discussion

Primary malignant melanoma of the vagina is extremely rare, accounting for 0.3-0.8% of all malignant melanomas. True amelanotic vaginal melanoma showing no melanin on histological examination is exceedingly rare, accounting for only 2% of all vaginal melanomas.

The most common presenting symptoms of vaginal melanomas are vaginal bleeding, discharge or a palpable mass. The tumor is most commonly located in the distal third of the vagina, mostly on the anterior wall. In our case patient was a young 27 years old lady, who presented with vaginal discharge as the only presenting complaint. There was no history of abnormal bleeding.

As primary malignant melanoma is a rare gynecological malignancy, limited studies have been done and minimal data is available. Patients’ mean age is reported to be 60 years on average (ages range from 38 to 90 years) and the most common presenting symptom is vaginal bleeding, followed by vaginal
Grossly vaginal melanomas are polypoid and nodular in majority of cases. Histologically, they can display different morphological patterns, including spindle shaped and epitheloid cell type, but diagnosis can readily be made as these are pigmented lesions. Amelanotic melanomas show no melanin on histological examination and thus can be misdiagnosed as undifferentiated carcinoma or sarcoma which is more common in this area. Immunohistochemistry of such lesions is recommended to confirm the diagnosis.

Various immunohistochemical markers 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. Immunohistochemical technique incorporating the use of the HMB-45 monoclonal antibody has improved the accuracy of diagnosing malignant melanoma.

In our case, the tumor was amelanotic, containing spindle shaped as well as epitheloid cells, but focal junctional activity and prominent eosinophilic nucleoli were suspicious for malignant melanoma. Subsequently, immunohistochemical analysis revealed that the tumor cells were positive with the S-100 protein, HMB-45 and Melan A. They were negative for cytokeratin. Thus this case was confirmed as an amelanotic melanoma.