Oral melanoma in a gravid, HIV-positive woman

Alexis B. Lyons, MS,[a] Mildred P. Warren, MD,[a] Cynthia Ferguson, PA-C, MHS,[a]
Meena Katdare, PhD,[a,b] and Valerie M. Harvey, MD, MPH[a,b]
Norfolk and Hampton, Virginia

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INTRODUCTION

Oral melanoma accounts for approximately 1% of all melanomas.[1] In contrast to cutaneous melanoma, the risk factors for development of oral melanoma are largely unknown. Immunosuppressive states, including HIV infection and iatrogenic immunosuppression, are associated with an increased risk of melanoma development.[2] Pregnancy has not been found to impact melanoma progression or overall survival.[3] We present a case of oral melanoma in a pregnant, HIV-positive woman to emphasize the need for prompt evaluation of evolving pigmented lesions during times of immunosuppression and physiologic change.

CASE REPORT

A 30-year-old gravid, African-American woman with multidrug-resistant HIV based on genotype testing presented to the Department of Dermatology with a 10-year history of asymptomatic hyperpigmentation of the gingiva and lip, which had darkened over the course of her current pregnancy. Physical examination found an asymmetric, ill-defined, 3-cm dark brown and black plaque with irregular borders involving the vermillion and mucosal lip, gingiva, and hard palate (Fig 1). There was no cervical adenopathy. Initial punch biopsy from the right upper mucosal lip found a melanoma in situ involving the lateral margins. Subsequent incisional biopsy found invasive mucosal lentiginous melanoma with a Breslow depth of 1.45 mm (Fig 2). Pertinent laboratory findings included a decreased CD4 count of 177 cells per cubic millimeter and a viral load of 624 copies per milliliter. After multidisciplinary consensus with otolaryngology and surgical oncology, the patient underwent wide resection with 1-cm margins after delivery.

Abbreviation used:

HAART: highly active antiretroviral therapy

Sentinel lymph node biopsy results were negative. The patient is disease free 21 months after resection and has required no further adjuvant treatment.

DISCUSSION

Oral melanoma is a rare subtype of melanoma of unknown etiology.[4] There is weak evidence suggesting possible association with tobacco use, chronic inflammation, and inhaled environmental carcinogens.[1] Approximately 30% of oral melanomas arise from preexisting oral pigmentation; the remainder are thought to arise de novo.[1] Oral melanoma is more prevalent in men and individuals of Japanese and African descent and rarely occurs before the age of 30.[1] Although oral melanoma most often presents with irregular hyperpigmentation of the hard palate and maxillary gingiva, a small portion (2.9%-5.0%) are amelanotic.[1,5] The differential diagnosis includes postinflammatory hyperpigmentation, oral melanotic macules, physiologic pigmentation, medication-induced hyperpigmentation (eg, antiretrovirals such as azidothymidine), and Kaposi's sarcoma.[4]

Unlike cutaneous melanoma, oral melanoma is usually in the vertical growth phase at the time of diagnosis.[4] The low 5-year survival rate of 10%-25% is likely caused by a combination of factors including delays in detection and rich vascularity of the oral mucosa facilitating distant metastasis.[5] Patient age greater than 55, lymph node metastasis, and diameter greater than 4 cm are all associated with a worse prognosis.[5]

From the Department of Dermatology, Eastern Virginia Medical School, Norfolk,[a] and Hampton University Skin of Color Research Institute, Hampton.[b]

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Correspondence to: Valerie M. Harvey, MD, MPH, 721 Fairfax Avenue, Suite 200, Norfolk, VA 23507. E-mail: HarveyVM@evms.edu.

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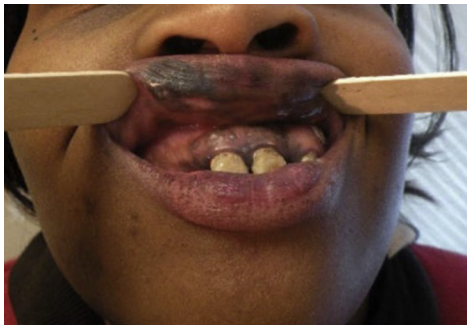

Fig 1. Oral melanoma manifesting as an asymmetric, ill-defined dark brown and black plaque with irregular borders involving the vermillion and mucosal lip and gingiva.

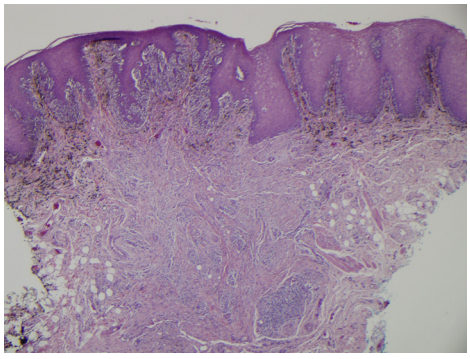

Fig 2. Invasive mucosal lentiginous melanoma. Breslow depth of 1.45 mm. (Hematoxylin-eosin stain.)

There is paucity of data to guide the staging and treatment of this rare condition. A commonly used staging system for head and neck melanomas, including oral melanoma, is of prognostic value and recognizes 3 stages: stage I for localized disease, stage II for lymph node metastasis, and stage III for distant metastasis.[5] Clinical staging at diagnosis is found to be the most important predictor of outcome.[5] Computed tomography or magnetic resonance imaging can be used to evaluate the primary tumor site and cervical lymph nodes.[1] Although sentinel lymph node biopsy seems to be reliable for cutaneous melanoma, the utility of this diagnostic tool in oral melanoma requires further investigation.[6] Metastatic workup, including lactate dehydrogenase, chest radiograph, and positron emission tomography of the chest, abdomen, and pelvis, is also frequently used.[1,5] The mainstay of treatment for oral melanoma involves wide surgical resection with appropriate margins. If anatomic complexities of the oral cavity preclude acquisition of appropriate margins, more narrow margins are justified.[1,4] Evidence for the role of radiation and chemotherapy either alone or as adjuvant therapy for advanced disease is conflicting.[7] Although some studies have found a reduction in local recurrence and distant metastasis, other studies have been unable to show improvements in survival.[5,7]

Immunosuppression is a known risk factor for cutaneous melanoma.[8] Recipients of renal transplants are approximately 3.6 times more likely to get melanoma compared with individuals in the general population.[8] Moreover, immunosuppressed patients with melanoma have increased mortality rates, independent of Breslow depth, compared with their immunocompetent counterparts.[2] Similarly, HIV/AIDS patients have a 50% increased risk of melanoma and a significantly shorter survival time compared with those without HIV/AIDS.[2] One study found that median overall survival for HIV-positive patients was 2.8 years compared with 6.4 years in HIV-negative patients.[9] A recent meta-analysis examining the effects of highly active antiretroviral therapy (HAART) treatment on melanoma risk found that patients with HIV/AIDS in the post-HAART era possessed a comparable risk of melanoma as those diagnosed during the pre-HAART era.[2] These findings suggest that there may be multiple pathways linking HIV infection and melanoma, including immunodeficiency, chronic immune inflammation, and immune dysfunction.[2] To our knowledge, oral melanoma in the setting of underlying HIV is exceedingly rare with only one other case described in the literature.[10]

Melanoma is one of the most common malignancies diagnosed during pregnancy and accounts for up to 25% of newly diagnosed cancers in pregnant women.[3] Pregnancy is associated with a significant decrease in lymphocytes and suppression of T lymphocyte activity with diminished interleukin and interferon secretion.[3] It was initially hypothesized that the relative immunosuppression during pregnancy favored more aggressive melanoma progression.[3] However, larger epidemiologic studies have since found that pregnancy has no significant impact on disease progression and overall melanoma-specific survival.[3]

This case is important for several reasons. First, it adds to the body of evidence showing involvement of the immune system in melanoma development. Next, we speculate that the known risk factors for melanoma may operate differently in the setting of immunosuppression and within different subpopulations including HIV-positive patients. Finally, this case illustrates the importance of maintaining a high level of suspicion for evolving pigmented lesions irrespective of patient race or ethnicity, especially during times of immune compromise. Vigilant surveillance and education remain essential in all patient populations to maximize outcomes.

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