Polypoid amelanotic melanoma: a diagnostic challenge

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Abstract

Melanoma is a highly aggressive cutaneous malignancy with considerable risk for metastasis. These malignant tumors are typically pigmented given that they arise from melanocytes capable of producing melanin. Amelanotic melanomas are a rare variant and there is often a delay in diagnosis owing to lack of pigmentation. Although there are various presentations of amelanotic melanoma, a solitary polypoid nodule is unusual and warrants further reporting. Herein, we present a patient with a 3-year history of a tender firm, skin-to-pink colored polypoid nodule. Excisional biopsy and work up showed an aggressive amelanotic melanoma with depth of 20mm and nodal metastasis consistent with stage IIIC disease. This case highlights the necessity of recognition and prompt management of this rare subtype of melanoma.

Keywords: melanoma, amelanotic, metastasis

Introduction

Amelanotic melanoma is a rare subtype of cutaneous melanoma, which can be often be clinically misdiagnosed. Herein, we describe a patient with amelanotic melanoma that presented as an atypical polypoid nodule.

Case Synopsis

A 37-year-old woman with no contributing medical history presented for evaluation of a lesion on the right posterior thigh, which was first noticed approximately 3 years prior to presentation. It was initially stable in size and asymptomatic but subsequently increased in size and developed tenderness over the course of the 3 months leading up to evaluation in our clinic. Physical examination was significant for a particularly firm 3.6cm×3.1cm skin toned to pink colored polypoid nodule (**Figure 1**). An urgent excisional biopsy was performed owing to lack of definitive clinical diagnosis. Histopathological evaluation was consistent nodular malignant melanoma with a depth of 20mm, Clark's Level V, mitotic count of 10/mm^2, lymphovascular and perineural invasion, and considerable dermal fibrosis (**Figure 2**). She was subsequently staged at IIIC melanoma given positive sentinel lymph nodes and negative Magnetic Resonance Imaging of the brain and Positron Emission Tomography studies.

Case Discussion

Herein, we present an unusual and advanced case of malignant melanoma, which posed a diagnostic

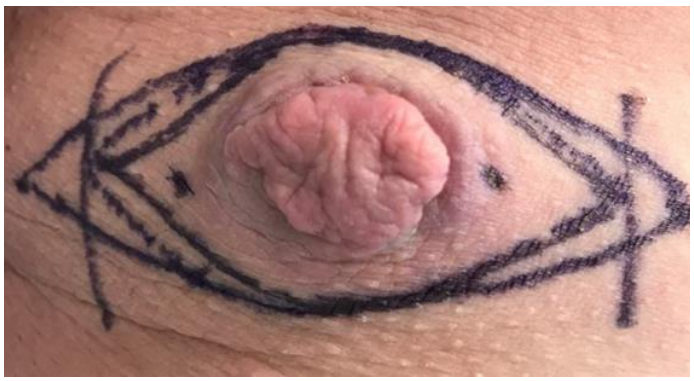

Figure 1. *Clinical appearance of the large polypoid nodule prior to excisional biopsy.*

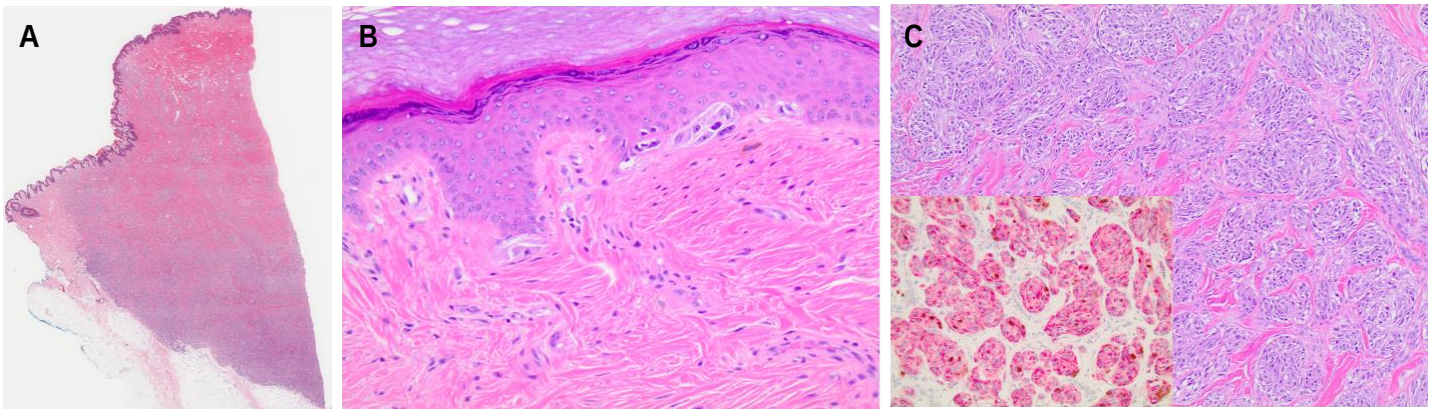

Figure 2. *A) Nests of atypical melanocytes extending deep into the dermis with associated dermal fibrosis (H&E, 3×). B) Magnification showing junctional component of atypical melanocytes. H&E, 200×. C) Magnification of the nests of atypical melanocytes. H&E, 100×. Inset: Tumor cells diffusely and strongly positive for Melan-A (cytoplasmic, red chromogen) and shows high proliferative index by Ki-67 (nuclear, 3,3'-Diaminobenzidine chromogen), (Melan-A and Ki-67 double label immunohistochemical stains, 200×).*

challenge, highlighting the importance of prompt recognition and intervention of such atypical presentations.

It is estimated that amelanotic malignant melanomas account for up to 8% of all melanoma cases [1, 2]. Amelanotic melanomas, like their pigmented counterparts, can be subdivided as nodular, superficial spreading, lentiginous, and acral [1]. However, a large polypoid nodule is a very rare presentation, which warrants recognition. In contrast to pigmented melanomas, amelanotic melanomas often present a diagnostic challenge since the traditional ABCDE criteria (asymmetric, irregular borders, color variations, diameter greater than 6mm, and evolution) is insufficient [2, 3]. It is proposed that EFG (elevated, firm, growing) be addended to these criteria to improve detection rates of atypical cases [2]. In our patient, physical examination was notable for an unusually firm nodule, which was likely related to the significant dermal fibrosis. This observation coupled with the history of rapid and sudden tumor growth were diagnostic clues of a neoplastic process warranting urgent diagnosis and management. Dermoscopy clues such as irregular and dotted vessels have been shown as hallmarks of amelanotic melanoma [4, 5]; however, these can be nonspecific findings.

Conclusion

Amelanotic melanomas are typically diagnosed at a higher tumor stage (based on American Join Committee on Cancer [AJCC]) and Breslow thickness [1, 2] and are associated with poorer survival than their pigmented counterparts [1]. This case highlights an atypical presentation of melanoma and underscores the importance of utilizing clinical clues such as elevation, firmness, and growth for appropriate diagnosis of polypoid amelanotic melanoma.

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