PHOTO CAPSULE

Acral Amelanotic Melanoma in Fitzpatrick Type IV Skin

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A 56-year-old woman with Fitzpatrick type IV skin presented with a 6 month history of a fleshy nodular tumor measuring approximately 4 cm × 4 cm on the right great toe, with overlying grayish slough and areas of hemorrhage and necrosis (Figure 1). Histopathology revealed diffuse, atypical, small round cells with numerous mitotic figures (Figure 2) that stained positively with Human Melanoma Black (HMB) 45 and S100 (Figure 3). A diagnosis of amelanotic melanoma was established.

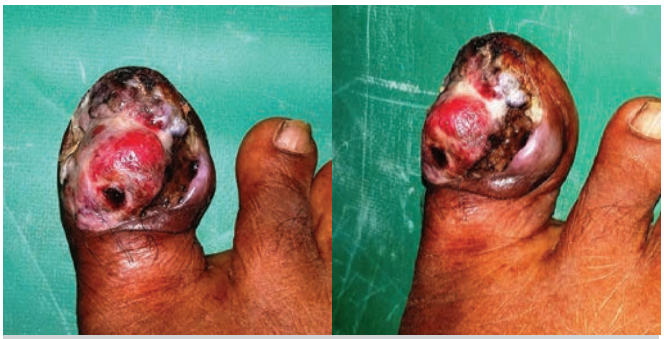

Figure 1. A fleshy nodular tumor on the right great toe with overlying slough and areas of hemorrhage and necrosis.

DISCUSSION

Cutaneous melanoma is common in Caucasians and is attributable to intermittent ultraviolet exposure. It is rare in darker skin due to the protective effect of melanin against ultraviolet light and may exhibit several features: (1) the preponderance of acral forms, (2) biological aggressiveness, and (3) frequent occurrences in photo-protected sites (subungual and palmoplantar melanomas). Some authorities believe

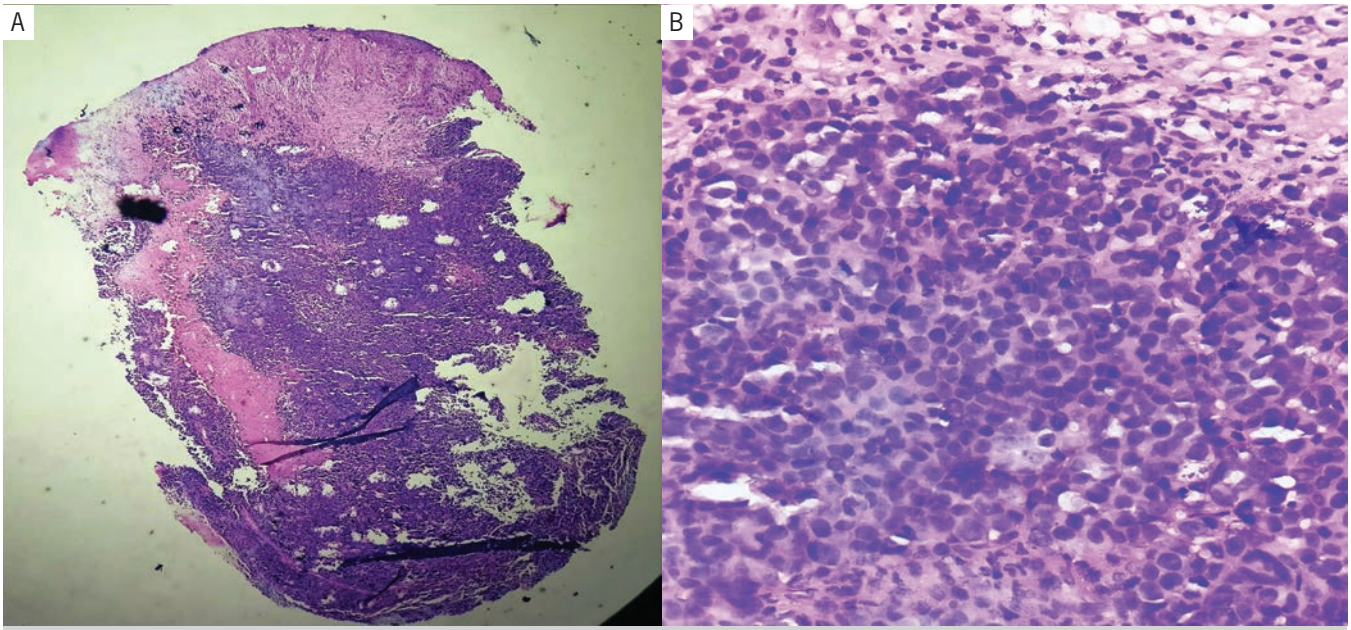

Figure 2. Photomicrograph showing small round cells with increased nucleus to cytoplasm ratio and mitotic figures. (Hematoxylin and eosin, original magnification ×5 [A] and ×40 [B]).

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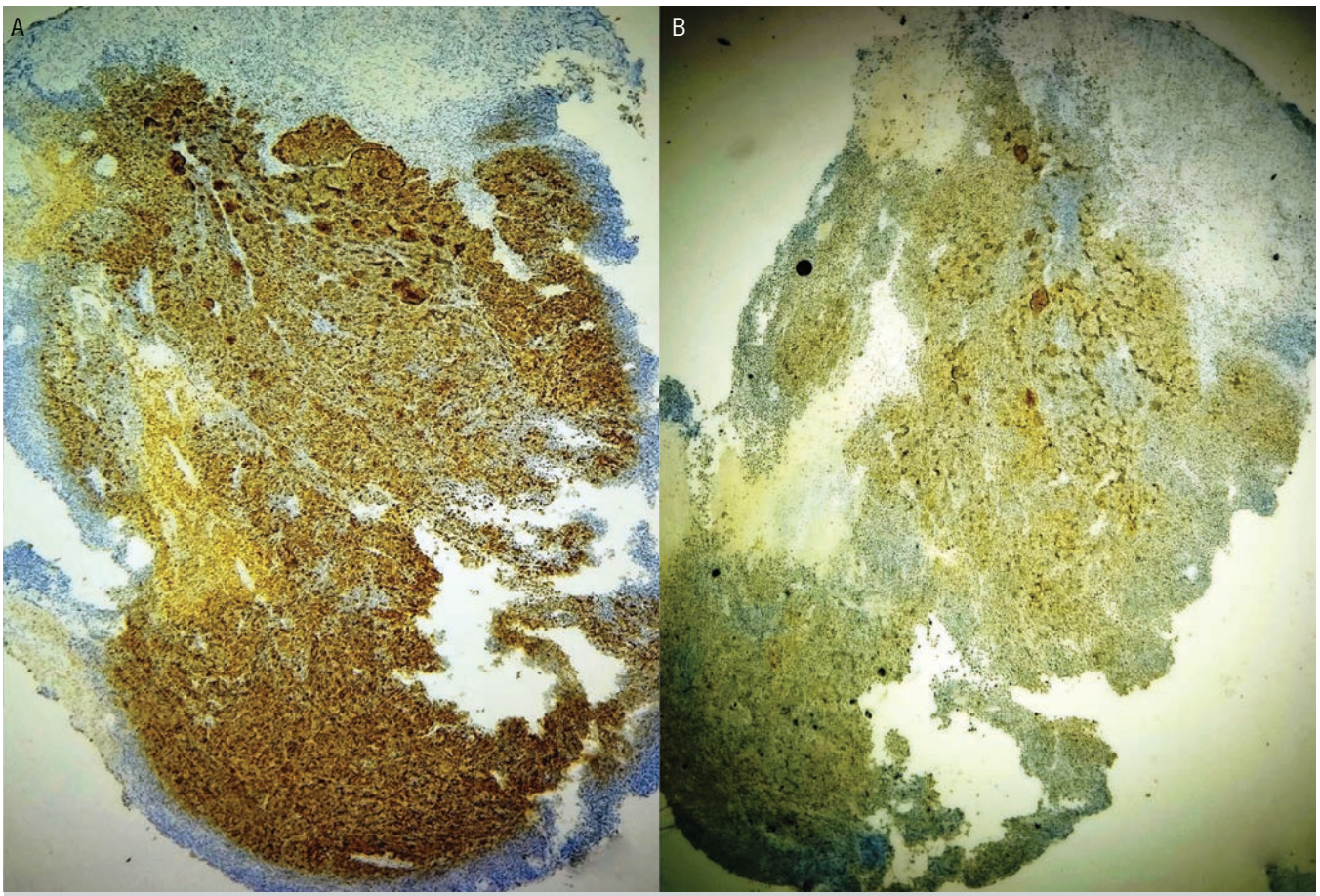

Figure 3. Immunohistochemical staining showing diffuse positivity with HMB45 (A) and S100 (B). (Original magnification ×5).

that the preponderance of cutaneous melanoma in acral photo-protected areas is due to the penetrating trauma and chemical exposure, while others believe that trauma is coincidental. Their aggressive nature and poor prognosis are due to the aggressive biologic types and delayed attention due to tumors at unnoticeable sites.[1]

Amelanosis in such tumors could be due to the cells representing a de-differentiated amelanotic clone, or the cells may have become multipotent differentiating into amelanotic phenotypes. Immunohistochemical analysis is definitive with staining positively with S100 and HMB 45.[2]

CONCLUSIONS

Cutaneous melanomas in darker skin are rare and tend to be aggressive. Amelanotic melanomas exhibit reduced/absent melanin. Diagnostic delay is common in both types of melanomas, requiring a high index of suspicion essential for early diagnosis and management.

REFERENCES

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