Early Detection of Acral Lentiginous Melanoma

The case of an elderly African American female patient reminds of the need to maintain suspicion.

By Mosunmola Babade, MS, Eliot Mostow, MD, MPH, Robert Brodell, MD

Acral Lentiginous Melanoma (ALM) is the most common cutaneous melanoma in African Americans. ALM occurs on the palms, soles, or on the nail bed beneath the nail plate. It may also occur on the mucocutaneous skin of the mouth, genitalia, or anus. It accounts for five to 10 percent of all melanomas but represents up to 70 percent of melanomas in darkly-complexioned individuals.1

Clinically, lesions are dark brown to black with variations in color and irregular borders. Papules or nodules may be present.1,2,3 Hutchinson’s sign (pigmentation of the proximal nail fold) is a non-specific finding in some cases of ALM. Patients and physicians often ignore these asymptomatic lesions until they are deeply invasive, which may explain the poor prognosis.2

Case Report
A 77-year-old African American female patient presented with a chief complaint of generalized unrelenting pruritus for two weeks. Physical examination revealed dry skin and diffuse guttate hypomelanosis on both lower legs. In addition, a dozen volar melanocytic lesions were present on the soles of each foot.

A brown macule 4.0 x 3.2mm in diameter on the plantar surface of the left foot was larger and slightly different in shape and coloration than the other lesions (Ugly duckling sign). The lesion was non-tender to palpation. There was no appreciable core; bleeding was not present. No palpable lymphadenopathy was noted in the popliteal fossa or inguinal fold.

A punch biopsy of the site revealed atypical melanocytes irregularly arranged at the dermal-epidermal junction diagnostic of malignant melanoma in situ. Wide excision with 1cm margins was performed. There has been no evidence of recurrence after six months.

Discussion
Melanoma in the African American population usually occurs in non-sun-exposed areas around the nails or on the palms or soles and is called Acral Lentiginous Melanoma. The generalized pruritus reported by our patient was probably not related to the ALM that was identified on a total body examination. Because lesions are generally asymptomatic and in locations where they are not of cosmetic concern, it is important to think about the epidemiology and find lesions of ALM in situ when they would be most curable.4,5 This case emphasizes the importance of a careful physical examination and a high index of suspicion in patients who present with non-specific complaints.

A variety of conditions may simulate ALM clinically, including Melanonychia striata; Exostosis, subungual; Lentigo, reticulated; Acral nevi; Nevocytic nevus; Onychomycosis, pigmented; Melanoma in situ (Hutchinson’s freckle); and Angiokeratoma (Table 1).

Melanonychia striata is a black longitudinal streak that is generally benign in black individuals and can be caused by malignant melanoma. This condition is always related to a pigmented lesion at the nail matrix. Spread of the melanin pigment to the proximal or lateral nail fold (Hutchinson’s sign) is highly suggestive of melanoma. The presence of multiple melanonychia in black individuals is a sign of benignity. A biopsy is usually recommended for every longitudinal melanonychia acquired after puberty in fair-skinned individuals.6

Exostoses (subungual) are bony outgrowths of underlying bone generally associated with the great toes. It presents as a solitary, pink or flesh-colored, firm swelling below the nail that can simulate melanoma when associated with overlying nail dystrophy.

Lentigo, reticulated (ink-spot) can initially suggest melanoma because of the dark coloration and irregular reticulated border of these lesions. These lesions, however, are small in size and do not grow or change.

Acral nevi may simulate ALM when they are associated with lentiginous pigmentation or melanonychia striata. Biopsy of this lesion may reveal occasional melanocytes in a pagetoid distribution that simulates the histopathology of melanoma in a minority of acral nevi.