

## Bilateral Sequential Acral Lentiginous Melanoma of the Sole

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To the Editor,

A 69 year old man presented with the complaint of recurrent sores on the sole of his right foot beginning five months ago in December 2009. An excisional biopsy was made and reported as malignant melanoma. Later the patient was admitted to our center and the biopsy specimen was re-examined. The complete pathologic report included the following: Clark level at least four, Breslow thickness at least 0.35 mm, tumor size of 0.5 mm, presence of ulceration and necrosis, lymphovascular invasion and no reactive lymphocyte infiltration. According to AJCC staging system the patient was stage 2B melanoma. The tumor on the right sole was excised, together with the right groin sentinel lymph node dissection and multiple biopsies of the left sole were made. The surgical wound was closed with skin graft. The pathological examination of the lesion over the right sole was reported as acral lentiginous melanoma in situ (ALM) and the biopsies from the left sole as benign vascular proliferations. The dessected right groin sentinel lymph nodes were reported to be reactive. Four months later the patient was readmitted with a recurrence of the melanotic lesion on the right sole (Figure 1-2). An excisional biopsy was made which was reported as in situ malignant melanoma by the pathologist. Eight months later in December 2010, melanotic lesions reappeared on the left sole at the previous biopsy site (Figure 3). An excisional biopsy was made again and closed with skin graft. This time Lesion was reported as in situ acral lentiginous melanoma. At

the lateral surgical margin of the lesion, minimally atypic melanocytes were observed, the rest of the surgical margins were negative for tumor. The patient was referred for dermatological and reconstructive surgical opinion for the moderate hyperpigmented lesions over the soles. Further surgery was not planned and continuation of the topical imiquimod treatment was deemed appropriate.

Acral lentiginous melanoma compromises 2% to 8% of melanomas in Caucasians and 30% to 75% cases in black, Hispanic, and Asian populations. It appears on the palms, soles, terminal phalanges, and mucous membranes.<sup>1</sup> ALM is characterized by a radial growth phase evolving to a vertical invasive stage over months or years. At the radial growth phase, lesions may be mistakenly considered as benign causing a delay in diagnosis. A lesion recurring in a short time on the same foot adjacent to the previous tumor may be explained by the field cell model suggested by Bastian. According to this suggestion, without any histological or proliferative abnormality, genomic changes in the cells at that area may occur. Growth factors released during wound healing activate local cells and initiate recurrence.<sup>2</sup>

Inadequate surgery also effects local recurrence. The size of the surgical margins depends on the tumour thickness. For in situ lesions a 0.5- to 1.0 cm margin of normal skin is adequate for cure.

Thin lesions ( $\leq 1.0$  mm) require a 1.0 cm margin to prevent local recurrence; melanomas between 1.01 and 2.0 mm should have a margin of 1.0-2.0 cm.



**Figure 1.** Melanotic lesion on the soles



**Figure 3.** Melanotic lesion on the left sole



**Figure 2.** Melanotic lesion on the right sole

For lesions between 2.01 and 4.0 mm, a 2.0 cm margin is recommended.<sup>3</sup> According to some of the reports, ALM on the sole has a worse prognosis than other areas of the body, however the tumor thickness has a greater impact on prognosis than anatomical location.<sup>4</sup> The prognosis of lesions on the sole may be worse due to the fact that they may be noticed lately. Although there are recurrent ALM cases on the same foot, consecutive ALM on both soles similar to our case has not been reported previously.

ALM is a rare histopathological subtype of melanoma in white-skinned populations. The diagnosis is based on intraepidermal component with the lentiginous pattern on acral location. Any atypical melanocytic lesion on the foot should be considered as ALM in situ, and totally excized. Close follow-up of patients in terms of recurrent lesions is very important.

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