Dermatology Practical & Conceptual

# Successful Management of Periungual Acral Lentiginous Melanoma Using Secondary Intention Healing

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## Case Presentation

A 74-year-old man presented with a pigmented patch on the hyponychium and the distal nail bed of the left thumb. Dermoscopy revealed a parallel ridge pattern (Figure 1A). A skin biopsy demonstrated scattered atypical melanocytic proliferation in the epidermis, consistent with acral lentiginous melanoma in situ. The patient underwent wide excision with a 5-mm margin. Secondary intention healing (SIH) was used to resolve the surgical defect (Figure 1B). Granulation tissue formation and re-epithelialization occurred within 3 weeks and were completed within 12 weeks after surgery (Figure 1, C and D). The original shape of the thumb and the nail was restored after 7 months (Figure 1, E and F). There was no evidence of recurrence or metastasis based on clinical examination and ultrasonographic evaluation of the axillary lymph node at the 24-month follow-up after surgery.

## Teaching Point

Ungual melanoma that generally occurs in the nail matrix requires en bloc excision of the nail apparatus, resulting in total nail loss [1,2]. However, if it is detected and treated at an early stage, melanoma arising from periungual skin can have a chance for nail preservation. This report shares our experience of successfully managing the surgical defect in periungual acral melanoma with SIH after wide excision. Unlike skin grafting leading to digit deformity and unsatisfactory cosmesis, SIH promotes the natural regeneration of the nail unit. Therefore, the tissue left to heal by itself

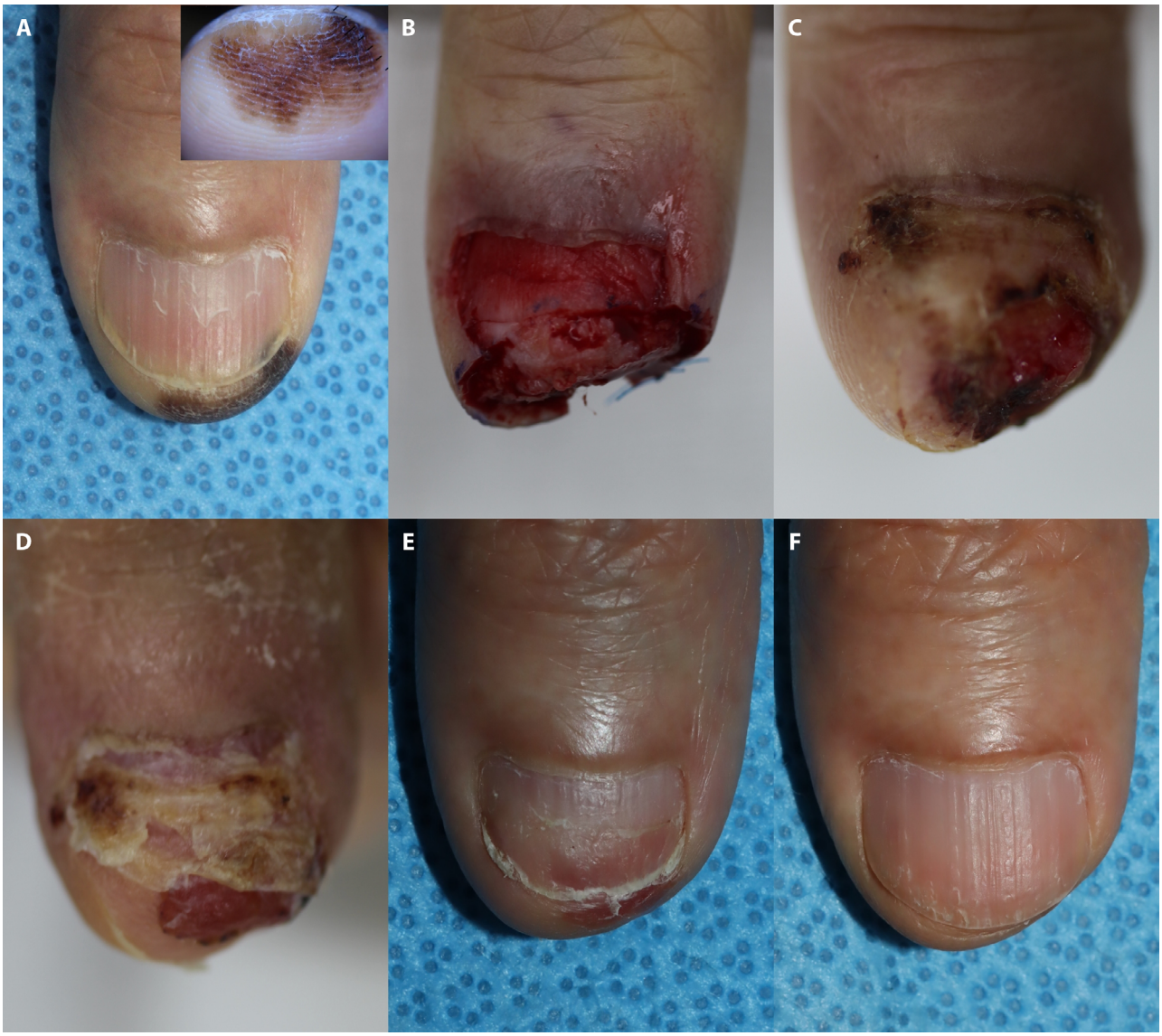


**Figure 1.** (A) Acral lentiginous melanoma in situ with irregular pigmentation affecting the distal nail bed and periungual skin of the left thumb. (B) Surgical defect involving the distal nail bed after wide excision. (C-F) Serial photographs during secondary intention healing after wide excision of acral lentiginous melanoma in situ: (C) at week 3, (D) at week 8, (E) at week 16, and (F) at week 30.

can replace the unique characteristics of the nail bed and the periungual acral skin with dermatoglyphics [1].

Another teaching point of the present case is that dermoscopy helped meticulous evaluation of the borders in periungual melanoma during surgery. We believe that new technologies, including dermoscopy and confocal microscopy, enable physicians to define surgical margins more accurately.

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