

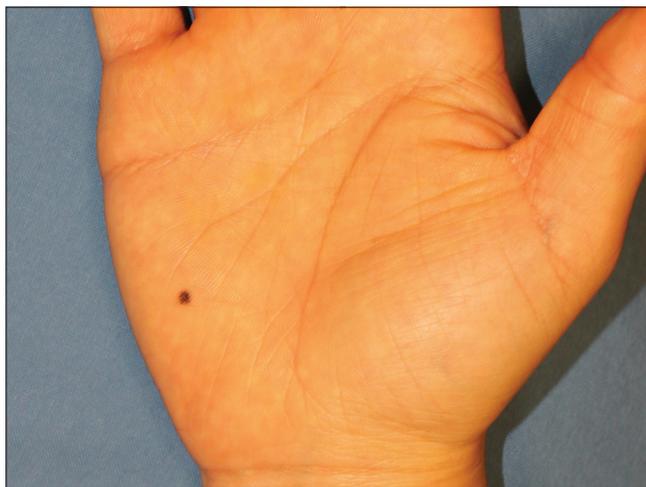
## Observation Letters

## Dermoscopic findings of Spitz nevus on acral volar skin

Sir,

Spitz nevus is a benign melanocytic neoplasm usually affecting children and young adults. It can appear as a reddish-pink or brownish-black lesion, predominantly distributed on the face, neck, or lower extremities while acral location is rare. Dermoscopy is a useful tool in the differential diagnosis of acral melanocytic tumors. However, data regarding their dermoscopic features on the acral volar skin is scarce. We report two cases of acral Spitz nevus on the glabrous skin, with dermoscopic and histopathologic findings.

A 23-year-old woman was referred to our department with a pigmented lesion on her right palm since last 5 years. Physical examination revealed a dark brown macule sized about  $3 \times 2$  mm. [Figure 1a]. Dermoscopy using contact polarized mode without fluid interface (DL3 equipment; 3Gen, San Juan Capistrano, CA, USA) revealed a furrow pattern (yellow arrows) with peripheral projections (red arrow) [Figure 1b]. Histopathologic examination demonstrated a symmetric and well-circumscribed lesion composed of melanocytic nests. Several vertically-oriented junctional nests composed of large, heavily melanised spindled and epithelioid melanocytes with abundant cytoplasm were observed on higher magnification. Artificial clefts were conspicuous between the nests and epidermal cells. [Figure 1c and d]. Immunohistochemical tests showed positive staining for Melan A (MART-1) and a low Ki-67 proliferation index. Based on the clinical and histopathologic findings, a diagnosis of acral Spitz nevus was made.



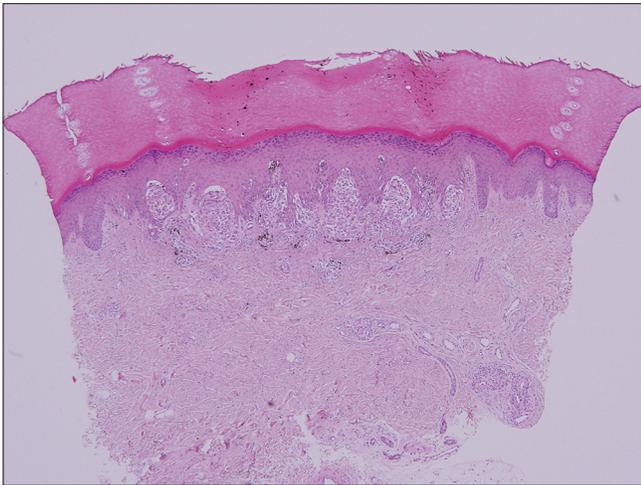
**Figure 1a:** Dark brown macule on the volar surface of the right hand

A 23-year-old man was referred to us with a  $13 \times 14$  mm sized pigmented patch on the plantar surface on the second toe for the last 18 months [Figure 2a], showing atypical melanocytic features on skin biopsy. Dermoscopic evaluation with polarized mode showed heavy central pigmentation with a scarred area due to a previous biopsy. In the margins, a parallel furrow pattern (yellow arrows) with peripheral streaks (red arrows) was detected [Figure 2b]. We excised the lesion with 3-mm free margins and repaired it with a bilobed flap. Histopathologic analysis revealed junctional melanocytic proliferation along with elongated dermal rete ridges. Under high magnification, heavily pigmented epithelioid and spindled melanocytes containing vesicular nuclei were observed to form nests. Cleaving was detected around them; however, mitotic figures were absent [Figure 2c and d]. We diagnosed acral spitz nevus, based on these findings.

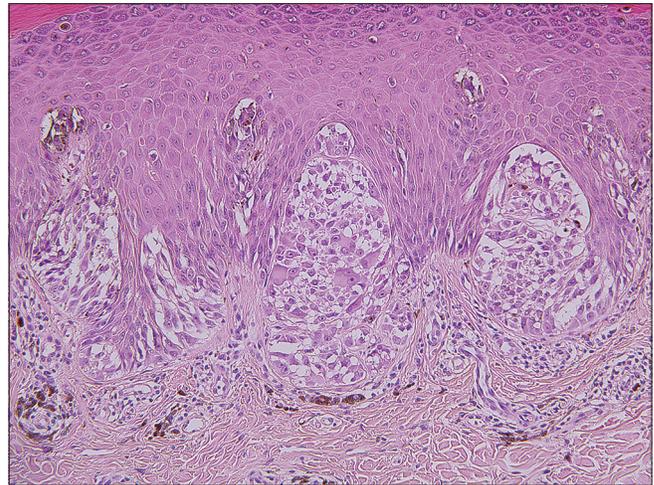
Palmo-plantar spitz nevus is rare. Spitz nevus on glabrous skin has been reported to comprise about 2% of all Spitz nevi.<sup>1</sup> We have found only seven dermoscopic reports of acral spitz nevi on in the literature [Table 1].<sup>1-7</sup> Starburst pattern<sup>1-3</sup>, parallel furrow pattern with peripheral dots and projections<sup>4,5</sup> and a parallel ridge pattern with few peripheral globules<sup>6</sup> have been reported in three, two and a single case respectively. Recently, globular pigment along the ridges has been reported.<sup>7</sup> In our first case, we detected a furrow pattern with peripheral streaks while our second case demonstrated a heavily pigmented central area with marginal parallel furrows and streaks. Parallel ridge pattern



**Figure 1b:** Dermoscopic examination reveals a parallel furrow pattern (yellow arrows) with peripheral projections (red arrow). (DL3, contact polarized mode without fluid interface  $\times 10$ )



**Figure 1c:** The histopathologic finding reveals symmetrical and well-circumscribed lesion (H and E,  $\times 40$ )



**Figure 1d:** Vertical-oriented junctional nest of large spindled and epithelioid cells and artificial clefts (H and E,  $\times 200$ )



**Figure 2a:** Pigmented lesion in the glabrous skin of the second right toe



**Figure 2b:** Dermoscopic examination reveals heavy pigmentation in the center with scar due to previous biopsy. Furrow pattern (yellow arrows) with peripheral streaks (red arrows) are detected. (DL3, contact polarized mode without fluid interface  $\times 10$ )

is a diagnostic dermoscopic feature of acral melanoma. However, most of the reported cases including the current ones (78%) presented benign patterns. Therefore, dermoscopy can be a useful ancillary technique for acral Spitz nevus. However, more cases are needed to validate their dermoscopic features.

Spitz nevus is a unique melanocytic tumor, often resembling malignant melanoma clinically, thus requiring a high index of suspicion. Clinical history (young age), histopathologic and dermoscopic evaluation are necessary for accurate diagnosis.<sup>4</sup> In our cases, the dermoscopic findings differed from the typical parallel ridge pattern of acral melanoma. Histologic features like asymmetric melanocytic distribution, atypical hyperchromatic melanocytes with Pagetoid spread, and high mitotic figures with increased ki-67 index are suggestive of acral melanoma. In contrast, the symmetric proliferation of medium-sized to large epithelioid or spindle-shaped melanocytes with retraction artefact (clefing), Kamino bodies, and dermal maturation

without cellular or nuclear pleomorphism suggest acral spitz nevus.<sup>8</sup> In addition, clinical information is essential to differentiate acral lentiginous melanoma from Spitz nevi as the former usually occurs in elderly patients. In our case, the characteristics of both lesions indicated acral Spitz nevi.

In conclusion, we report two rare cases of acral Spitz nevi with both histopathologic and dermoscopic findings. Further reports of dermoscopic patterns of acral spitz nevus will help in defining the characteristics of this entity.

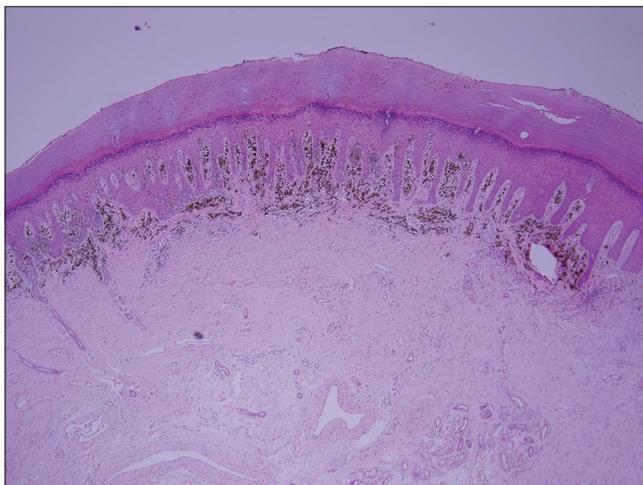
#### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts

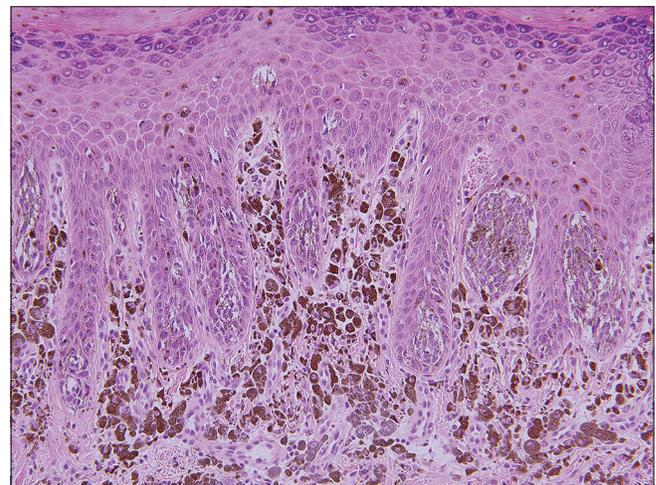
**Table 1: Clinical and dermoscopic characteristics of acral Spitz nevus**

Author	Age (years)	Sex	Duration (months)	Clinical manifestation	Location	Dermoscopic pattern
Yasuma <i>et al.</i> <sup>2</sup>	9	Female	12	Symmetrical, ellipsoidal black macule 6 × 4 mm	Palm	Starburst pattern
Hatta <i>et al.</i> <sup>3</sup>	28	Female	3	Oval, flat-surfaced, elevated black macule 5 mm	Sole	Starburst pattern
Kobayashi <i>et al.</i> <sup>1</sup>	10	Female	8	Rhomboid-shaped brown macule 4 × 3 mm	Sole	Starburst pattern
Nakagawa <i>et al.</i> <sup>5</sup>	16	Male	12	Gradually enlarging striated pigmented lesion 5 × 1 mm	Palm	Parallel furrow pattern with crista transverse dots plus spike projections
Vaccaro <i>et al.</i> <sup>4</sup>	28	Female	2	Rapidly growing pigmented macule 2.9 × 1.6 mm	Palm	Parallel furrow pattern and large radial projections
Jurakić Tončić <i>et al.</i> <sup>6</sup>	23	Female	3	Rapidly growing lesion, atypical dark brown macule	Sole second toe	Parallel ridge pattern with few projections
Iriarte <i>et al.</i> <sup>7</sup>	4	Female	8	Oval-shaped brown papule 6 × 4 mm	Palm	Globular pigment along the ridges
Present case	23	Female	60	Dark brown macule 3 × 2 mm	Palm	Parallel furrow pattern with focal globules and peripheral streaks
Present case	23	Male	18	Pigmented patch 13 × 14 mm	Sole second toe	Highly pigmented center and marginal parallel furrow pattern with peripheral streaks

Starburst pattern: pigmented pseudopods or streaks distributed throughout the periphery of the lesion, located around intense pigmentation in the central area; parallel furrow pattern: pigmentation along the superficial sulci in palmoplantar localization; parallel ridge pattern: pigmentation along the rete ridge; globular pattern: multiple aggregated variously sized, round to oval structures; spike projection/peripheral streaks: brownish-black linear lines at the lesion edge



**Figure 2c:** Histopathologic finding demonstrates symmetrical melanocytic lesion with prominent intraepidermal and papillary dermal components with elongated rete ridges (H and E, ×40)



**Figure 2d:** Epithelioid and spindled melanocytes with abundant cytoplasm containing vesicular nuclei forming nests. A cleft artifact is showing (H and E, ×200)

will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

#### Conflicts of interest

There are no conflicts of interest.

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