

An Atlas of Nail Disorders, Part 13

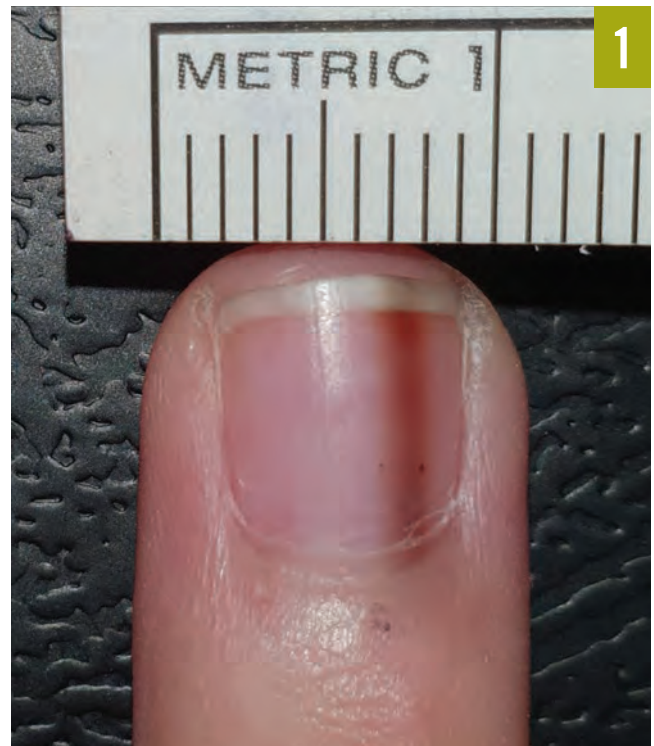
Alexander K. C. Leung, MD^{1,2} • Benjamin Barankin, MD³ • Kin Fon Leong, MD⁴ • Joseph M. Lam, MD⁵

EDITOR'S NOTE: This article is part 13 of a 15-part series of Photo Essays describing and differentiating conditions affecting the nails. Parts 14 and 15 will be published in upcoming issues of *Consultant*. To access previously published articles in the series, visit the *Consultant* archive at www.Consultant360.com and click the “Journals” tab.

Melanonychia Striata

Melanonychia striata, also known as longitudinal melanonychia, is characterized by a narrow tan, brown, or black streak or band that runs along the longitudinal axis within the nail plate from the proximal nail fold to the distal part of the nail plate, due to the presence of melanin in the nail plate (**Figure 1**).¹⁻³ Rarely, the pigmentation can be so extensive as to involve more than half of the nail plate (**Figure 2**).²⁻⁴

Melanonychia striata is more common in the thumb, which is the most often used digit for grasping, and is often bilateral (**Figure 3**).^{3,5-7} The index, middle, fourth, and fifth fingers have a correspondingly lower incidence of melanonychia striata, since they are used in the order of decreasing frequency for grasping objects.²⁻⁵ Involvement of the toes is less common than the fingers (**Figure 4**).^{4,6,8} By the same token, the big toe is more frequently affected than the other toes, since the big toe is used more often and is more prone to trauma.^{6,9} The involvement of multiple digits is not common (**Figure 5**).^{4,10-12} When it occurs, it is more commonly observed in dark-skinned individuals and those with connective tissue disorders.^{4,10,12}



AFFILIATIONS:

¹Department of Pediatrics, University of Calgary, Calgary, Alberta, Canada

²Alberta Children's Hospital, Calgary, Alberta, Canada

³Toronto Dermatology Centre, Toronto, Ontario, Canada

⁴Pediatric Institute, Kuala Lumpur General Hospital, Kuala Lumpur, Malaysia

⁵Department of Pediatrics and Department of Dermatology and Skin Sciences, University of British Columbia, Vancouver, British Columbia, Canada

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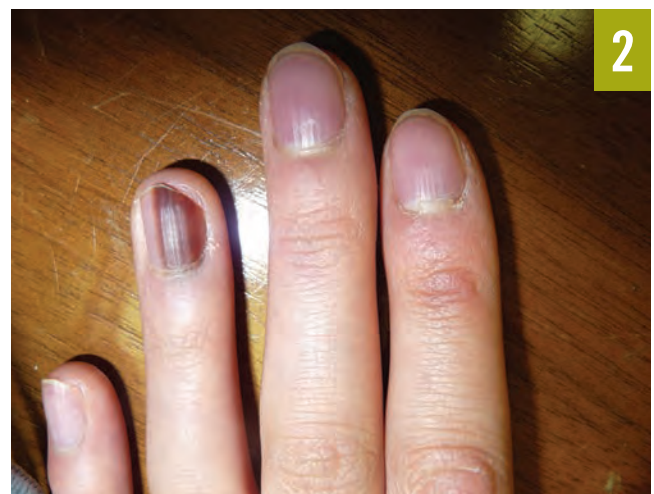
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CORRESPONDENCE:

Alexander K. C. Leung, MD, #200, 233 16th Ave NW, Calgary, AB T2M 0H5, Canada (aleung@ucalgary.ca)





Melanonychia striata is more commonly seen in darker-phototype individuals (Fitzpatrick phototypes IV, V, and VI) and is quite uncommon in fair-skinned individuals.^{3,6,9,11,13} In the pediatric age group, melanonychia striata is rare, even in dark-skinned individuals.^{3,13,14} In one study of 2457 Chinese individuals seen for nondermatologic conditions at the Asian Medical Center, an affiliate of the University of Calgary Medical Clinic in Calgary, Alberta, Canada, the authors did not find melanonychia striata in individuals under 20 years of age.¹⁵ Melanonychia striata was present in 0.6% of individuals between 20 and 29 years of age. After that, the prevalence increased gradually to 1.3%, 1.6%, and 1.7% in individuals aged between 30 and 39 years, 40 and 49 years, and 50 years and over, respectively. Although rare, familial occurrence of melanonychia striata with an early age of onset has been reported.^{8,16}

In most cases, melanonychia striata results from melanocytic activation/stimulation in the nail matrix.^{3,12} Less commonly, melanonychia striata results from melanocytic hyperplasia in the nail matrix/bed with subsequent deposition of melanin in the nail plate.^{3,12} Unlike in adults, 75% of melanonychia striata in children is due to melanocytic hyperplasia.⁷

Melanonychia striata should be differentiated from a nail apparatus/subungual melanoma, splinter hemorrhages, subungual hematoma, onychomatricoma, longitudinal erythronychia, fungal melanonychia, transverse orange-brown chromonychia, Laugier-Hunziker syndrome, and exogenous discoloration (eg, topical application of potassium permanganate, nicotine staining of the nail) (Figure 6).^{3,17-19}

In most cases, melanonychia striata is a benign condition, with

Nicotine staining of the nail.

the rare exception when it is secondary to a subungual melanoma.^{3,9} The benign nature of melanonychia striata is suggested by an early age of onset, nonprogression of the lesion, involvement of multiple digits, absence of the Hutchinson sign (periungual spread of pigmentation onto the cuticle and/or proximal and/or lateral nail folds), and/or occurrence in dark-skinned individuals.³ Spontaneous regression has rarely been reported.^{20,21} Dermoscopic findings of black dots distributed along melanotic lines, referred to as “dots and lines,” can be a sign of regression of melanonychia striata in the pediatric age group.^{20,22} ■

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