

An Atlas of Lumps and Bumps, Part 42: Acquired Melanocytic Nevi

Alexander K.C. Leung, MD, MBBS, FRCPC, FRCP
Benjamin Barankin, MD, FRCPC
Joseph M. Lam, MD
Kin Fon Leong, MD

Volume 64 - Issue 8 - August 2024



Acquired Melanocytic Nevi

Acquired melanocytic nevi (moles) are benign proliferations of nevus cells that cluster within the lower epidermis or dermis.¹⁻³ The lesions may appear at any time after birth but usually appear after the first 6 months of life.¹ Very few acquired melanocytic nevi are present in early childhood.¹ They tend to appear after 6 months of age and increase in number during childhood.⁴ The number increases sharply through adolescence and more slowly in early adulthood.^{4,5} It reaches a plateau in number in the third decade and then slowly regress with age.^{4,5} These nevi are slightly more common in women.¹ Individuals with lightly pigmented skin have more melanocytic nevi than those with darker complexions.³ The number of acquired melanocytic nevi is 15 to 30 and 5 to 10 among White children and Black children, respectively, by the end of the first decade of life.⁶ Other risk factors for the development of acquired melanocytic nevi include chronic intensive sun exposure, intensive neonatal phototherapy, high propensity to sunburn, medications (e.g., encorafenib, chemotherapeutics, immunosuppressants), lichen sclerosus, blistering disorders, obesity, trauma, and genetic predisposition.^{2,4,7-10}

Generally, acquired melanocytic nevi are well-circumscribed, round or oval, with a homogenous surface, even pigmentation, and are less than 8 mm in diameter.^{1,3} Sites of predilection include the sun-exposed areas of the trunk, and upper and lower extremities although acquired melanocytic nevi can appear anywhere on the body.^{1,4} Acquired melanocytic nevi on the palms and soles are more commonly observed in individuals with a darker skin complexion.⁴

Junctional nevi (**Figure 1**) are usually macular (flat) or minimally raised, brown to black in color, and often hairless.¹



Fig. 1 *Junctional nevi are usually flat or minimally raised.*

Compound nevi (**Figure 2**) are raised and show lighter shades of brown than do junctional nevi.¹



Fig. 2 *Compound nevi are shown.*

Intradermal nevi are usually more elevated, dome-shaped, or pedunculated and show lighter shades of brown compared with compound nevi (**Figure 3**) and can be skin colored (**Figure 4**); the texture is soft and rubbery.^{1,4} Compared with junctional nevi, compound nevi and intradermal nevi are more likely to contain hair.



Fig. 3. *The texture of intradermal nevi is generally soft and rubbery.*



Fig. 4. *Intradermal nevi are generally more elevated and show lighter shades of brown compared with compound nevi.*

The diagnosis is mainly clinical based on the morphologic appearance. Typical dermoscopic features of acquired melanocytic nevi include a globular pattern (more common in lesions on the head, neck, and upper trunk) and a reticular pattern (more common in lesions on the extremities and children with darker skin complexion).^{4,11} Dermoscopy provides a powerful tool in the evaluation of atypical melanocytic nevi to determine the need for biopsy or excision of the lesion.¹²

Acquired melanocytic nevi are usually benign.¹ Occasionally, regression of acquired melanocytic nevi via the halo phenomenon (a depigmented halo around a central melanocytic nevus) (**Figure 5**) may occur.¹³



Fig. 5. A depigmented halo around a central melanocytic nevus is shown.

Halo eczema or halo dermatitis around acquired melanocytic nevi (Meyerson phenomenon) has also been described.¹⁴ A very small percentage of acquired melanocytic nevi may undergo malignant transformation.^{7,9} Risk factors for the development of melanoma include the presence of numerous melanocytic nevi, the presence of dysplastic nevi, a freckling tendency, intensive sun exposure (e.g., sunburns), family history of melanoma, and pale skin.^{7,9}

AUTHORS:

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

AFFILIATIONS:

¹Clinical Professor of Pediatrics, the University of Calgary, Calgary, Alberta, Canada

²Pediatric Consultant, the Alberta Children's Hospital, Calgary, Alberta, Canada

³Dermatologist, Medical Director and Founder, the Toronto Dermatology Centre, Toronto, Ontario, Canada

⁴Associate Clinical Professor of Pediatrics, Dermatology and Skin Sciences, the University of British Columbia, Vancouver, British Columbia, Canada.

⁵Pediatric Dermatologist, the Pediatric Institute, Kuala Lumpur General Hospital, Kuala Lumpur, Malaysia

CITATION:

Leung AKC, Barankin B, Lam JM, Leong KF. An atlas of lumps and bumps, part 42: acquired melanocytic nevi. *Consultant*. 2024;64(8):eXX. doi:10.25270/con.2024.08.000004

CORRESPONDENCE:

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

EDITOR'S NOTE:

This article is part of a series describing and differentiating dermatologic lumps and bumps. To access previously published articles in the series, visit: <https://www.consultant360.com/resource-center/atlas-lumps-and-bumps>.

References

1. Leung AKC. Acquired melanocytic nevi. In: Leung AKC, ed. *Common Problems in Ambulatory Pediatrics: Specific Clinical Problems*, Vol. 2. New York: Nova Science Publishers, Inc. 2011;197-200.
2. Leung AK. Obesity and nevocellular nevi. *Br J Clin Pract*. 1988;42(4):172-173.
3. Schaffer JV. Pigmented lesions in children: when to worry. *Curr Opin Pediatr*. 2007;19(4):430-440. doi: 10.1097/MOP.0b013e32825b0788.
4. Hunt R, Schaffer JV, Bologna JL. Acquired melanocytic nevi. In: Post TW, ed. *UpToDate*. Waltham, MA. Accessed on August 14, 2024.
5. Levy R, Lara-Corrales I. Melanocytic nevi in children: A review. *Pediatr Ann*. 2016;45(8):e293-e298. doi:10.3928/19382359-20160720-07.
6. Yang C, Gru AA, Dehner LP. Common and not so common melanocytic lesions in children and adolescents. *Pediatr Dev Pathol*. 2018 Mar-Apr;21(2):252-270. doi:10.1177/1093526617751720.
7. Gallus S, Naldi L. Longitudinal studies of melanocytic nevi in children: a clue to improve understanding of melanoma in adults. *Arch Dermatol*. 2009;145(2):191-193. doi:10.1001/archdermatol.2008.535.
8. Katoulis AC, Sgouros D, Argenziano G, Rallis E, Panayiotides I, Rigopoulos D. Surgical suturing-induced melanocytic nevi. A new type of eruptive melanocytic nevi? *J Dermatol Case Rep*. 2016;10(3):49-52. doi:10.3315/jdcr.2016.1233.
9. Matichard E, Le Hénanff A, Sanders A, Leguyadec J, Crickx B, Descamps V. Effect of neonatal phototherapy on melanocytic nevus count in children. *Arch Dermatol*. 2006;142(12):1599-1604. doi: 10.1001/archderm.142.12.1599.
10. Meneguzzo A, Lazzarotto A, Alaibac M. Eruptive melanocytic nevi secondary to encorafenib for BRAF mutant metastatic colorectal cancer. *In Vivo*. 2020;34(1):441-445. doi:10.21873/invivo.11793.
11. Tuma B, Yamada S, Atallah ÁN, Araujo FM, Hirata SH. Dermoscopy of black skin: A cross-sectional study of clinical and dermoscopic features of melanocytic lesions in individuals with type V/VI skin compared to those with type I/II skin. *J Am Acad Dermatol*. 2015;73(1):114-119. doi: 10.1016/j.jaad.2015.03.043.
12. Zalaudek I, Docimo G, Argenziano G. Using dermoscopic criteria and patient-related factors for the management of pigmented melanocytic nevi. *Arch Dermatol*. 2009;145(7):816-826. doi: 10.1001/archdermatol.2009.115.
13. Leung AKC, Barankin B. Pigmented lesion with a depigmented rim. *Am Fam Physician*. 2017;96(1):53-54. PMID: 28671374.
14. Fernández-Sartorio C, Alós L, García-Herrera A, Ferrando J, Carrera C. Multiple primary melanoma with the Meyerson phenomenon in a young patient. *Melanoma Res*. 2019;29(3):325-327. doi:10.1097/CMR.0000000000000583.