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Disseminated non-segmental vitiligo with halo nevi and grey hair

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Introduction

Halo nevi (HN, also known as Sutton's nevi) are typically an acquired melanocytic nevus (junctional, dermal, or compound) surrounded by a circular white depigmented region. Congenital nevi may also present as HN. Irrespective of onset, HN may naturally resolve during their clinical course.[1] They are considered benign and affect 1% of Caucasian individuals, appearing in childhood or early adulthood.[2] HN may be associated with non-segmental vitiligo. Herein, we report a rare triad of rapid-onset HN, non-segmental vitiligo and premature hair graying (PHG).

Case History

A healthy 20-year-old male presented to our dermatology clinic with a 5-month history of asymptomatic depigmented lesions on his trunk and diffuse graying of his hair. He initially noted an acute onset of these asymptomatic lesions slowly enlarging around nevi on his chest and abdomen. Three months later, he developed similar appearing and slowly enlarging areas of involvement disassociated from nevi on his back and progressive graying of his scalp hair. The skin of the perifollicular scalp was not affected. He denied new or changing moles and reported no associated symptoms. Personal and family histories were negative for vitiligo, autoimmune conditions, and skin cancer.

Examination

- He had numerous, isolated depigmented macules and patches on the trunk and back, with some surrounding symmetric, evenly pigmented, well-demarcated 3-6-mm brown-black macules (Figure 1).
- The left upper inner arm had isolated 2 small depigmented patches and the right inner thigh had 1 hypopigmented patch.
- He had diffuse graying of his scalp hair without apparent nevi of the scalp (Figure 2).
- Overall, he had approximately 5% body surface area involvement.
- Wood's lamp examination revealed lesion enhancement and depigmentation of these various lesions.

Clinical Photographs

Figure 1. Halo nevi and vitiligo patches on the anterior trunk.

Figure 2. Vitiligo patches on the posterior trunk and associated leukotrichia.

Figure 3. Wood's lamp enhancement of depigmented lesions.

Course

- Labs were unremarkable except for a mild anemia and TSH was normal.
- The patient was started on betamethasone dipropionate 0.05% ointment BID and Gingko biloba (60 mg BID) and alpha lipoic acid (100 mg QD) capsules.
- He was referred to ophthalmology, who performed an unremarkable ocular exam to rule out ocular sites of melanoma.
- At his 4-month follow-up, he stated that he stopped using betamethasone dipropionate 0.05% ointment when it ran out but continued gingko biloba and alpha lipoic acid daily.
- He does not note any new lesions but also no improvement in current depigmented spots.
- Due to insurance issues, the patient was unable to initiate narrowband ultraviolet light therapy or start topical tacrolimus ointment.

Discussion

- Although usually benign, HN have two important associations: vitiligo and melanoma-associated leukoderma. Melanoma-associated leukoderma was ruled out in our patient with total body skin exam and referral to ophthalmology for ocular exam.
- While the exact pathophysiology of HN is poorly understood, melanocytes are absent under histopathology, suggesting a link to vitiligo. Overall, HN is a clinical indicator of a cellular immune response targeting abnormal melanocytes.[4] This may indirectly relate to the mechanisms implicated in vitiligo. Specifically, nonsegmental vitiligo, such as in our patient, is more often associated with an autoimmune background than segmental vitiligo.[1]
- Notably, our patient also had (premature hair greying) PHG, which refers to focal graying of scalp hair. It is known that lesional leukotrichia and family history of PHG may be seen in patients with non-segmental HN-associated vitiligo.[1,5] However, reports of focal PHG of the scalp hair occurring concurrently in a patient with presentation of HN-associated vitiligo are lacking. Nevertheless, PHG is a very unusual finding in a patient with HN-associated vitiligo. In patients with multiple HN, PHG may represent a robust immune response that warrants search for melanoma as a possible trigger due to its association with multiple new HN.[5]
- Our patient's acute clinical presentation of HN, non-segmental vitiligo, and PHG represents a rare triad. While PHG may be related to an autoimmune/autoinflammatory process, it is not thought of as such. Thus, further research of the pathophysiology and clinical course of these findings in the context of HN-associated nonsegmental vitiligo may guide management and provide insights into disease prognosis.

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