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Case Report Open Access

Halo Medium-Sized Congenital Melanocytic Nevi and Vitiligo Progression in Three Children

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Abstract

Reports of halo nevus in medium-sized CMN are limited in the literature and its association with vitiligo is not very common. We present three healthy children with medium-sized CMN. There was no family history of vitiligo, other autoimmune disorders or melanoma. After years of follow up, the patients developed an achromic regular halo around the congenital nevus and one of them showed others halo nevi. Following these changes, achromic macules appeared and vitiligo was diagnosed. At follow-up, we observed reduction in size of the CMN and no thought-provoking malignant changes. Conclusion: We support that in halo medium sized CMN, like in other congenital nevi with unusual features, continuous observation should be recommended. Furthermore, parents should be informed about the long period of time required for complete resolution and the low possibility of malignant change in the nevus. Pediatricians should be familiar with this no life-threatening association.

Keywords: Halo nevus; Medium sized congenital melanocytic nevus; Melanocytic nevus, Vitiligo

Abbreviations: CMN: Congenital Melanocytic Nevi

Introduction

Reports of halo nevus in medium-sized Congenital Melanocytic Nevi (CMN) are limited in the literature and their association with vitiligo is not very common [1-3]. We herein report three children with medium-sized halo CMN with concomitant vitiligo.

Case 1

A one year-old girl was referred to our dermatology department for assessment of an asymptomatic congenital pigmented lesion on the right posterior flank. Medical history was unremarkable. Dermatologic examination revealed a 30×10 mm homogeneous dark brown plaque with a verrucous surface, which was diagnosed as medium-sized CMN. After seven years of follow-up, the nevus had enlarged proportionally to the child's growth, and an achromic halo appeared around the nevus (Figure 1). Over the following two years, this achromic halo increased in size with a profound reduction in the CMN. The addition of facial and anogenital achromic patches were noted. Blood tests including thyroid function and autoimmunity were normal. Findings were consistent with a halo nevus in a medium sized CMN and vitiligo.

Case 2

A two year-old girl was under follow-up due to an asymptomatic congenital pigmented lesion on the left leg. She had no relevant past medical and family history. Dermatologic examination revealed a homogeneous dark-brown plaque with an irregular and hairy surface of 63×30 mm. Four years later, an achromic halo appeared around the CMN and around other pigmented lesions, some of the halos increased in size with disappearance of several nevi and achromic macules randomly distributed were noted. Blood analyses including thyroid function were normal. The patient was diagnosed of halo medium-sized CMN, multiple halo nevi and vitiligo. Reduction in size of pigmented lesions with no progression of vitiligo was observed on follow-up.

Case 3

A six year-old boy had an asymptomatic congenital pigmented lesion on the right axilla with an adjacent depigmented patch of one year of progression. The family and personal history were unremarkable. Dermatologic examination revealed on the right axilla a heterogeneous light-brown plaque of 40×20 mm with an achromic patch overlying it and other achromic patches randomly distributed. After 5 years of follow-up, partial regression of the nevus was observed. Laboratory tests including thyroid function and autoimmunity were normal. Reduction in size of the CMN and a slow progression of vitiligo were observed (Figure 2).

Discussion

Melanocytic nevi surrounded by a halo of depigmentation can occur in childhood. In contrast, halo phenomenon around medium-sized CMN has been rarely reported, especially as a manifestation of vitiligo in children. The appearance of this phenomenon usually correlates with the onset of nevus regression that leads to a complete disappearance of the nevus. It is remarkable that most of the reported cases developed vitiligo shortly after the achromic halo expanded around the CMN [1-3].

In the literature reviewed, seven cases were found with vitiligo after halo medium-sized CMN with no sex or age of onset predominance (Table 1). Other cases with simultaneous development of vitiligo and halo formation have also been reported [4,5], with no significant clinical differences in vitiligo progression. This situation could enhance that immunological factors seem to play a crucial role for the induction of halo phenomenon and vitiligo, suggesting a common immune mechanism directed against similar or even identical molecular targets.

Aouthmany et al. reported three cases of halo CMN not associated with vitiligo in a retrospective study of halo nevus, and two of these patients elected to have the CMN excised. In the patient whose CMN was followed-up, the halo phenomenon persisted around the slowly regressing CMN and no vitiligo progression was observed as in our patients. These authors concluded that large congenital nevi with halos

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Figure 1: Achromic halo around the CMN

Figure 2: Achromic patch in a child with vitiligo

Case	Age of onset in yrs	Sex	Size (mm) of CMN	Location of nevus	Distribution of vitiligo
1*	8	F	30 x 7	Trunk	Localized
2*	4	F	63 x 30	Left leg	Randomly
3*	5	M	40 x 20	Right axilla	Randomly
4	2	M	55 x 18	Right arm	Localized [4]
5	6	M	70 x 30	Right leg	Localized [5]
6	13	F	65 x 26	Right hip	Randomly [2]
7	7	F	45 x 15	Left hand	Randomly [2]
8	3	M	80 x 20	Right frontal scalp	Randomly [2]
9	7	F	26 x 12	Submandibular	Randomly [2]
10	6	M	30x15	Right knee	Randomly [6]

*our patients

Table 1: Characterization of halo nevus in medium-sized CMN and vitiligo in children

may take longer to resolve than halo nevus involving smaller benign acquired nevi [1]. Itin et al. also recommend continuous observation as in all CMN with unusual features [5].

One unusual case of halo-CMN and vitiligo was recently reported with and spontaneous partial repigmentation of vitiligo and of the acrhomic halo. As in our cases, the patient developed vitiligo after the halo formation around the CMN [6].

Vitiligo is an acquired, progressive disorder of the skin that results in the selective destruction of melanocytes of the interfollicular epidermis and occasionally of the hair follicles as well. The etiology is still unknown, but loss of melanocytes has been recently explained by an autoimmune mechanism [7]. This entity is often a psychologically devastating disorder, associated with a marked psychosocial and long lasting effect on the self-esteem of the affected children; therefore an adequate psychological management is in some cases essential. Treatment of vitiligo is indeed a tough challenge for dermatologists, especially in childhood [8]. The parents of our patients refused any vitiligo treatment.

As in previous reports of other similar cases [3], we have observed no changes of malignancy in any of the three patients. We still recommend continuous observation of halo medium sized CMN, as we would recommend with any congenital nevus with unusual features. Parents should be informed about the long period of time required for complete resolution and the low possibility of observing malignant changes among these nevi. Vitiligo should be treated if there is a social and psychological concern in the affected children.

In conclusion, we herein report three new cases of halo medium-sized CMN and vitiligo, a no complicated association that pediatricians should be familiar with the benign features of this reaction and the regular following to calm the parents of their patients.

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