RESEARCH LETTER

A Series of Halo Congenital Nevi

Christina STEFANAKI, Eythymia SOURRA, Christina CHLORIDOU and Alexander STRATIGOS
First Dermatology Clinic, Andreas Sygros University Skin Hospital, Athens, Greece. E-mail: cstefana@otenet.gr
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To the Editor,

Halo nevus (HN) is a benign melanocytic nevus surrounded by an achromic rim that simulates a halo, resulting in regression of the nevus (1). The estimated incidence of HN in the population is around 1% and there is no predilection for sex or race (1, 2). Children and young adults are predominantly affected, with an average age of onset of 15 years (1, 2).

Halo formation may also rarely be observed with small and medium-sized congenital melanocytic nevi (CMN) and may result in subsequent involution of the nevus (3).

In a cohort of 524 patients with CMN we identified 13 CMN with halo phenomenon, representing 2.4% of the cohort. Six CMN were small, 6 were medium-sized CMN measuring 1.5–10 cm, and 1 CMN was large (>20 cm). No patient had a family history of melanoma or immunosuppression. Only 2 patients suffered from vitiligo and thyroiditis, while the rest were healthy. Patients' age at presentation and disease characteristics are presented in **Table I**.

Dermoscopic evaluation was performed in all CMN and digital dermoscopic follow-up was available for 10 patients ranging between 3 and 10 years. No vascular structures or blue-white veil were identified. No patient developed melanoma in the follow-up period. Two CMN disappeared completely, whereas in the rest the colour regressed by 10–90% (**Fig. 1**). Dermoscopic characteristics of halo CMN are presented in **Table II**.

Halo phenomenon in CMN has been reported previously and in particular large CMN have been associated with intralesional and perilesional depigmentation and extralesional vitiligo (3–7).

Halo phenomenon has not been fully understood but it is tempting to speculate that the abundance of melanocytes and nevus cells in CMN triggers an immunological response leading to the destruction of melanocytes and pigment loss (4, 5).

There is a strong relationship between halo nevi and vitiligo (3, 6); however, we observed vitiligo in only 1 of our patients. The relationship between CMN and vitiligo has been investigated before and it has been found that patients with vitiligo with CMN had an earlier age of onset, which was even more pronounced in the case of halo CMN (7). In a previously reported series of 8 children with halo large CMN, 3 had extensive vitiligo and 1 had vitiligo adjacent to the nevus (4).

The question remains whether patients with CMN develop a halo phenomenon more frequently than other individuals. Our series of 13 patients represented 2.4% of a larger cohort of 524 patients with CMN, suggesting a much higher prevalence than the usual 1% prevalence of halo nevi in the general population.

The most important question remains whether halo phenomenon is protective against melanoma. Cutaneous malignant melanoma has been reported in 1 patient with a halo large CMN (8). On the other hand, 2 large series support the protective role of vitiligo against the development of malignant melanoma (9, 10). It is unknown whether patients in our series will develop melanoma in the future but we did not detect any worrisome features in a follow-up period of 3–10 years.

Dermoscopically, halo CMN in our series demonstrated a globular or homogeneous pattern and typical features of CMN like target network, target and haloed globules, blotches, milia-like cysts, perifollicular hypopigmentation, and skin furrow hypopigmentation in the pigmented part and those features gradually faded during the hypopigmentation process (see Fig. 1). We did

Table I. Patient and nevus characteristics

No.	Sex	Age	Fitz	Birth	F	Location	Size	Colour	Shape	Nodularity	N	H	Follow-up	Nevus disappearance %
1	F	1	3	YES	NO	Shin	1.5–10	Brown/black	Regular	NO	0	0	9	60
2	M	8	3	YES	NO	Shin	20–30	Brown/black	Regular	NO	0	3	5	10
3	F	8	3	YES	NO	Back	<1.5	Brown/black	Regular	NO	0	0	3	20
4	F	4	3	YES	YES	Abdomen	1.5–10	Brown/black	Regular	NO	0	3		
5	M	3	4	YES	NO	Back	1.5–10	Brown/black	Regular	YES	1	0	6	40
6	F	10	3	YES	NO	Thigh	1.5–10	White	Regular	NO	0	2	7	90
7	M	9	3	YES	YES	Thigh	<1.5	Brown/black	Not regular	NO	0	0	7	100
8	M	9	3	YES	NO	Neck	<1.5	Brown	Regular	NO	0	0	5	60
9	M	13	3	NO	YES	Neck	<1.5	Brown	Regular	NO	0	0		
10	M	13	3	NO	YES	Abdomen	<1.5	Brown	Regular	NO	0	0	3	100
11	F	4	2	YES	YES	Shin	1.5–10	Red/brown	Regular	NO	0	0	7	80
12	F	10	3	YES	NO	Chest	<1.5	Brown	Regular	NO	0	0		
13	F	6	6	YES	NO	Back	1.5–10	Brown	Regular	NO	0	1	10	90

Fitz: Fitzpatrick type, F: family history of CMN, N: nodules, H: hairiness.

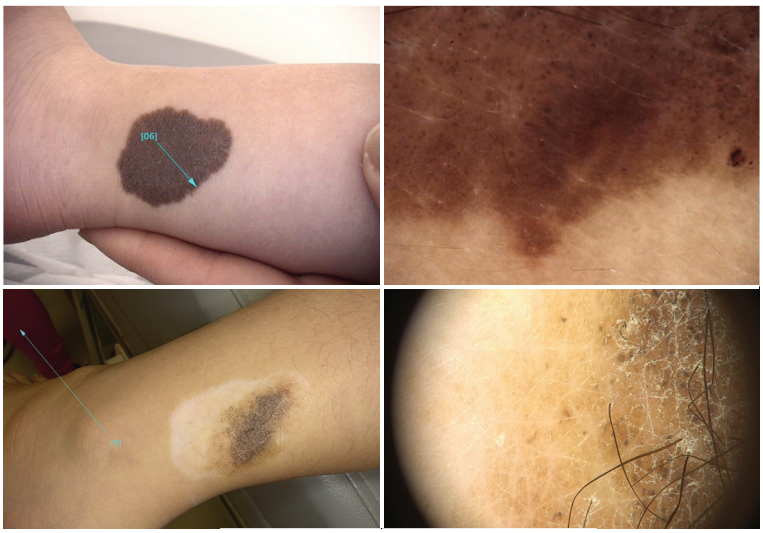

Fig. 1. Macroscopic image of medium-sized halo congenital nevus before and after 9 years of follow-up and dermoscopic pictures of the same nevus before and after the halo phenomenon.

Table II. Dermoscopic characteristics of halo congenital nevi

No.	Pattern	Atypical network	Target network	Haloed/target globules	Blotches	Dots	Milia-like cysts	Perifollicular hypopigmentation	Skin furrow hypopigmentation
1	Homogeneous/globular	No	No	Yes	Yes	No	No	No	No
2	Homogeneous/globular	No	No	Yes	Yes	Yes	No	No	Yes
3	Globular	No	No	No	Yes	No	No	Yes	No
4	Homogeneous/reticular	Yes	Yes, globules	Yes	Yes	Yes	Yes	No	No
5	Globular	No	No	Yes	No	Yes	Yes	Yes	No
6	Homogeneous	No	No	No	No	No	No	No	No
7	Globular	No	No	No	No	No	Yes	No	No
8	Globular/reticular	No	No	No	No	No	No	No	No
9	Homogeneous/globular	No	No	No	No	No	No	No	No
10	Homogenous/globular	No	No	No	No	No	No	No	No
11	Globular	No	No	Yes	No	Yes	No	No	Yes
12	Globular	No	No	Yes	No	No	Yes	No	No
13	Globular	No	No	Yes	Yes	Yes	No	No	No

not detect a cerebriform appearance and a blue-white veil in any of the nevi in our series as has been observed by other authors (11).

Further studies should clarify the halo phenomenon in CMN, which in the case of medium and large CMN may in part improve the patient's cosmetic appearance.

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