Growing Naevi, Targetoid Haemosiderotic Naevi, and Halo Naevi – Presentation of Original Dermoscopic Images and Reviews of Three Special Types of Melanocytic Naevi

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Abstract: *Background*: There exist several specific types of melanocytic naevi. Their diagnoses, future prognoses, and management plans all differ.

Case Reports: We demonstrated dermoscopic images of growing naevi, targetoid haemosiderotic naevi, and halo naevi.

Conclusion: Growing naevi should be monitored for their growth and evolution. For children, the increases in size of the naevi will be affected by growths of the children and the further autonomous growths of the naevi. For targetoid haemosiderotic naevi with compatible histories of trauma or signs of trauma, re-examination in three to four weeks will confirm stabilisation of the naevi. For halo naevi, any naevus or other structure in the centre should be clearly visualised and diagnosed.

Keywords: Autoimmunity, congenital melanocytic naevus, congenital naevus, melanoma, Spitz naevus, starburst naevus, vitiligo.

INTRODUCTION

There are a large number of benign melanocytic naevi with characteristic dermoscopic appearances. In this article, we shall present dermoscopic images of three of these types of distinctive naevi.

CASE PRESENTATIONS

Growing Naevi

Growing naevi (GN) are frequently seen on the skins of small children to young adults. Their peripheral rims are surrounded by one, and sometimes two, rows of regular, similar-sized, and monomorphic globules (Figure **1**).

It is important to distinguish GN from starburst / pigmented Spitz naevi, as the latter, when found on adults, might not be distinguishable from melanoma by dermoscopy *per se*. In GN, the peripheral globules are *free-floating*. However, in starburst / pigmented Spitz naevi, the globules or streaks are *projecting out radially*.

Another difference is that the centres of starburst / pigmented Spitz naevi are usually very dark, while a lot of configurations can be seen in GN. In Figure **1**, the centre of the lesion is not completely dark. Some dark-brownish globules and perhaps small milia can be seen.

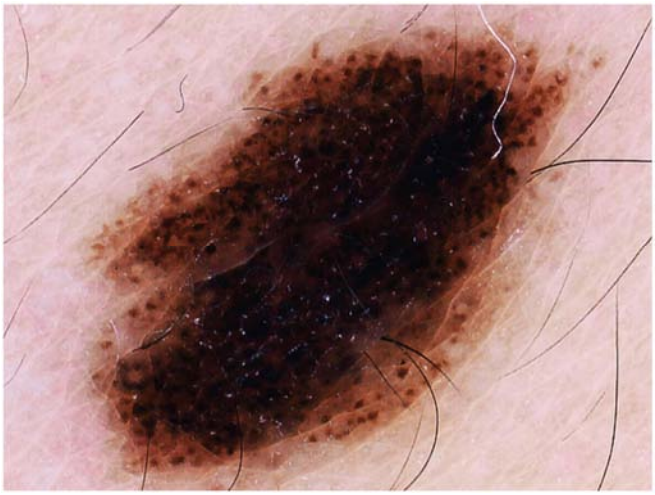

Figure 1: Growing naevus.

If a diagnosis of a GN is ascertained, monitoring its increasing size and changes in the patterns of pigmentation would be adequate. It is highly unlikely that it is or will become a melanoma.

Targetoid Haemosiderotic Naevi

Targetoid haemosiderotic naevi (THN) usually arise from melanocytic naevi sustaining physical trauma.

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Figure **2** depicts a THN. Globular components can be seen in the centre of the naevus. This is surrounded by an ecchymotic halo. The entire lesion is asymmetrical. This asymmetry is frequently seen in THN, as the traumas can be unidirectional.

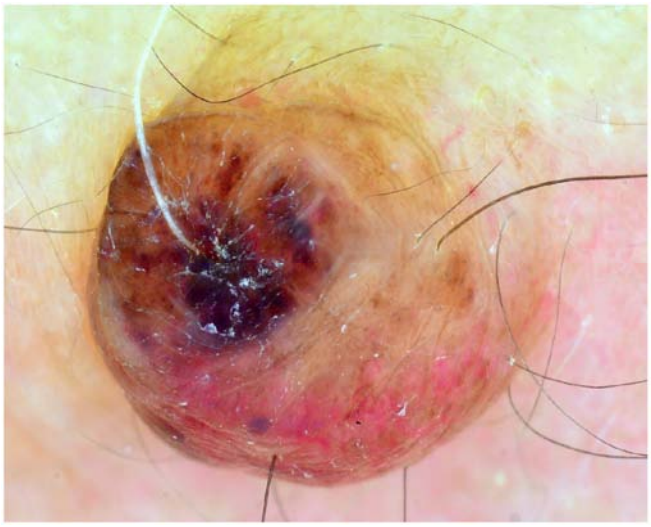


Figure 2: Targetoid haemosiderotic naevus.

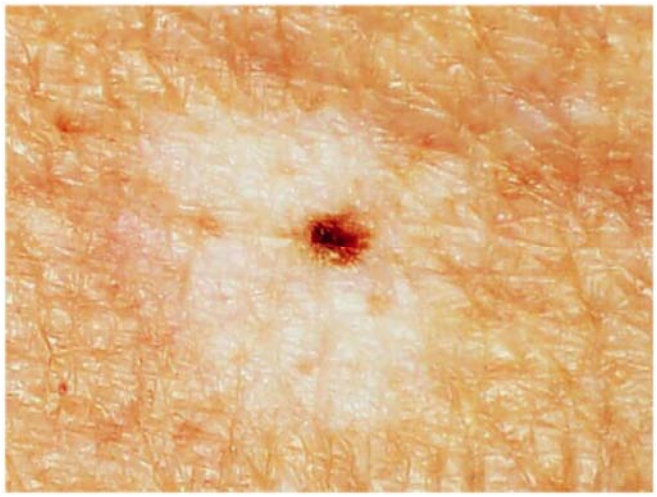
The diagnosis of a THN is usually supported by a history of local trauma. However, the patient might not recall a minor injury. If there is no further sign of injury in the neighbouring skin and related body parts, a follow-up can be arranged three to four weeks later. Usually, the ecchymotic halo would have been regressed. The naevus would become regular and symmetrical again.

Halo Naevi / Sutton Naevi

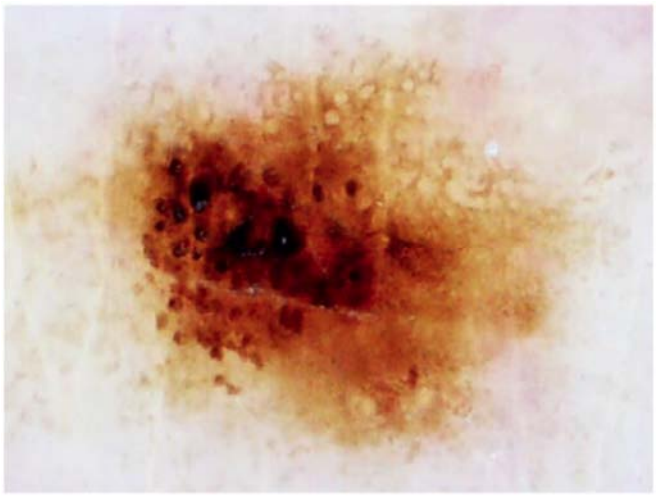
Halo naevi (HN) are commonly seen. When discovered, they are either a round and regular patch of hypopigmentation, or a lesion surround by a halo of hypopigmentation. They are frequently seen in children and adolescents.

Figure **3a** depicts a HN. For this one, the structure is more distinct. A lesion is seen in the centre. Polarised dermoscopy in higher magnification (Figure **3b**) reveals that the central mass is a melanocytic naevus. The *scale* (number of components and complexity of patterns) of the central mass is small, indicating that it is a relatively immature naevus with central globular pattern and a less distinctively reticular pattern in the periphery.

Since the central part is still largely symmetrical, we decided to observe. The HN regressed entirely in four months.



a



b

Figure 3: Halo naevus / Sutton naevus.

(**a**) Unpolarised dermoscopy of the entire lesion.

(**b**) Polarised dermoscopy of the central region.

DISCUSSION

We applied Dermlite Foto *II* Pro to capture the above dermoscopic images. We mounted such to a Nikon Digital-Fusion body, but camera bodies of Canon are also compatible. This dermoscope captures full-frame images at resolutions up to 4928 X 3280 pixels. The globules in the periphery of the GN in Figure **1** are lucidly demonstrated. Magnified images are still clearly seen, such as the immature naevus in the centre of the HN in Figure **3b**.

Table **1** shows a commonly used classification for melanocytic naevi. We postulate that GN would be in the “Congenital naevi / Globular” category, while THN, and HN would be in the “Unclassifiable” category. It is worth noting that dysplastic naevi, with their various

dermoscopic and histopathological defining criteria, are also in the latter category.

Table 1: Classification System for Melanocytic Naevi (Simplified) [1]

Congenital naevi	Globular
Acquired naevi	Reticular
Spitz naevi	Starburst
Blue naevi	Homogenous
Site-related naevi	Acral, facial, et cetera
Nevi with special features	Combined, halo, irritated, recurrent
Unclassifiable	Atypical features, melanoma cannot be excluded

Witnessing that a naevus on a child is rapidly enlarging can be alarming for parents, particularly those with family histories of melanomas or dysplastic naevi syndrome. With a clear polarised dermoscopic image, we can reassure the parents that the rapid enlargement is a natural course for the evolution of the naevus.

We might as well let them realise that there are actually *two* components of growth for a GN in a child before puberty – proportional growth as the child grows in height and weight, and autonomous growth of the naevus itself.

The globules in the rim of GN are histopathologically correlated to nests of proliferating melanocytes at the tips of the rete ridges [2]. The biological behaviours of these GN, naevi seen at birth, and naevi seen after birth but before puberty are very similar. This leads to the term “congenital naevi” being applied to all these types of naevi [3,4]. Most of these naevi are globular or globules-predominating, It is likely that most GN are congenital naevi by this definition [3,4].

In contrast, most naevi appearing after puberty (“acquired naevi”) are reticular or reticules-predominating [5]. Rapidly enlarging acquired naevi are rare, and a study reported that peripheral globules for *acquired naevi* are less seen significantly than for *congenital naevi* ($P < 0.001$) [2]. Moreover, cell atypia are almost absent in all GN before the age of 20, but present in up to 50% of the rapidly enlarging naevi after the age of 20 [2].

THN, combined naevi, recurrent, sclerosing naevi with pseudomelanomatous features, and eczematous naevi have been described as “melanoma simulators” [6,7]. For these naevi, if there is any doubt, excision or referrals to more experienced colleagues would be highly recommended. For THN with histories of trauma, our experience is that most will stabilise within two to four weeks. For suspected THN without history of trauma, lower thresholds should be maintained for full excisional biopsy.

HN, also known as “leukoderma acquisitum centrifugum”, is almost always benign. It is caused by a cell type-specific autoimmune pathogenesis, which is very similar to that for focal vitiligo [8]. However, a melanoma appearing akin to a HN has been reported, with melanoma antigens triggering the autoimmune response presumed to be the underlying immunopathogenesis [9]. In the case that a cutaneous mass is in the centre of a HN, the best magnifying dermoscopes should be put to use in order to make a full assessment [10].

CONCLUSION

GN, THN, and HN are distinctive types of melanocytic naevi. Their diagnoses and managements warrant specific considerations.

COMPETING INTEREST

The author declare that he has no competing interest.

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