

Remote Repigmentation as Removal of Halo Nevi Leads to Disappearance of Vitiligo –a Case Report

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Abstract

Halo nevi and Vitiligo are quite frequently occurring conditions with their prevalence being 1% and 2% respectively. The Halo nevus phenomenon is fairly common acquired hypo- or depigmentation around preexisting nevi. Vitiligo is an autoimmune-mediated depigmenting disease characterized by the gradual destruction of melanocytes. Halo nevi can manifest either as an isolated condition or along with vitiligo. Whether both are the same or different entities, remains questionable. We report a case of halo nevi with vitiligo, with the disappearance of vitiligo patches after the removal of halo nevi.

Keywords: Halo nevi, Vitiligo, Reverse Koebnerisation

Introduction

Halo nevus(HN) is a halo or ring of depigmentation appearing around congenital or acquired melanocytic nevi and melanoma also. In a few situations, the depigmented ring predicts the partial or complete regression of the melanocytic lesion, whereas it can remain stable or undergo repigmentation in some cases¹. Halo nevi are associated with Vitiligo in 26% of cases². It was described by Sutton in 1916. The exact processes involved in the development of Halo nevi and vitiligo are not known.

Case report

A 7-year-old boy came to our Dermatology OPD with complaints of lesions over the face, trunk, buttocks and extremities from the past 2 years. On examination, vitiligo patches were seen on the face on bilateral eyebrows and eyelids, below the chin and over

knees and elbows. Multiple halo nevi were seen on the chin, neck, upper back, trunk and gluteal region.

2 lesions of halo nevi were biopsied and sent for histopathological examination, which revealed a reticulate pattern of epidermis and inflammatory infiltrate around few nevus cell nests, which was suggestive of halo nevus. On follow up after 6 weeks, it was observed that vitiligo patches from most parts of the body had disappeared.

Discussion

Halo nevus also called as 'Sutton nevus,' 'Leukoderma acquisitumcentrifugum,' 'Perinevoid vitiligo,' 'Perinevoid leukoderma,' 'Leukopigmentary nevus' and 'Grunewald nevus.' It signifies the development of a halo of depigmentation around a central nevus. Acquired melanocytic nevi (junctional, compound, or dermal) are most commonly associated³. Halo formation around congenital melanocytic nevi has also been reported⁴. Depigmented halo can also develop around nevocellular nevi, spindle nevi, epithelioid nevi, blue nevi, neurofibromas and melanoma too⁵. It occurs more frequently in children and young adults of both sexes, with the back being the most common site, less commonly on the head and limbs⁶.

Halo nevus is due to the immunological reaction of the host to a nevus. 4 stages of evolution of halo nevus have been postulated, i) appearance of halo, ii) loss of pigment within nevus, iii) disappearance of nevus, iv) disappearance of halo⁷. Usually, no treatment is required for cases of halo nevi. The relationship between HN and vitiligo is interesting. While it's

been thought that both have the same immunological mechanism of destruction of pigmented melanocytes, recent studies say they have different mechanisms. A regression of vitiligo was seen after the complete removal of nevi only for the vitiligo to recur⁸. In one of the widely accepted hypothesis, oligoclonal T cells are directed against nevus cells and target along with them, the surrounding melanocytes resulting in halo formation⁶. In a recent study, TNF related apoptosis-inducing ligand has been cited as a probable causative factor for both HN and vitiligo⁹. Other observations show that there are different triggers for HN and vitiligo, while HN always begins around a nevus and has lymphocytic infiltrate, it is not so with vitiligo¹⁰. The diagnosis of HN is mainly clinical, dermoscopy shows patterns such as uniform, globular and structureless¹¹. There has been a report of resolution of vitiligo distant from the site of autologous skin graft which is described as remote reverse koebner phenomenon¹². Whereas, in our case, there is spontaneous disappearance of vitiligo patches after removal of halo nevi due to reverse koebner response.



Figure 1: Clinical photographs taken at the first clinical presentation



Figure 2: Clinical photograph showing disappearance of vitiligo from previously existing sites after removal of halo nevi

Conclusion

The exact immunopathogenic mechanism of HN and vitiligo is still arguable. Many studies report a significant association between these 2 entities whereas various studies say that they can be separate entities. HN can also be an apart of the clinical spectrum of vitiligo, such as it could be a forerunner of vitiligo in children. Removal of the halo nevi can induce an immunological response in the form of reverse koebnerization causing the vitiligo lesions to disappear, the exact pathogenesis of which is not known.

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