

## VITILIGO IN A PIGMENTED NEVUS

K. PAVITHRAN \*

## Summary

A case of vitiligo developing within a patch of pigmented nevus – an early Becker's melanosis – is being reported. The possible mechanisms of development of depigmentation are discussed.

KEY WORDS: Vitiligo, pigmentary nevus, Becker's melanosis, Self destruct theory.

Vitiligo is a common disease encountered in Dermatological practice. Though the disease has been known and studied literally from ages, its aetiology still remains obscure. Recently a number of postulations have been put forward to explain the loss of melanin from the skin, in this disease. It is interesting to note that vitiligo has occasionally been reported in association with various types of benign and malignant lesions of the melanocyte system. 'Halo nevus' is a well known entity, where leucoderma develops around a centrally placed nevus cell nevus. It has also been reported to develop around and within the skin lesions of malignant melanoma of the skin<sup>1-2</sup>. Kapur<sup>3</sup> in 1976 reported a case of vitiligo in association with congenital pigmented nevus. His patient developed vitiligo over various parts of the body including a few areas of the nevus. An almost similar case was observed by Bedi, in which depigmented macules appeared within a patch of Becker's melanosis<sup>4</sup>. Here, we are reporting a case in which

vitiliginous macules appeared within a patch of 'pigmentary nevus' – most probably an early Becker's melanosis – on the face.

## Case Report

A sixteen years old male student attended the Dermatology section of Medical College, Kottayam for asymptomatic depigmented macules on his face which has been present for one month. There was no history of preceding trauma or inflammation at that site. He had a large hyperpigmented patch extending from the chin to the neck for two years. General physical and systemic examination did not reveal any abnormality.

Dermatological examination revealed a large hyperpigmented patch with a linear well defined upper border, extending from the middle of chin to the front and left side of neck. Close examination showed excessive growth of thin short lanugo hairs and 'goose flesh' like prominences of follicular orifices in the patch. Two small well defined, depigmented, non anaesthetic oval macules of 0.5 x 0.3 cm. size were seen in the hyperpigmented patch close to its upper border on the face

\* Assistant Professor,  
Dept. of Skin & V.D.,  
Medical College,  
Kottayam-686008.

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**Fig. 1**

Note two depigmented macules within a patch of pigmented nevus on the face.

(Fig. 1). There was no other skin or mucous membrane lesions.

Routine laboratory investigations were found to be normal. Histological study of the hyperpigmented patch revealed mild acanthosis and hypermelanosis of the basal layer. A few melanophages were seen in the upper dermis. The hair structures appeared normal.

#### *Discussion*

The pigmentary nevus of the face and neck in the present case is most likely to be an early Becker's melanosis because of its onset in the second decade of life, unilateral distribution and presence of mild hypertrichosis in the melanotic patch. In Becker's melanosis the lesion usually starts as a patch of pigmented skin which remains stationary for some time with subsequent appearance of hypertrichosis years after its onset<sup>4</sup>. Though, classically seen in the shoulder region it may rarely affect other areas<sup>5</sup>. The exact mechanism of development of vitiligo within these patches of pigmented nevi is not clear. One view put forward is that some form of injury to these nevi containing abundant

melanin releases the antigenic material to the circulation and thereafter the body no longer considers melanin as 'self' but tries to destroy it by two basic immunologic mechanisms – humoral and cell mediated. This is autoimmunity<sup>6</sup>. Recently depigmentation has been noted at sites of resolution of pigmented tumours in animal models – Sinclair swine. The more recently put forward 'self destruct' hypothesis proposes that an intermediate or metabolite in melanin synthesis causes disappearance of melanocytes. Lerner<sup>7</sup> suggested that melanocytes have an inherent protective mechanism which leads to successful elimination of melanin precursors that are synthesised by melanocytes but toxic to them. Disruption of this labile destructive process causes vitiligo. Support for this hypothesis arises from the observation that the skin areas usually affected by vitiligo are those darkly pigmented. The development of vitiligo in Becker's melanosis – a highly pigmented area – in the present case, also favours the 'self destruct' hypothesis.

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