A Rare Concomitance of Two Blaschkoid Pigmentary Disorders: A Juggle of Pigmentary Mosaicism

Sir,

The lines of Blaschko are postulated to correspond to the migration of ectodermal and neuroectodermal cells during embryogenesis.[1] Genetic mosaicism is pathomechanism behind segmental/blaschkoid distribution of lesions. It refers to the habitation of two or more genetically distinct cell populations derived from same zygote. Colocalization phenomenon is not uncommon in dermatologic disorders. But concomitance of two different pigmentary disorders in a blaschkoid distribution is a rare phenomenon, under reported.

A 7-year-old female student presented with 6 months history of depigmented patches and 4 months history of hyperpigmented patches over the left side of her face. The lesions had insidious onset, progressive, and asymptomatic. There was no history of preceding raised/erythematous lesions and no similar history in the family. Clinical examination revealed well-defined confluent and discrete depigmented patches over the left periorbital area extending to left zygomatic area, left temporal area, left pinna, and left side of occipital scalp, also there was presence of discrete and confluent hyperpigmented brownish patches over chin extending to the left side of neck in a linear pattern and few similar patches over left cheek [Figure 1a and b]. Dermoscopy and histopathological examination was done and was consistent with lichen planus pigmentosus (LPP) [Figure 2a and b]. With a diagnosis of segmental vitiligo and LPP, patient was treated with topical tacrolimus 0.1% ointment followed by partial repigmentation of depigmented patches and no change in hyperpigmented patches at the end of 2 months.

Segmental vitiligo is characterized by depigmented patches over skin in a dermatomal distribution. Pathomechanisms suggested are somatic mosaicism or neurogenic cause.[1] Blaschkoid LPP is sparingly reported in the literature and mosaicism is suggested in this disorder too.[2] LPP has rarely been reported as associated with vitiligo in the literature. It has been seen that lichen planus may develop over lesions of vitiligo, or may occur both on vitiligo and on normal skin, or it may develop at a different site than on vitiligo lesions. Both the diseases are autoimmune in nature; and two autoimmune skin diseases can occur together. Another reason for co-occurrence of lesions has been suggested to be because of actinic damage in non-pigmented skin, leading to abnormal immune response.[3] Another theory suggested that vitiligo alters the antigens identified by effector T cells in lichen planus.[4] It has also been suggested that the Koebner's phenomenon may be implicated in the causation. The association of co-occurrence of segmental vitiligo and blaschkoid LPP has been shown as a single case in the literature suggesting the role of mosaicism.[2] There are very few reports of blaschkoid LPP presenting on the face, trunk, and limbs. The Blaschko's lines are thought to reflect T-lymphocytic migration and the clonal expression during the embryogenesis of the skin.[5] The genetic mosaicism is an acquired Blaschko-linear inflammatory dermatosis, could be responsible for this cutaneous antigenic mosaicism that may induce a mosaic T-cell response against an environmental trigger.[5] In our case, two pigmentary disorders in blaschkoid pattern in same segment of body represent a rare association and an effect of acquired pigmentary mosaicism.

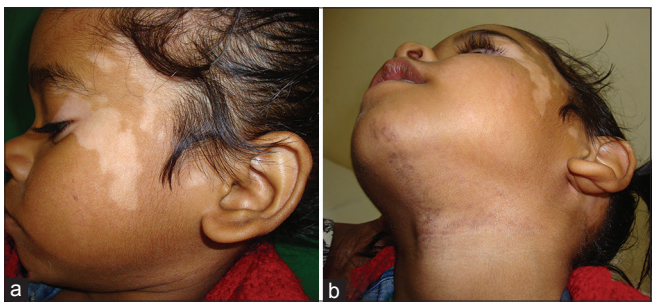

Figure 1: (a) Well-defined discrete and confluent depigmented patches in a segmental fashion over left eyelids, zygomatic area, pinna, and occipital area. (b) Discrete brownish macular lesions in a linear fashion extending over from chin till mid neck on left side of the face

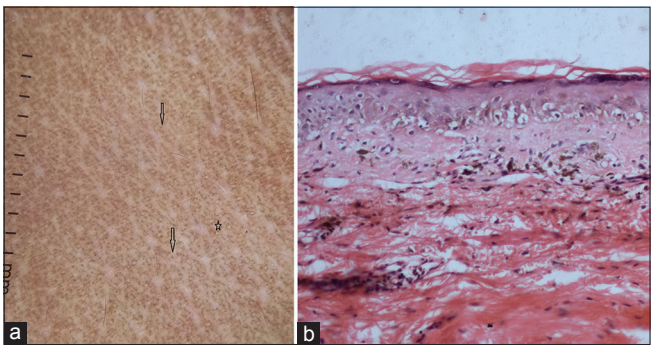

Figure 2: (a) Brown dots and globules (black arrows) with sparing of eccrine glands (black astrisk) and hem like pattern (circle) on dermoscopy (Dermlite II Hybrid M Dermatoscope at ×10 magnification in polarized mode). (b) Histopatholgy shows thinned out epidermis, presence of basal layer vacuolization. Upper dermis shows lymphocytic infiltrate with marked melanin incontinence. (H and E stain, ×200)

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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