

CASE REPORTS

HYPERTRICHOSIS BY TOPICAL PSORALEN

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Two cases in which topical psoralen induced hypertrichosis in the depigmented patches of vitiligo are being reported. The possible mechanisms for this hypertrichosis are briefly discussed.

Key words : Psoralen, Hypertrichosis, Vitiligo.

Psoralen is a drug that is mainly used for the treatment of vitiligo. Recently, it has been tried in conditions like psoriasis and lymphomas where there is uncontrolled proliferation of cells. The drug is available as tablets for systemic use and as solutions and ointments for topical use. Though hypertrichosis has been mentioned as one of the rare complications of topical psoralen for the treatment of vitiligo¹ we had not come across such an adverse effect so far. Recently two such cases were seen and are reported here.

Case Reports

Case 1

A girl aged 8 years had been applying 0.25% psoralen solution (psorline—Franco Indian pharmaceuticals) after dilution with methylated spirit (1 : 6) since last 5 months, on the vitiligo patches on her left leg. She used to apply it with a brush daily at 1 p. m. followed by exposure to sunlight for 20 minutes. After three months of starting the treatment she noticed increased hair growth in the patches in addition to the brownish black spotty macules. Meanwhile, she developed a few more patches of depigmentation on the dorsum of left foot and on the right leg. The possibility of hypertrichosis due to topical psoralen was thought of and she was asked to continue the application of psoralen

over the patches. She was instructed to apply methylated spirit alone over the patches on the dorsum of left foot and right leg. Though the patches on the left leg got almost completely repigmented, hypertrichosis persisted. The hairs in the patches were partly depigmented. Hypertrichosis was strictly limited to the patches where she applied psoralen. The patches on the dorsum of foot did not show increased hair growth. General physical and systemic examination and routine laboratory investigations did not reveal any abnormality. Six months follow up of the patient showed persistence of hypertrichosis.

Case 2

A 12-year-old girl had been applying 0.25% psoralen solution after diluting it with spirit (1 : 5) over a depigmented patch of vitiligo on her left elbow. She used to expose the patch to sunlight at 1 p. m. for 15 minutes every day. Four months after starting the treatment she noticed hypertrichosis (Fig. 1) and tiny follicular hyperpigmented macules in the patch which got completely repigmented in six months time. There was no history of constant rubbing or application of other medications over the patch. There was no hypertrichosis over the other elbow. General physical and systemic examination and routine laboratory investigations did not reveal any abnormality. Hypertrichosis was found persisting even after stopping the application of psoralen.

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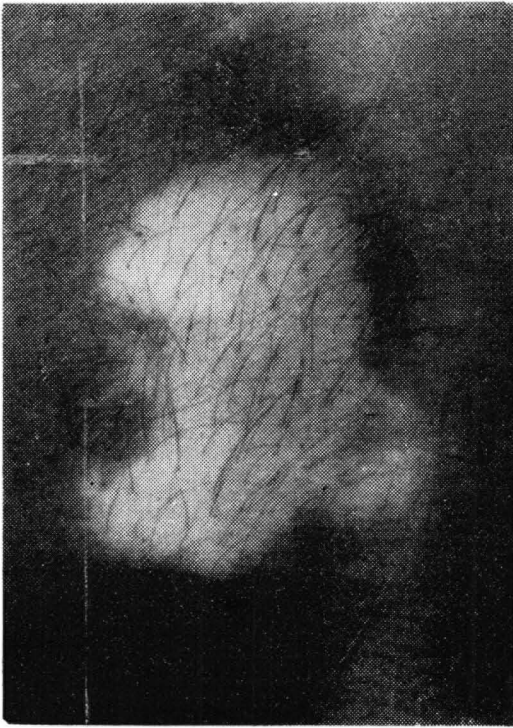


Fig. 1. Patch of vitiligo on the elbow with hypertrichosis (case 2).

Comments

Hypertrichosis implies excessive growth of hairs in a generalised or localised pattern but not of the male distribution. Many systemically administered drugs have occasionally been recorded to cause generalised hypertrichosis. These include dilantin, streptomycin, penicillamine, corticosteroid, diazoxide and thiacetazone. Singh and Lal² reported hypertrichosis and hyperpigmentation in a patient treated with systemic psoralen. Topical as well as systemic psoralens have recently been used in the PUVA therapy for alopecia areata.^{3,4} PUVA, here, non-specifically suppresses the immune responses against the hypothetical hair-associated antigen responsible for alopecia areata.⁴

It was quite interesting to note the growth of excess hairs along with repigmentation in the vitiligo patches in our cases. It is well known

that psoralen, in the presence of sunlight has an antimitotic effect especially on the cells having high turn-over rate. This is the mechanism that operates in PUVA therapy of psoriasis and lymphoma. Antimitotic effect here is due to formation of photo-adducts with histidine of DNA. Cells in the hair matrix are multiplying rapidly. So naturally one can expect arrest or decrease in mitosis of the matrix cells of hair resulting in decreased hair growth. But contrary to this expected effect, the patches showed hypertrichosis, the mechanism of which is still a mystery. It is a well known fact that long continued cutaneous hyperaemia without permanent dermal changes can induce hypertrichosis. It is quite probable that in our cases also the chronic inflammation and hyperaemia induced by localised photosensitivity by psoralen in patches devoid of melanin stimulated the hair growth. It is a common observation to see tiny follicular pigmented macules in the depigmented patches of vitiligo as an initial response to psoralen therapy. This is due to stimulation of melanocytes remaining in the hair follicles in these patches. It is probable that the same stimulus stimulated the follicular matrix cells also; resulting in hypertrichosis.

It is well known that repeated friction and application of corticosteroid ointments may induce localised hypertrichosis.⁵ But in the present case there was no history of constant rubbing over the lesion and they had never applied any corticosteroid ointment. Methylated spirit used to dilute psoralen is unlikely to be the hypertrichogenic agent in these cases because case 1 did not show any evidence of increased hair growth in the patches, where she was applying methylated spirit alone.

References

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