

## TOPICAL MOMETASONE FUROATE FOR THE TREATMENT OF CHILDHOOD VITILIGO

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*Forty-five children with vitiligo were treated with topical applications of mometasone furoate for 2 to 6 months. The best results occurred in the facial vitiligo. Repigmentation of 90-100% was achieved in more than 80% of patients with vitiligo of the face and more than 60% of patients with vitiligo on other part of the body. Interestingly there was no single side effect noted even after six months application in children.*

*Key words : Mometasone furoate, Vitiligo, Children*

### Introduction

Vitiligo is a common idiopathic acquired heritable melanocytopenic depigmentation disorder. The disorder results in substantial cosmetic disfigurement, particularly in dark-skinned patients. Even limited vitiligo in such an individual is socially detrimental. It appears to be a common condition with general incidence reported to be one percent.<sup>1</sup> In recent years, several studies have indicated that the topical applications of corticosteroid preparations may promote repigmentation in the lesions of vitiligo.<sup>1-4</sup> Mometasone furoate is a non fluorinated topical corticosteroid with high potency and safety profile.<sup>5</sup> This study was designed to evaluate the efficacy as well as safety profile of mometasone furoate in childhood vitiligo.

### Materials and Methods

Forty-five children with stable vitiligo were selected. Cases of post inflammatory hypopigmentation

were not included. The age range (Table-I) of the patients was from 2-14 years. Total number of the depigmented patches, their size and sites were recorded. History of the vitiligo was obtained with special references to family history, duration of disease, spread of disease and treatment taken previously. A complete physical as well as systemic examination and basic investigations like complete haemogram and blood sugar estimation were carried out at the commencement of therapy. The areas of vitiligo were photographed before treatment was initiated and at various times during the course of therapy.

Patients were advised to apply mometasone furoate 0.1% ointment once a day for six months or till complete repigmentation whichever was earlier. Patients were followed up at monthly intervals. They were carefully observed for any cutaneous, ocular or systemic side effects.

Complete repigmentation in this study meant the repigmentation of more than 90% of the total area of the tested patches of vitiligo and partial pigmentation meant beginning of perifollicular and marginal erythema and pigmentation.

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## Results

The first sign of response to treatment was the appearance of perifollicular islands of pigmentation in the

Table I. Age and sites of involvement

Age	No. of patients	Sites of involvement			
		Face	Trunk	Upper Lower Extremity	Extremity
2-4	5	3	1	1	-
5-6	7	3	2	1	1
7-8	9	5	2	2	2
9-10	10	7	3	3	1
11-12	7	3	2	1	2
13-14	7	4	1	2	2
Total	45	25	11	10	8

areas of vitiligo. These islands of repigmentation gradually coalesced. In addition, there was a gradual spread of pigment from the margins of the vitiligo patches into the amelanotic areas. The first evidence of repigmentation in most lesions was seen one to four months after the start of treatment.

Twenty-five patients were treated for vitiligo of face. Six of them responded with complete repigmentation after 2 months of treatment, whereas 8 required 4 months and 8 required 6 months to achieve the same result while 3 showed only partial repigmentations after 6 months of treatment.

Eleven patients with vitiligo of trunk were treated. Three responded with successful repigmentation after 4 months of treatment whereas 4 required 6 months to achieve the complete repigmentation. Two did not show any repigmentation with 6 months of treatment and 2 showed only partial repigmentation after six months of treatment.

Eighteen patients were treated for vitiligo of extremities, of which 5 achieved complete repigmentation

after 4 months of treatment, whereas 6 required six months to achieve same result. Two did not show any repigmentation while 5 showed partial repigmentation after 6 months of therapy. The results of the treatment of vitiligo on different parts of body with durations of treatment are given in Table II.

Partial repigmentation achieved in 3 patients with facial vitiligo, 2 patients with vitiligo of trunk continued to improve for one to two months even after treatment was terminated. Three of five partial repigmented patients with vitiligo of extremities relapsed during one year follow up study.

## Discussion

Our study revealed complete improvement in 88% of facial vitiligo, 63% of vitiligo of trunk and 61% of vitiligo of extremities after 6 months therapy without any local or systemic side effects. Similar results have been

Table II. Correlation with sites to response of treatment

Sites	8 weeks			16 weeks			24 weeks		
	Partial	Complete	Nil	Partial	Complete	Nil	Partial	Complete	Nil
Face	18	6	1	11	14	-	3	22	-
Trunk	6	-	5	5	3	3	2	7	2
U.Ext.	5	-	5	3	2	3	2	5	1
L.Ext.	3	-	5	3	2	3	2	5	1
Total	32	6	16	23	22	9	10	40	4

reported in another study where clobetasol propionate was used.<sup>1</sup> The clobetasol propionate and betamethasone - 17-valerate have been used in different concentrations with varying success rates by many workers.<sup>4,6,7</sup> These strong corticosteroids have their own limitations for long and continuous use especially in children with larger areas, because of their topical as well as systemic side effects, whereas mometasone furoate being a strong yet safe corticosteroid can be used for longer duration in children.

The mechanism of the beneficial effects of

costicosteroids in cases of vitiligo remains uncertain. The finding of an increased incidence of autoantibodies in patients with vitiligo,<sup>8</sup> suggests a possible autoimmune basis for the disease. Topical steroids may locally suppress the immunologic changes allowing inactive melanocytes to repopulate affected skin sites.<sup>1</sup>

Differences in skin physiology especially permeability, at different anatomic sites might explain the higher success rate in cases of vitiligo on the face as has been reported.<sup>1</sup> Melanocytic density of facial skin is also higher than skin of trunk and limbs. Thus, larger number of residual melanocytes in unaffected facial skin may further explain the better results of repigmentation on the face. The results of this study indicate that a strong non fluorinated steroid, mometasone furoate, is a useful agent for treatment of childhood vitiligo without any local or systemic side effects.

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## **Contributors, Please note**

Only black and white, good quality, clear and glossy prints of clinical photographs are accepted for publication. In case one desires to have color photos printed, the author/s has to bear the expense for it.

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